

# **TEST REPORT**

**Report Number:** R16238088-E4d

**Applicant :** Samsung Electronics Co Ltd  
129, Samsung-ro, Yeongtong-gu, Suwon-si,  
Gyeonggi-do, 16677, Rep. of Korea

**Model :** SM-F976B

**FCC ID :** A3LSMF976B

**EUT Description :** GSM/WCDMA/LTE/NR Phone + BT/BLE, DTS/UNII  
a/b/g/n/ac/ax/be, UWB, WPT and NFC

**Test Standard(s) :** FCC 47 CFR PART 2, PART 24E, PART 25  
ISED RSS-GEN ISSUE 5 + A1 + A2, RSS-133 ISSUE 7

**Date Of Issue:**  
2026-05-11

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Revision History

| Rev. | Issue<br>Date | Revisions     | Revised By   |
|------|---------------|---------------|--------------|
| V1   | 2026-05-11    | Initial Issue | Noah Bennett |

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## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** Samsung Electronics Co Ltd  
129, Samsung-ro, Yeongtong-gu, Suwon-si,  
Gyeonggi-do, 16677, Rep. of Korea

**EUT DESCRIPTION:** GSM/WCDMA/LTE/NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax/be, UWB, WPT  
and NFC

**SERIAL NUMBERS:** ZAQ0548M, ZB30741M, ZBK0208M, ZBK0213M, ZBK0219M

**SAMPLE RECEIVE DATE:** 2026-02-24

**DATE TESTED:** 2026-03-06 to 2026-04-29

| APPLICABLE STANDARDS                            |                    |
|-------------------------------------------------|--------------------|
| STANDARD                                        | TEST RESULTS       |
| FCC 47 CFR PART 2, PART 24E, PART 25            | Refer to Section 2 |
| ISED RSS-GEN ISSUE 5 + A1 + A2, RSS-133 ISSUE 7 |                    |

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document.

Approved & Released  
For UL LLC By:

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## 2. SUMMARY OF TEST RESULTS

This report contains data provided by the customer which can impact the validity of results. UL LLC is only responsible for correctly integrating customer-provided data with measurements performed by UL LLC.

| Requirement Description              | Requirement Clause Number (FCC) | Requirement Clause Number (ISED) | Result   | Remarks |
|--------------------------------------|---------------------------------|----------------------------------|----------|---------|
| Equivalent Isotropic Radiated Power  | 24.232 (c)                      | RSS133§5.5                       | Complies | None.   |
| Occupied Bandwidth                   | 2.1049                          | RSS-GEN§6.7, RSS133              | Complies | None.   |
| Band Edge and Emission Mask          | 2.1051, 24.238 (a)              | RSS133§5.6                       | Complies | None.   |
| Out of Band Emissions                | 2.1051, 24.238 (a)              | RSS133§5.6                       | Complies | None.   |
| Frequency Stability                  | 2.1055, 24.235                  | RSS133§5.4                       | Complies | None.   |
| Peak-to-Average Ratio                | 24.232 (d)                      | RSS133§5.5                       | Complies | None.   |
| Field Strength of Spurious Radiation | 2.1053, 24.238 (a)              | RSS133§5.6                       | Complies | None.   |

## 3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with the following.

FCC published lists of [measurement procedures](#) for compliance testing.

ISED published lists of [normative test standards and acceptable alternatives procedures](#).

- ANSI C63.26:2015
- FCC 47 CFR Part 2, Part 24E, Part 25
- [FCC KDB 971168 D01](#): Power Meas License Digital Systems (ISED acceptable alternative procedure)
- [FCC KDB 971168 D02](#): Misc Rev Approv License Devices
- [FCC KDB 412172 D01](#): Determining ERP and EIRP
- [FCC KDB 273109 D02](#): Part 25 SCS and CMRS-Bands
- ISED RSS-Gen Issue 5 + A1 + A2, RSS-133 Issue 7

## 4. FACILITIES AND ACCREDITATION

UL LLC. is accredited by A2LA, certification #0751.06, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

|                                     | Address                                                                       | ISED CABID | ISED Company Number | FCC Registration |
|-------------------------------------|-------------------------------------------------------------------------------|------------|---------------------|------------------|
| <input checked="" type="checkbox"/> | Building 2800 Suite Perimeter Park Dr. Suite B, Morrisville, NC 27560, U.S.A. | S0067      | 27265               | 825374           |

## 5. DECISION RULES AND MEASUREMENT UNCERTAINTY

### 5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

### 5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

### 5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| PARAMETER                                           | U <sub>Lab</sub> |
|-----------------------------------------------------|------------------|
| Worst Case Radiated Disturbance, 9KHz to 30 MHz     | 2.52 dB          |
| Worst Case Radiated Disturbance, 30 to 1000 MHz     | 4.88 dB          |
| Worst Case Radiated Disturbance, 1000 to 18000 MHz  | 4.24 dB          |
| Worst Case Radiated Disturbance, 18000 to 26000 MHz | 4.37 dB          |
| Worst Case Radiated Disturbance, 26000 to 40000 MHz | 5.17 dB          |
| Occupied Channel Bandwidth                          | ±0.39 %          |
| Temperature                                         | ±0.9 °C          |
| Supply voltages                                     | ±0.45 %          |
| Time                                                | ±0.02 %          |

Uncertainty figures are valid to a confidence level of 95%.

### 5.4. SAMPLE CALCULATION

#### RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

## 6. EQUIPMENT UNDER TEST

### 6.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE/NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax/be, UWB, WPT and NFC.

The EUT supports the following LTE B25 and 5G NR n25 Bands and their antenna configurations:

| LTE & 5G NR Bands          | Config 0 | Config 1 |
|----------------------------|----------|----------|
| LTE B25(2) & 5G NR n25(n2) | ANT B    | ANT G    |

This report applies data referencing from FCC ID: A3LSMF976U. The test data to validate data referencing is included in Test Report R16238088-E29.

### 6.2. MAXIMUM OUTPUT POWER

#### EIRP/ERP TEST PROCEDURE

ANSI C63.26:2015  
KDB 971168 D01 Section 5.2

$$\text{ERP/EIRP} = P_{\text{Meas}} + G_T - L_C$$

where: ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as  $P_{\text{Meas}}$ , typically dBW or dBm);

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

The EUT has different power levels for head use configuration and body use configuration. The tables below contain the highest of all configurations average conducted and peak EIRP/ERP output powers as follows:

## LTE BAND 25

| Part 24 / RSS 133 |            |                     |                       |                    |                  |              |              |                     |
|-------------------|------------|---------------------|-----------------------|--------------------|------------------|--------------|--------------|---------------------|
| EIRP Limit (W)    |            | 2.00                |                       |                    |                  |              |              |                     |
| Bandwidth (MHz)   | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (MHz) | 99% BW (kHz) | Emission Designator |
| 3.0               | 16QAM      | 1851.5              | 1908.5                | 23.75              | 0.237            | 2.710        | 2709.7       | 2M71D7W             |
| 5.0               | QPSK       | 1852.5              | 1907.5                | 24.25              | 0.266            | 4.522        | 4521.8       | 4M52G7W             |
| 20.0              | QPSK       | 1860.0              | 1905.0                | 24.29              | 0.269            | 18.018       | 18018        | 18M0G7W             |
|                   | 16QAM      |                     |                       | 23.63              | 0.231            | 17.995       | 17995        | 18M0D7W             |

## 5G NR n25

| Part 24/ RSS 133 |            |                     |                       |                    |                  |              |              |                     |
|------------------|------------|---------------------|-----------------------|--------------------|------------------|--------------|--------------|---------------------|
| EIRP Limit (W)   |            | 2.00                |                       |                    |                  |              |              |                     |
| Bandwidth (MHz)  | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (MHz) | 99% BW (kHz) | Emission Designator |
| 25.0             | BPSK       | 1862.5              | 1897.5                | 25.83              | 0.383            | 23.036       | 23036        | 23M0G7W             |
| 35.0             | 16QAM      | 1867.5              | 1892.5                | 24.40              | 0.275            | 32.212       | 32212        | 32M2D7W             |
| 40.0             | BPSK       | 1870.0              | 1895.0                | 25.64              | 0.366            | 38.663       | 38663        | 38M7G7W             |
|                  | 16QAM      |                     |                       | 24.37              | 0.274            | 38.719       | 38719        | 38M7D7W             |

### 6.3. WORST-CASE CONFIGURATION AND MODE

The worst-case scenario for all measurements is based upon an engineering evaluation made on conducted average power taken during pre-testing. The modulations with the highest output power were selected as worst-case. Conducted tests were performed on the worst-case antenna port per band. Full radiated Emissions Testing on each antenna was performed and reported.

The following is the worst-case antenna port, and modulation, as tested:

| LTE & 5G NR Bands   | Worst-Case Antenna Port                                                                    | Worst-Case Modulation              |
|---------------------|--------------------------------------------------------------------------------------------|------------------------------------|
| LTE B25 & 5G NR n25 | LTE 2/25 Config 1 (Antenna G)<br>NR n2 Config 0 (Antenna B)<br>NR n25 Config 1 (Antenna G) | LTE B25 (QPSK)<br>5G NR n25 (BPSK) |

The EUT was investigated in three orthogonal orientations X/Y/Z on both Low Band (Fundamental Below 1GHz) Mid Band (Fundamental between 1-3GHz) and High Band (Fundamental above 3GHz) over all antennas to find the worst-case orientation. Additionally, the EUT was investigated between 3 folding positions, Fully Open, Fully Closed, and Half Open. For Simultaneous Tx scans in which there are two or more  $F_c$  ranges with different worst-case orientations, scans were performed in the orientation with the highest output power, and sufficient margin was added to cover other orientations. The following are the worst-case orientations:

| Bands 2 and 25                                 | Config 0 Orientation | Config 1 Orientation |
|------------------------------------------------|----------------------|----------------------|
| Low Band ( $F_c < 1\text{GHz}$ )               | -                    | -                    |
| Mid Band ( $1\text{GHz} < F_c < 3\text{GHz}$ ) | X Open               | X Open               |
| High Band ( $F_c > 3\text{GHz}$ )              | -                    | -                    |

Worst Case emissions from 9kHz-30Mhz, 30-1000MHz, 18-26.5GHz, and 26.5GHz-40GHz were done on the modes with the highest pre-tuned conducted average power per antenna. No emissions within 20dB were observed.

## 6.4. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

| Support Equipment List |              |                     |               |        |
|------------------------|--------------|---------------------|---------------|--------|
| Description            | Manufacturer | Model               | Serial Number | FCC ID |
| Power Adapter          | Sony         | XQZ-UC11-010-236-21 | NA            | NA     |

### I/O CABLES

| I/O Cable List |       |                      |                |            |                  |                        |
|----------------|-------|----------------------|----------------|------------|------------------|------------------------|
| Cable No.      | Port  | # of Identical Ports | Connector Type | Cable Type | Cable Length (m) | Remarks                |
| 1              | USB-C | 1                    | USB-C          | Shielded   | <3m              | Phone to power adapter |

### TEST SETUP

The EUT was connected to a base station simulator and set to transmit at max power for WWAN testing

### SETUP DIAGRAM

Please see R16238088-EP1d for Setup Diagrams and Setup Photos.

## 7. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

### **Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 4)**

| Equip. ID        | Description                                       | Manufacturer/Brand   | Model Number              | Last Cal.  | Next Cal.  |
|------------------|---------------------------------------------------|----------------------|---------------------------|------------|------------|
|                  | <b>0.009-30MHz</b>                                |                      |                           |            |            |
| 8939             | Passive Loop Antenna                              | EMCO                 | EM-6872                   | 2024-11-18 | 2026-11-18 |
| 8940             | Passive Loop Antenna                              | EMCO                 | EM-6871                   | 2024-11-18 | 2026-11-18 |
|                  | <b>30-1000 MHz</b>                                |                      |                           |            |            |
| 90628            | Hybrid Broadband Antenna                          | Sunol Sciences Corp. | JB3                       | 2026-02-09 | 2028-02-09 |
|                  | <b>1-18 GHz</b>                                   |                      |                           |            |            |
| 206211           | Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz | ETS Lindgren         | 3117                      | 2024-04-09 | 2026-04-30 |
|                  | <b>18-40 GHz</b>                                  |                      |                           |            |            |
| 204704           | Horn Antenna, 18-26.5GHz                          | Com Power            | AH-826                    | 2025-07-15 | 2027-07-15 |
| 204705           | Horn Antenna, 26-40GHz                            | Com Power            | AH-640                    | 2025-11-19 | 2027-11-19 |
|                  | <b>Gain-Loss Chains</b>                           |                      |                           |            |            |
| 207638           | Gain-loss string: 0.009-30MHz                     | Various              | Various                   | 2025-06-13 | 2026-06-13 |
| 207639           | Gain-loss string: 25-1000MHz                      | Various              | Various                   | 2025-06-13 | 2026-06-13 |
| 207640           | Gain-loss string: 1-18GHz                         | Various              | Various                   | 2025-06-13 | 2026-06-13 |
| 225795           | Gain-loss string: 18-40GHz                        | Various              | Various                   | 2025-06-13 | 2026-06-13 |
|                  | <b>Receiver &amp; Software</b>                    |                      |                           |            |            |
| 197954           | Spectrum Analyzer                                 | Rohde & Schwarz      | ESW44                     | 2025-04-21 | 2026-04-30 |
| SOFTEMI          | EMI Software                                      | UL                   | Version 9.5 (18 Oct 2021) |            |            |
|                  | <b>Additional Equipment used</b>                  |                      |                           |            |            |
| 241204           | Environmental Meter                               | Fisher Scientific    | 15-077-963                | 2025-08-05 | 2027-08-05 |
| 213025           | Wideband Radio Communications Tester              | Rohde and Schwarz    | CMW500                    | N/A        | N/A        |
| 208720           | Wideband Radio Communications Tester              | Rohde and Schwarz    | CMW500                    | N/A        | N/A        |
| 212167           | Wideband Radio Communications Tester              | Anritsu              | MT8821C                   | N/A        | N/A        |
| 169108 (BRF010)* | 1.85-1.97GHz notch filter, 2W, Fhigh = 9GHz       | Micro-Tronics        | BRM50714-01               | 2025-03-13 | 2026-03-31 |
| 169106 (BRF008)* | 1710-1785MHz notch filter, 2W, Fhigh = 9GHz       | Micro-Tronics        | BRM50713-01               | 2025-03-13 | 2026-03-31 |

**NOTES:**

1. \* Testing is completed before equipment expiration date.
2. \*\*Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

## **Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 2)**

| Equip. ID        | Description                                       | Manufacturer/Brand | Model Number              | Last Cal.  | Next Cal.  |
|------------------|---------------------------------------------------|--------------------|---------------------------|------------|------------|
|                  | <b>1-18 GHz</b>                                   |                    |                           |            |            |
| 86408            | Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz | ETS Lindgren       | 3117                      | 2025-07-15 | 2027-07-15 |
|                  | <b>Gain-Loss Chains</b>                           |                    |                           |            |            |
| 91977            | Gain-loss string: 1-18GHz                         | Various            | Various                   | 2025-05-31 | 2026-05-31 |
|                  | <b>Receiver &amp; Software</b>                    |                    |                           |            |            |
| 197955           | Spectrum Analyzer                                 | Rohde & Schwarz    | ESW44                     | 2025-07-29 | 2026-07-29 |
| SOFTEMI          | EMI Software                                      | UL                 | Version 9.5 (18 Oct 2021) |            |            |
|                  | <b>Additional Equipment used</b>                  |                    |                           |            |            |
| 239540           | Environmental Meter                               | Fisher Scientific  | 15-077-963                | 2025-08-05 | 2027-08-05 |
| 213025           | Wideband Radio Communications Tester              | Rohde and Schwarz  | CMW500                    | N/A        | N/A        |
| 169106 (BRF008)* | 1710-1785MHz notch filter, 2W, Fhigh = 9GHz       | Micro-Tronics      | BRM50713-01               | 2025-03-13 | 2026-03-31 |
| 169108 (BRF010)* | 1.85-1.97GHz notch filter, 2W, Fhigh = 9GHz       | Micro-Tronics      | BRM50714-01               | 2025-03-13 | 2026-03-31 |

### **NOTES:**

3. \* Testing is completed before equipment expiration date.
4. \*\*Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

**Wireless Conducted Measurement Equipment.**

| Equipment ID                     | Description                                           | Manufacturer          | Model Number | Last Cal.  | Next Cal.  |
|----------------------------------|-------------------------------------------------------|-----------------------|--------------|------------|------------|
| <b>Additional Equipment used</b> |                                                       |                       |              |            |            |
| 90411                            | Spectrum Analyzer<br><b>MY54490314</b>                | Keysight Technologies | N9030A       | 2026-03-03 | 2027-03-03 |
| 90416                            | Spectrum Analyzer<br><b>MY54490254</b>                | Keysight Technologies | N9030A       | 2025-07-31 | 2026-07-31 |
| 212967                           | Wideband Radio Communications Tester<br><b>170733</b> | Rohde and Schwarz     | CMW500       | 2026-02-13 | 2027-02-13 |
| 212166                           | Wideband Radio Communications Tester                  | Anritsu               | MT8000A      | 2026-02-23 | 2027-02-23 |
| 262469                           | Humidity and Temperature Probe                        | Control Company       | 15-077-963   | 2025-04-28 | 2026-04-30 |
| 211055                           | Real-Time Peak Power Sensor                           | Boonton               | RTP5000      | 2025-07-30 | 2026-07-30 |

**Test Equipment Used - Wireless Conducted Attenuators, Cables, and Couplers**

| Equipment ID       | Description                                  | Manufacturer       | Model Number | Last Cal.                | Next Cal.                |
|--------------------|----------------------------------------------|--------------------|--------------|--------------------------|--------------------------|
| <b>Attenuators</b> |                                              |                    |              |                          |                          |
| 226569             | 2.92mm Coaxial 10dB Attenuator 40GHz         | Fairview Microwave | SA4014-10    | 2025-09-02               | 2026-09-02               |
| 226554*            | 20dB Attenuator                              | CentricRF          | C18S2-20     | 2025-03-31<br>2026-04-01 | 2026-03-31<br>2027-04-01 |
| 226552*            | 20dB Attenuator                              | CentricRF          | C18S2-20     | 2025-03-31<br>2026-04-01 | 2026-03-31<br>2027-04-01 |
| <b>Cables</b>      |                                              |                    |              |                          |                          |
| 246257             | SMA Cable                                    | Huber + Suhner     | 104PEA       | 2025-09-05               | 2026-09-05               |
| <b>Couplers</b>    |                                              |                    |              |                          |                          |
| 238018*            | Ultra-Wideband Directional Coupler 0.5-18GHz | Mini-Circuits      | ZUDC10-183+  | 2025-04-48               | 2026-04-30               |

**NOTES:**

5. \* Testing is completed before equipment expiration date.
6. \*\*Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

## **8. CONDUCTED TEST RESULTS**

### **8.1. OCCUPIED BANDWIDTH**

#### **RULE PART(S)**

FCC: §2.1049

ISED: RSS133

#### **LIMITS**

For reporting purposes only.

#### **TEST PROCEDURE**

ANSI C63.26:2015: Section 5.4

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The 99% and -26dB bandwidths were measured with the spectrum analyzer at the middle channel in each band.

#### **RESULTS**

There is no limit required and power is the same for low, middle and high channel; therefore, only middle channel was tested.

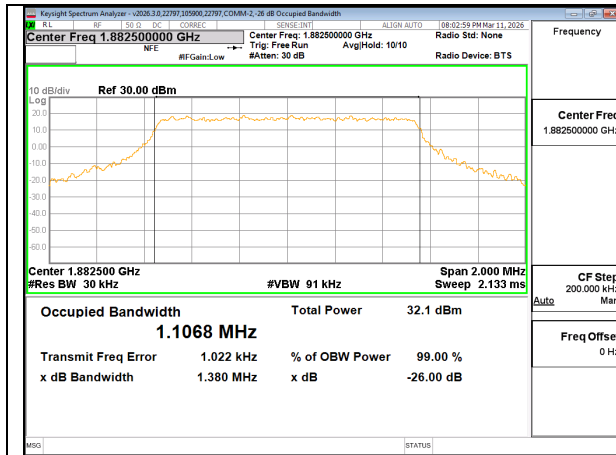
## **LTE BAND 25**

| Band        | Mode         | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|-------------|--------------|-------------------------|--------|--------------|----------------|
| LTE BAND 25 | 1.4MHz, QPSK | 6/0                     | 1882.5 | 1.1068       | 1.380          |
|             | 1.4MHz,16QAM |                         |        | 1.1056       | 1.407          |
|             | 3MHz, QPSK   | 15/0                    |        | 2.7179       | 3.091          |
|             | 3MHz, 16QAM  |                         |        | 2.7097       | 3.080          |
|             | 5MHz, QPSK   | 25/0                    |        | 4.5218       | 5.111          |
|             | 5MHz, 16QAM  |                         |        | 4.5217       | 5.179          |
|             | 10MHz, QPSK  | 50/0                    |        | 9.0280       | 10.02          |
|             | 10MHz, 16QAM |                         |        | 9.0207       | 10.08          |
|             | 15MHz, QPSK  | 75/0                    |        | 13.498       | 14.95          |
|             | 15MHz, 16QAM |                         |        | 13.508       | 14.89          |
|             | 20MHz, QPSK  | 100/0                   |        | 18.018       | 19.72          |
|             | 20MHz, 16QAM |                         |        | 17.995       | 19.84          |
|             | 20MHz, QPSK  | 1/0                     |        | 0.2924       | 0.4828         |

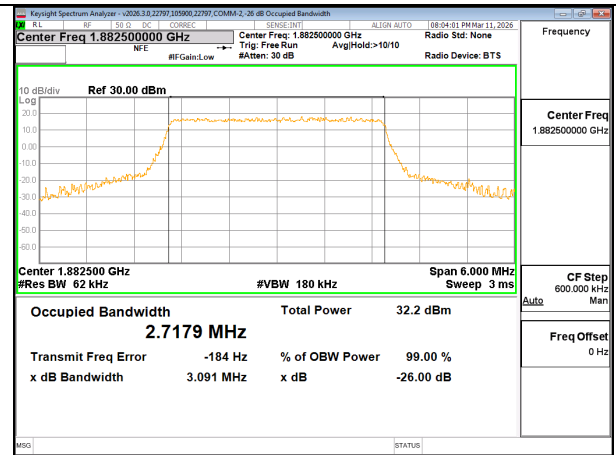
## **5G NR n25**

| Band      | Mode         | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|-----------|--------------|-------------------------|--------|--------------|----------------|
| 5G NR n25 | 5MHz, BPSK   | 25/0                    | 1882.5 | 4.5204       | 5.164          |
|           | 5MHz, 16QAM  |                         |        | 4.5455       | 5.192          |
|           | 10MHz, BPSK  | 50/0                    |        | 8.9643       | 9.709          |
|           | 10MHz, 16QAM |                         |        | 9.0056       | 9.813          |
|           | 15MHz, BPSK  | 75/0                    |        | 13.467       | 14.52          |
|           | 15MHz, 16QAM |                         |        | 13.533       | 14.54          |
|           | 20MHz, BPSK  | 100/0                   |        | 17.955       | 19.09          |
|           | 20MHz, 16QAM |                         |        | 17.925       | 19.25          |
|           | 25MHz, BPSK  | 128/0                   |        | 23.036       | 24.40          |
|           | 25MHz, 16QAM |                         |        | 22.998       | 24.42          |
|           | 30MHz, BPSK  | 160/0                   |        | 28.732       | 30.46          |
|           | 30MHz, 16QAM |                         |        | 28.684       | 30.18          |
|           | 35MHz, BPSK  | 180/0                   |        | 32.305       | 34.05          |
|           | 35MHz, 16QAM |                         |        | 32.212       | 33.97          |
|           | 40MHz, BPSK  | 216/0                   |        | 38.663       | 40.79          |
|           | 40MHz, 16QAM |                         |        | 38.719       | 40.90          |
|           | 40MHz, BPSK  | 1/0                     |        | 0.26103      | 0.4682         |

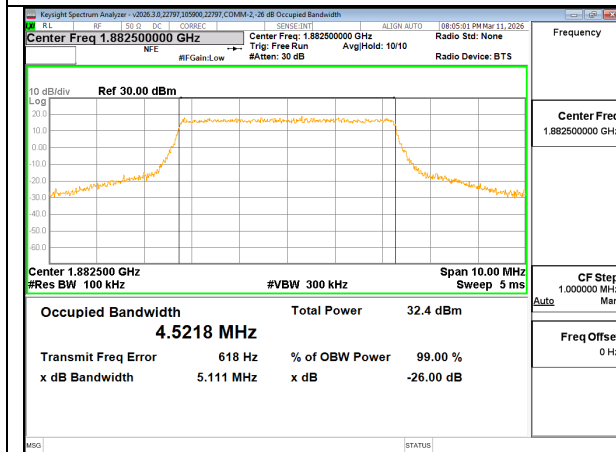
### 8.1.1. LTE BAND 25



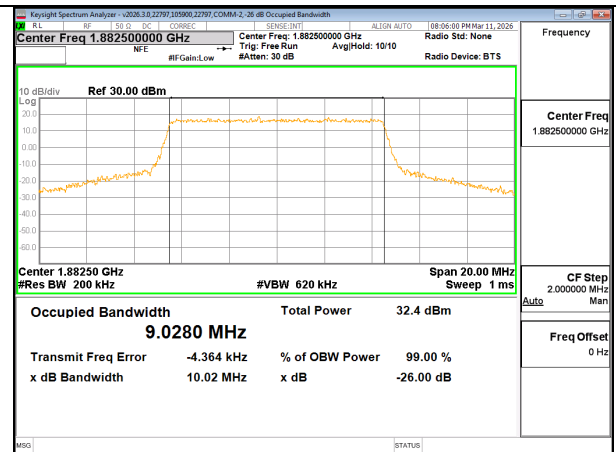
LTE B25 1.4MHz QPSK Middle Channel RB6-0



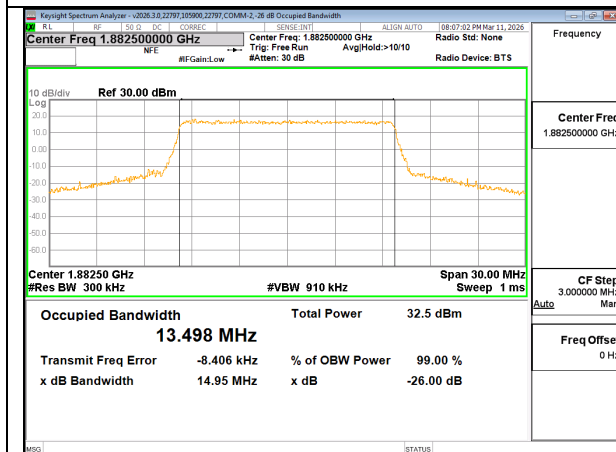
LTE B25 3MHz QPSK Middle Channel RB15-0



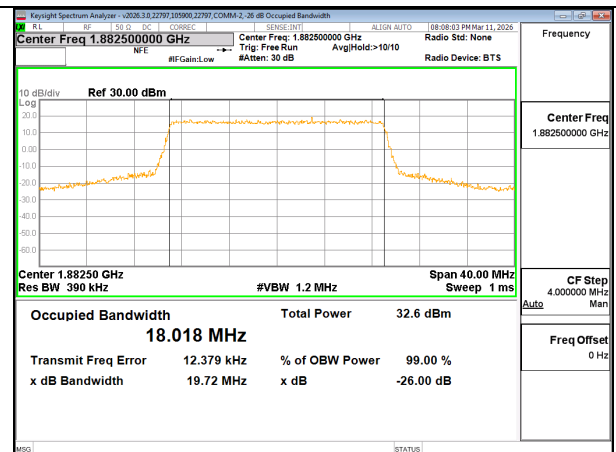
LTE B25 5MHz QPSK Middle Channel RB25-0



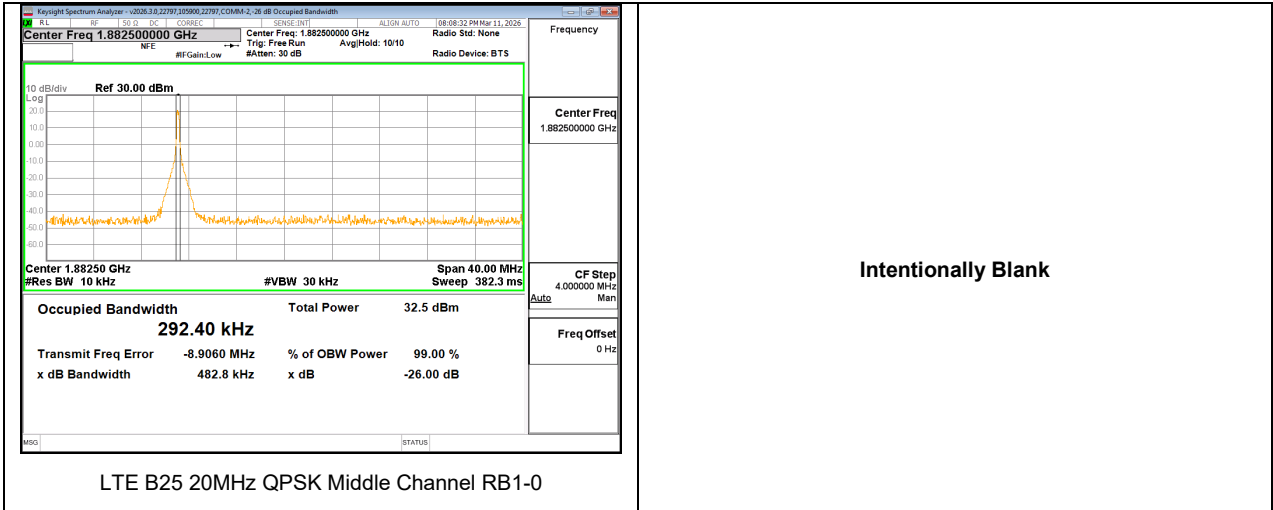
LTE B25 10MHz QPSK Middle Channel RB50-0



LTE B25 15MHz QPSK Middle Channel RB75-0

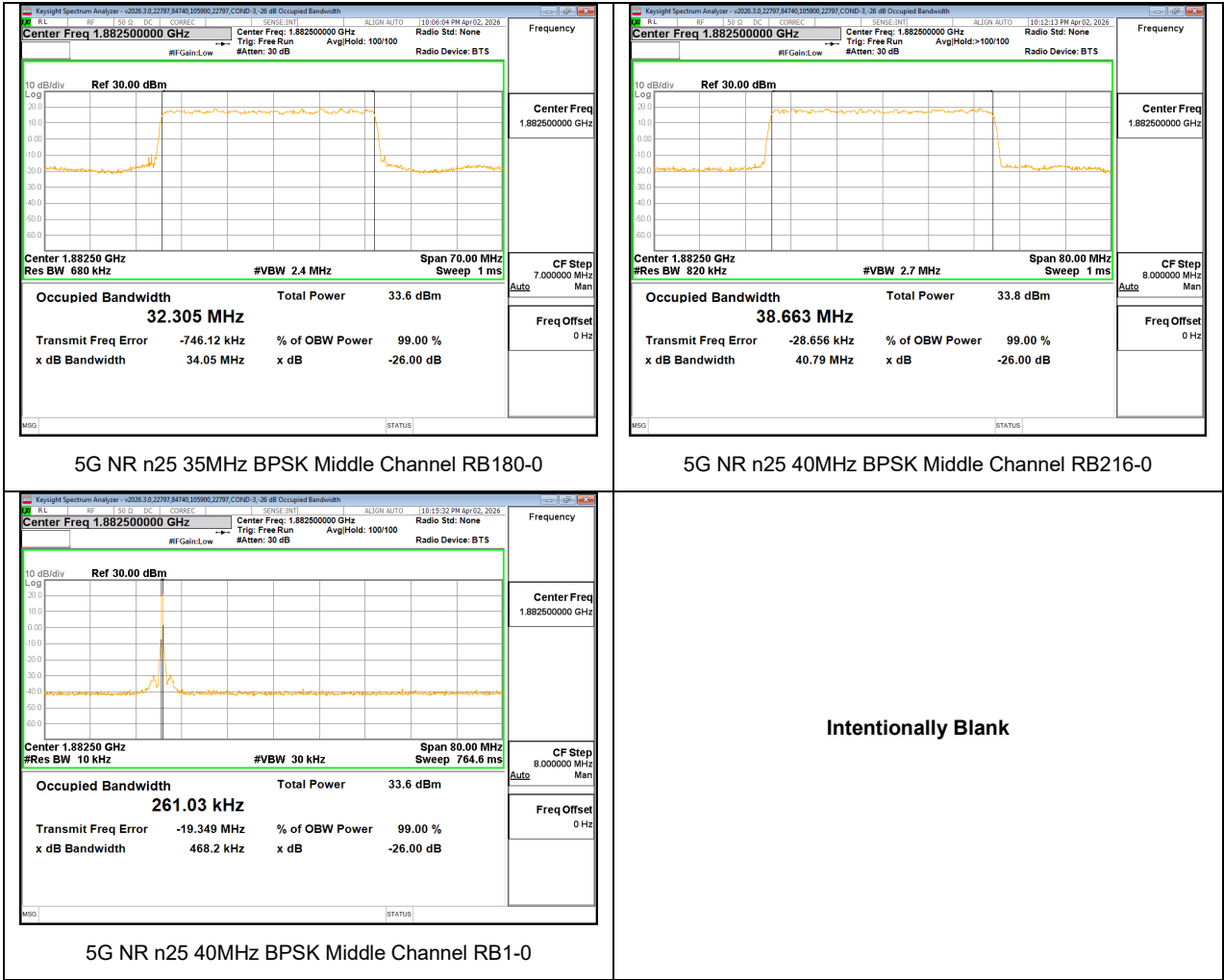


LTE B25 20MHz QPSK Middle Channel RB100-0



## 8.1.2. 5G NR n25





## 8.2. EMISSION MASK AND ADJACENT CHANNEL POWER

### LIMITS

FCC: §24.238 (a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

ISED: RSS133§5.6

For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors), where applicable, of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in the table 3.

| Table 3: Unwanted emission limits for all equipment               |                         |
|-------------------------------------------------------------------|-------------------------|
| Offset frequency from the edge of the frequency block group (MHz) | Unwanted emission limit |
| $\leq 1$                                                          | -13 dBm/(1% of OBW)     |
| $> 1$                                                             | -13 dBm/MHz             |

### TEST PROCEDURE

For Spectrum Emission Mask plots, the spectrum analyzer is configured to sweep with a moving integration window, the width of which can be adjusted to different sizes across the sweep. The window width is configured to be greater than or equal to the required reference bandwidth. The center frequencies of the integration window for the different integration windows was set such that the upper and lower edges of the windows are aligned with the transition points in the reference bandwidths. This is achieved by setting the start / stop frequencies of the window with an offset equal to the reference bandwidth / 2 from the transition point.

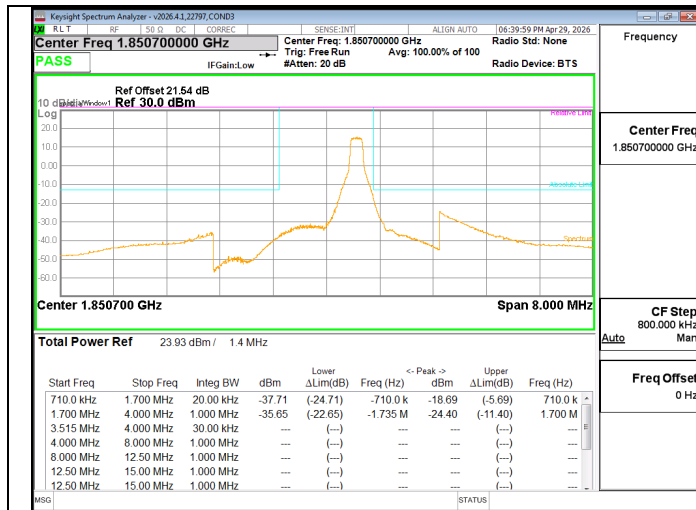
The transmitter output was connected to a base station simulator and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

For each band edge measurement:

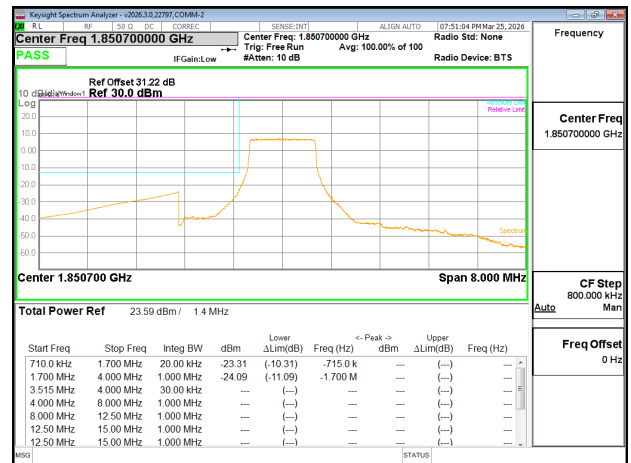
1. Set the spectrum analyzer span to include the block edge frequency.
2. Set a marker to point the corresponding band edge frequency in each test case.
3. Set display line at -13 dBm
4. Set resolution bandwidth to at least 1% of emission bandwidth.

### RESULTS

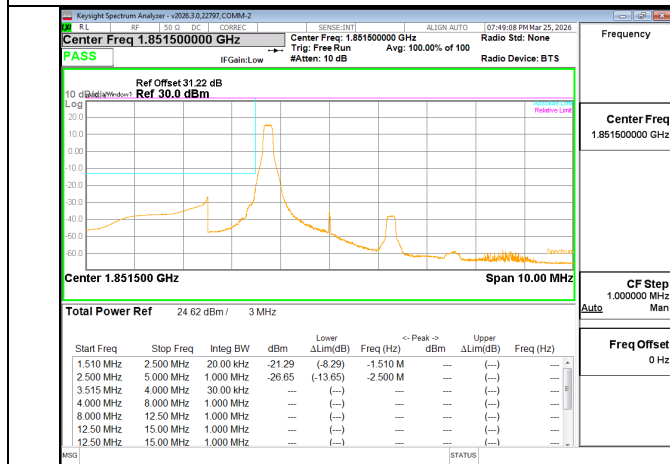
## 8.2.1. LTE Band 2



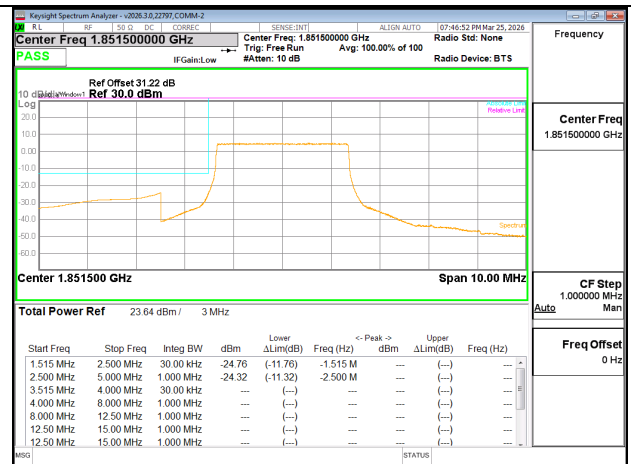
LTE B2 1.4MHz QPSK High Channel RB1-5



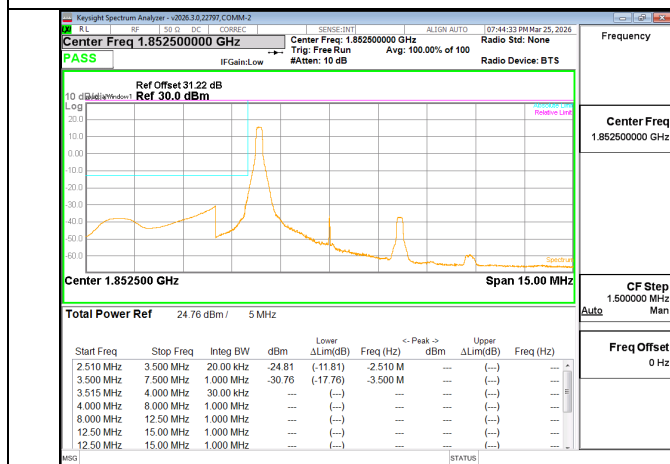
LTE B2 1.4MHz QPSK High Channel RB6-0



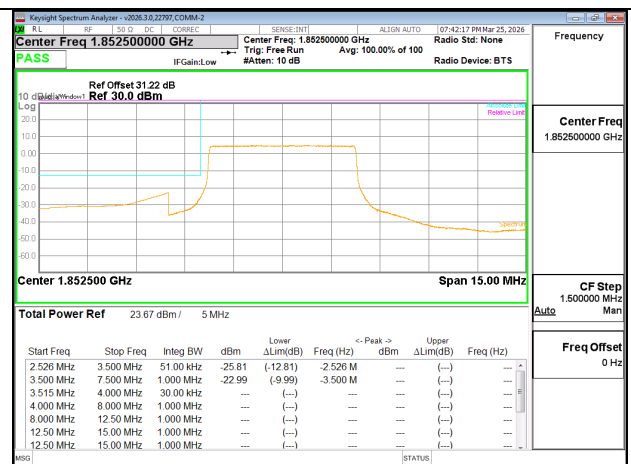
LTE B2 3MHz QPSK High Channel RB1-14



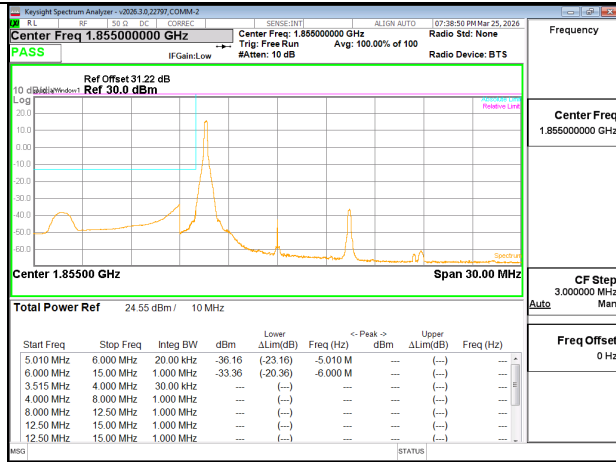
LTE B2 3MHz QPSK High Channel RB15-0



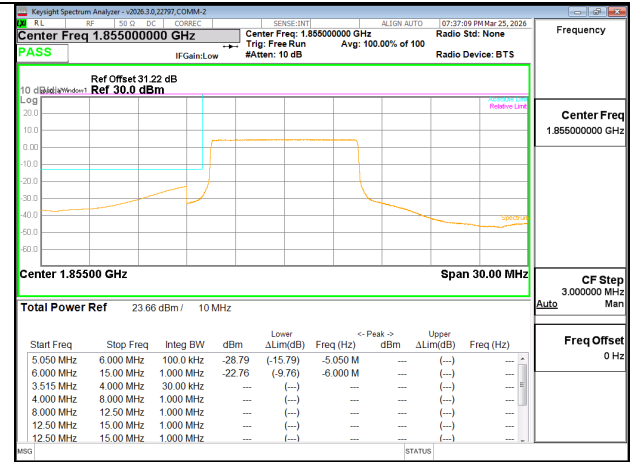
LTE B2 5MHz QPSK High Channel RB1-24



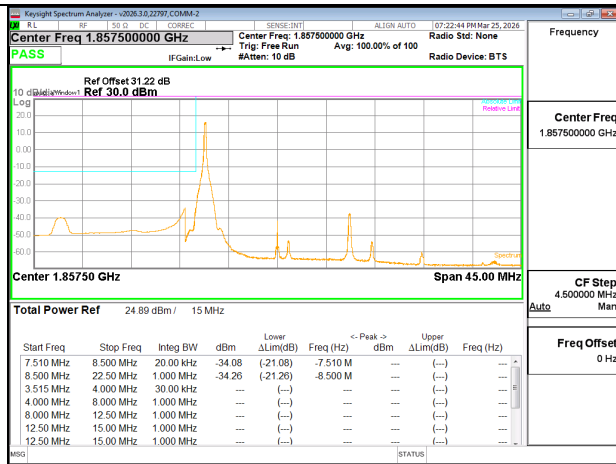
LTE B2 5MHz QPSK High Channel RB25-0



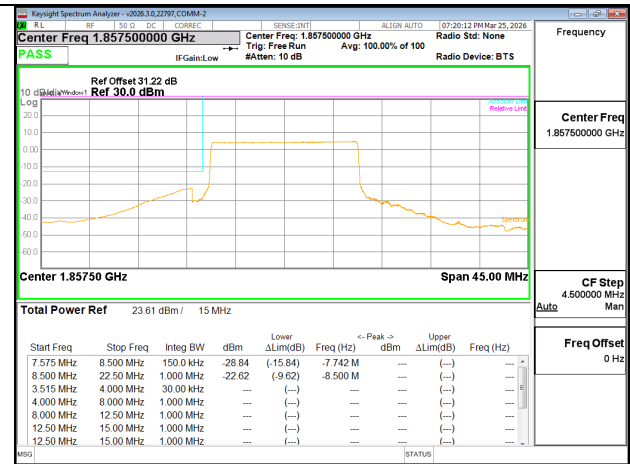
LTE B2 10MHz QPSK High Channel RB1-49



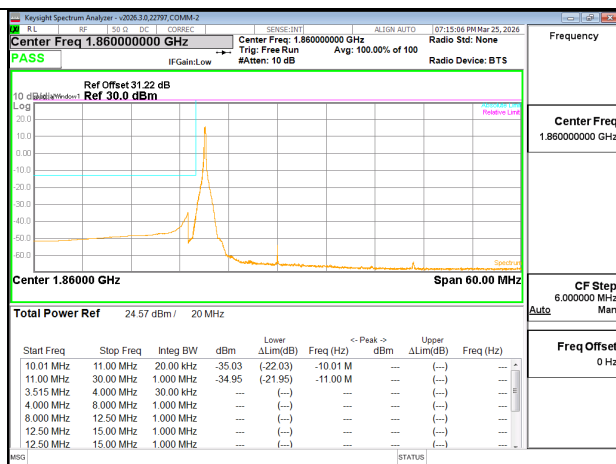
LTE B2 10MHz QPSK High Channel RB50-0



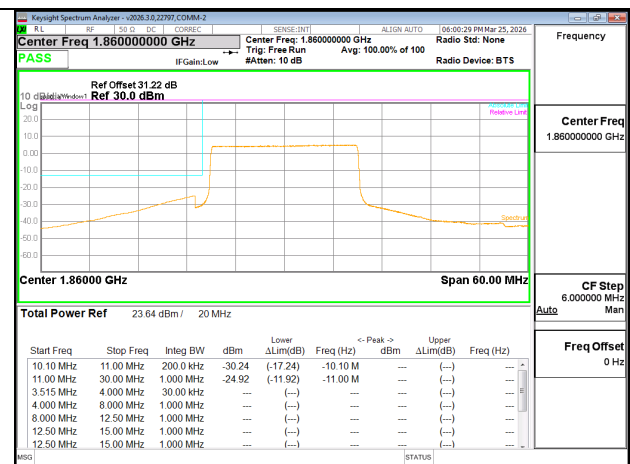
LTE B2 15MHz QPSK High Channel RB1-0



LTE B2 15MHz QPSK High Channel RB75-0

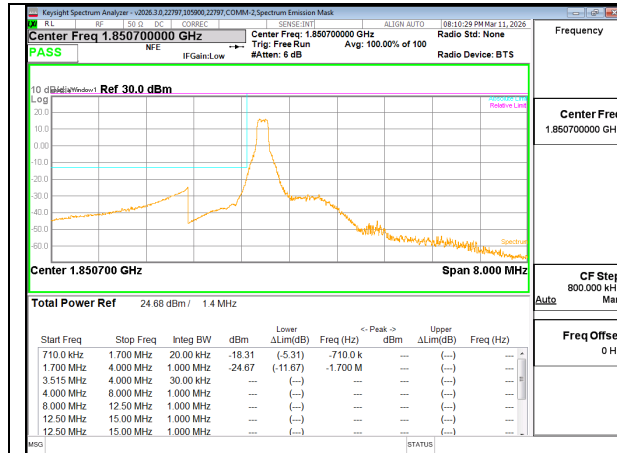


LTE B2 20MHz QPSK High Channel RB1-0

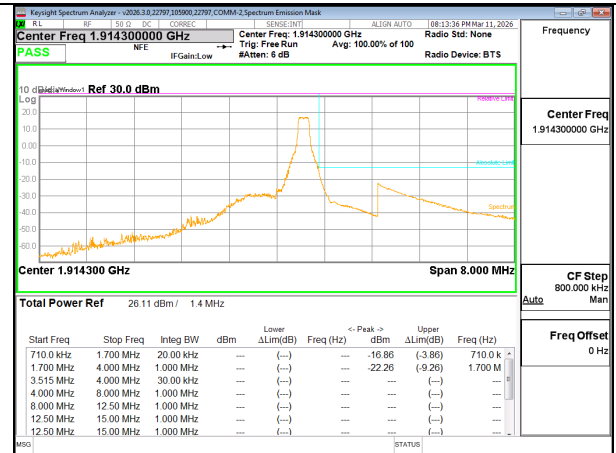


LTE B2 20MHz QPSK High Channel RB100-0

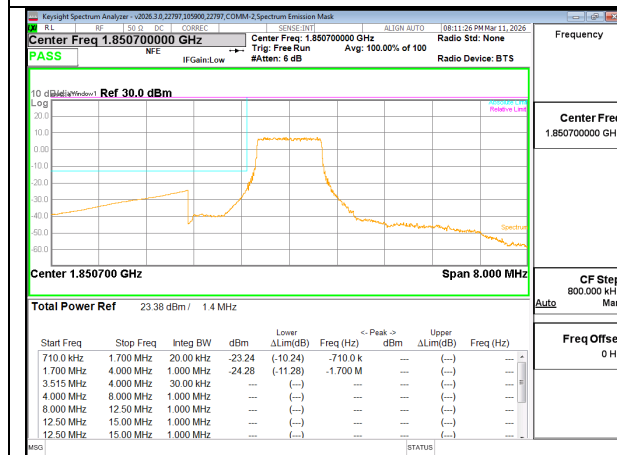
## 8.2.2. LTE BAND 25



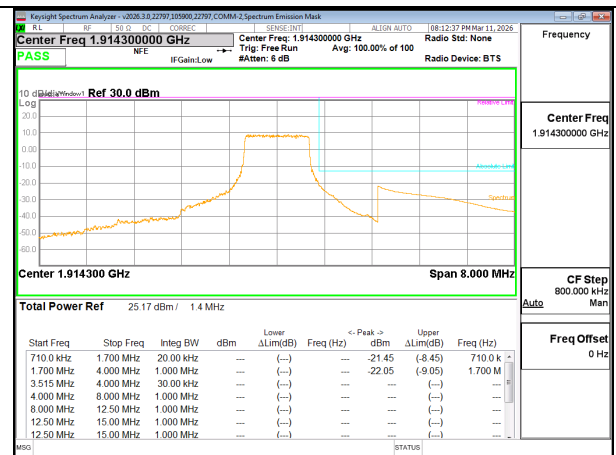
LTE B25 1.4MHz QPSK Low Channel RB1-0



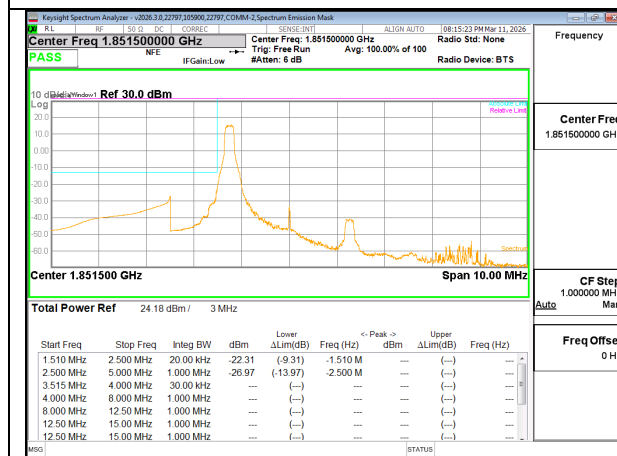
LTE B25 1.4MHz QPSK High Channel RB1-5



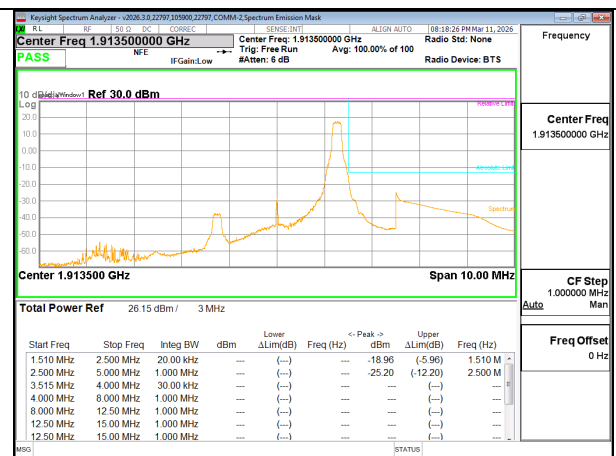
LTE B25 1.4MHz QPSK Low Channel RB6-0



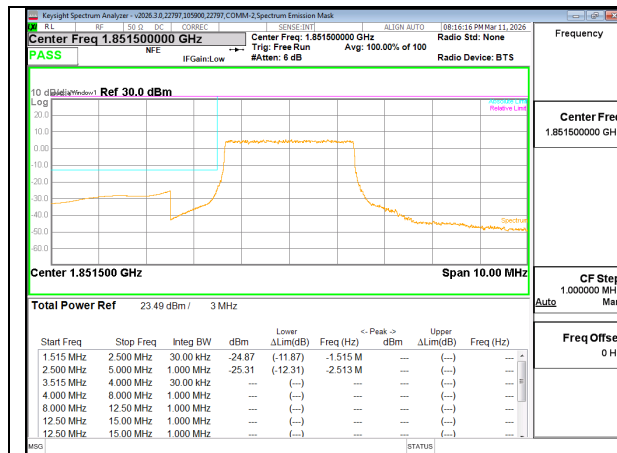
LTE B25 1.4MHz QPSK High Channel RB6-0



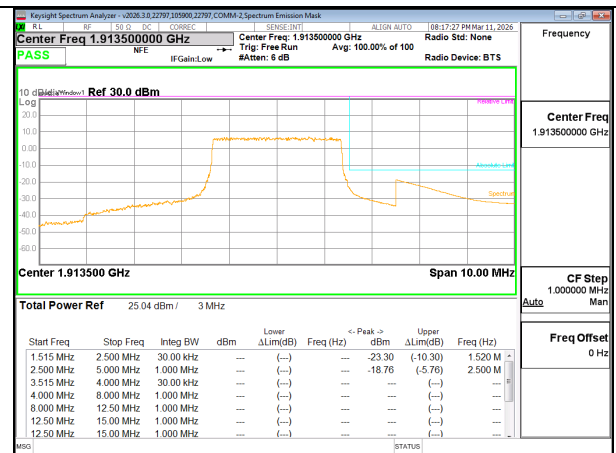
LTE B25 3MHz QPSK Low Channel RB1-0



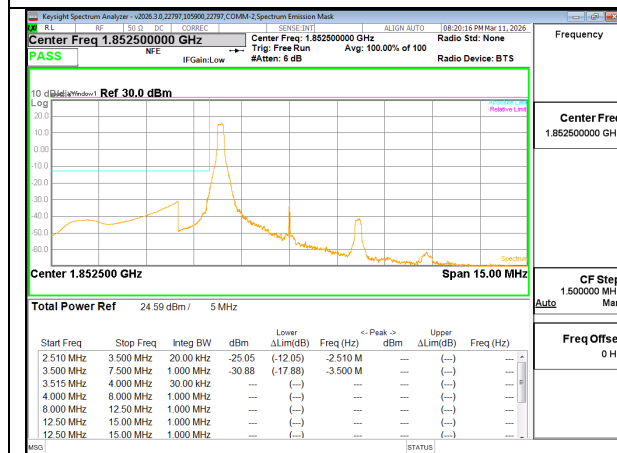
LTE B25 3MHz QPSK High Channel RB1-14



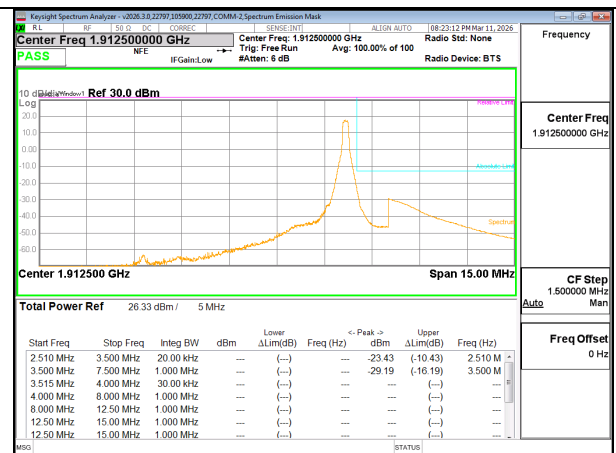
LTE B25 3MHz QPSK Low Channel RB15-0



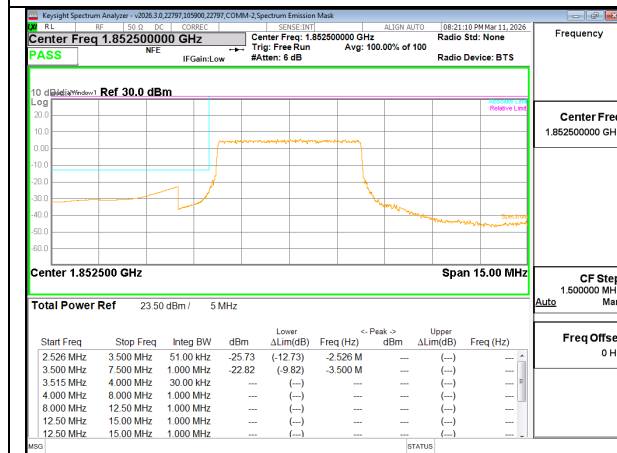
LTE B25 3MHz QPSK High Channel RB15-0



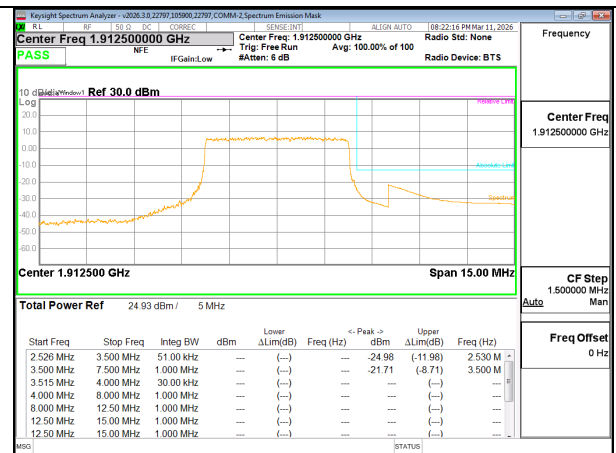
LTE B25 5MHz QPSK Low Channel RB1-0



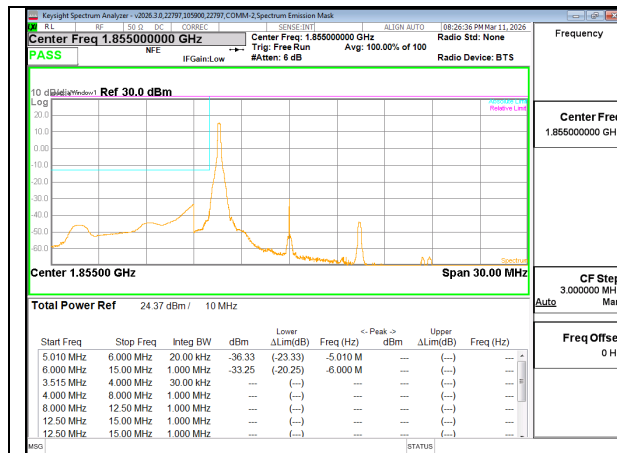
LTE B25 5MHz QPSK High Channel RB1-24



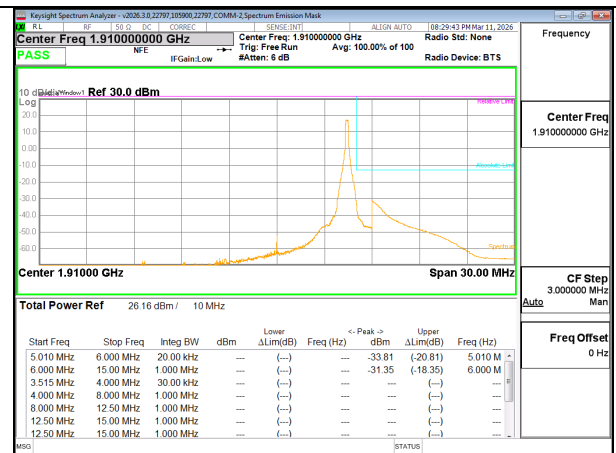
LTE B25 5MHz QPSK Low Channel RB25-0



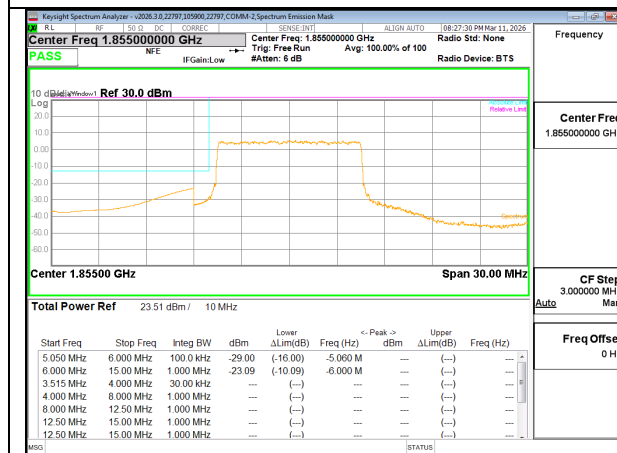
LTE B25 5MHz QPSK High Channel RB25-0



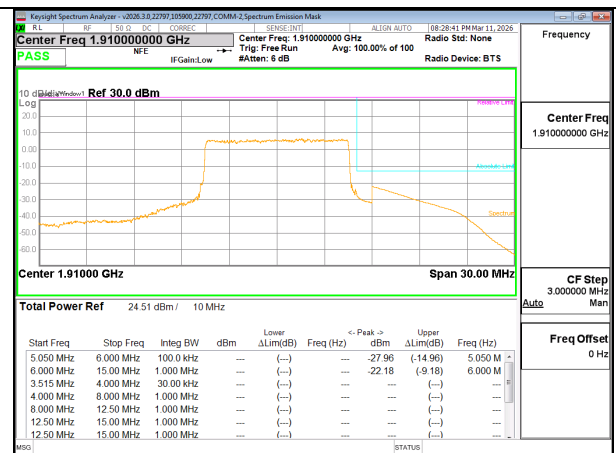
LTE B25 10MHz QPSK Low Channel RB1-0



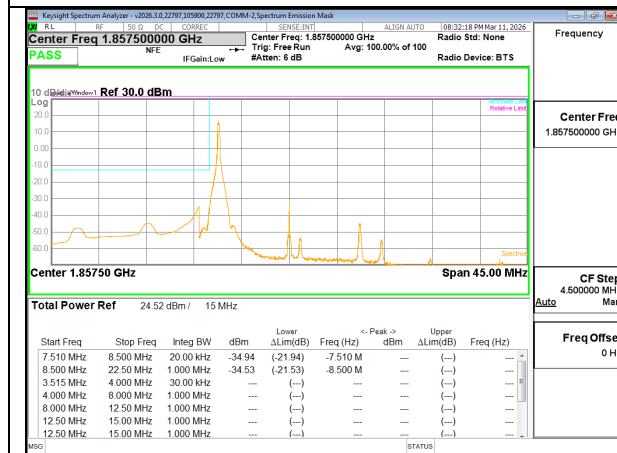
LTE B25 10MHz QPSK High Channel RB1-49



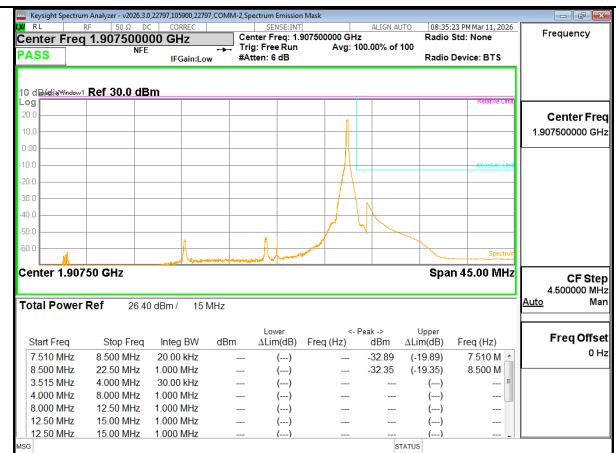
LTE B25 10MHz QPSK Low Channel RB50-0



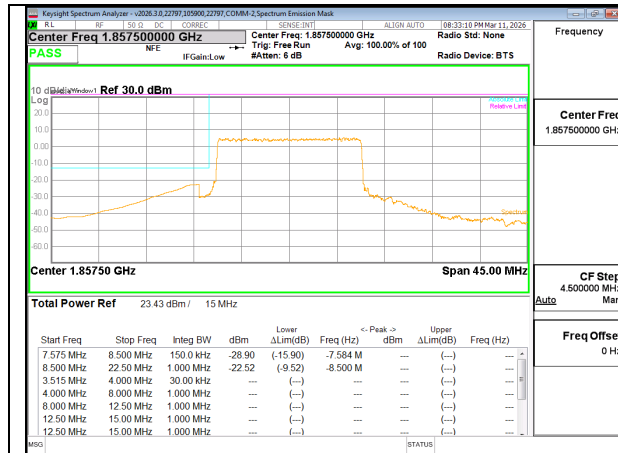
LTE B25 10MHz QPSK High Channel RB50-0



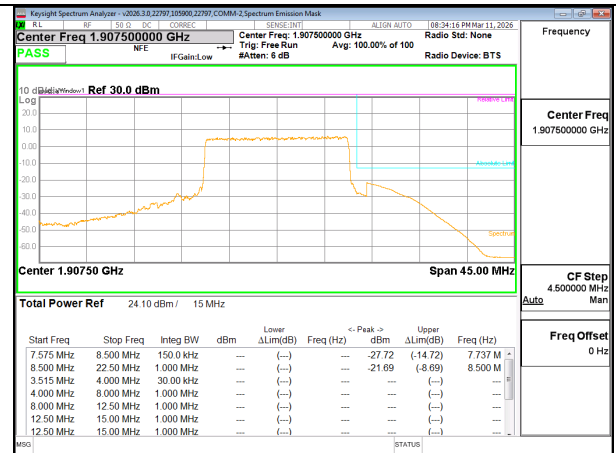
LTE B25 15MHz QPSK Low Channel RB1-0



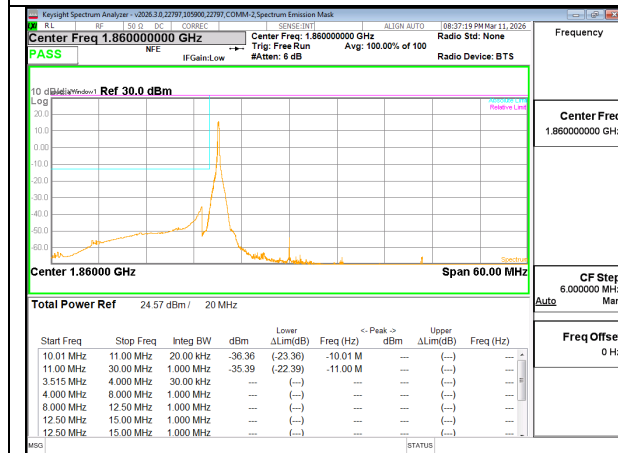
LTE B25 15MHz QPSK High Channel RB1-74



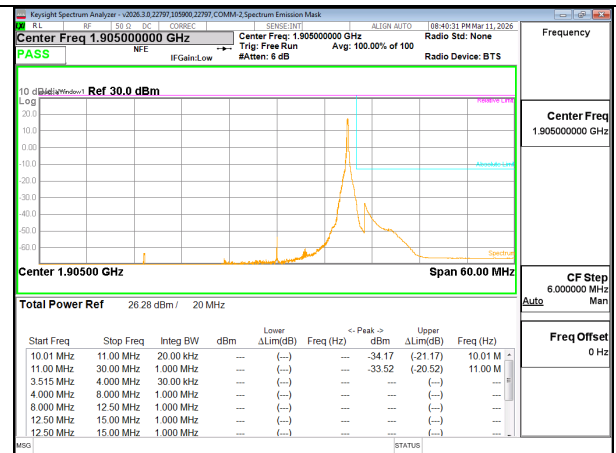
LTE B25 15MHz QPSK Low Channel RB75-0



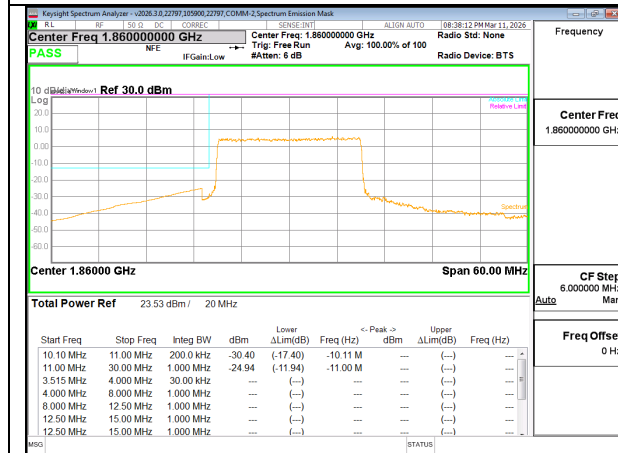
LTE B25 15MHz QPSK High Channel RB75-0



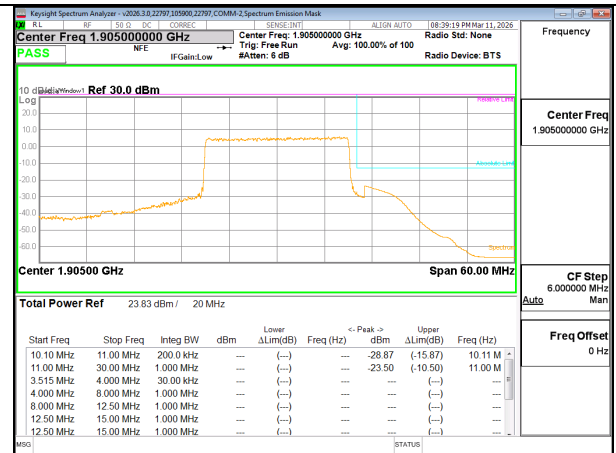
LTE B25 20MHz QPSK Low Channel RB1-0



LTE B25 20MHz QPSK High Channel RB1-99

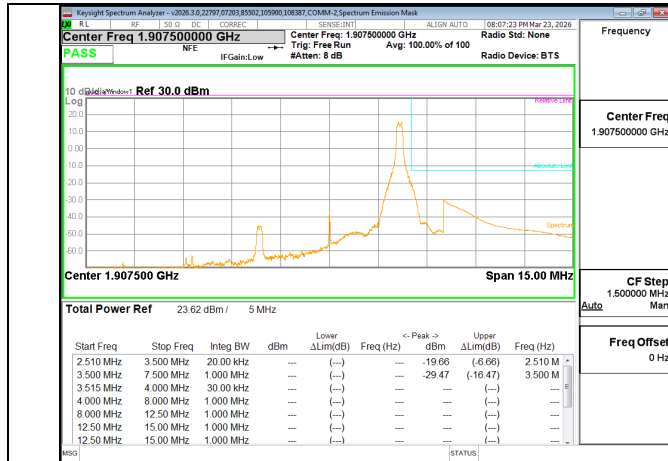


LTE B25 20MHz QPSK Low Channel RB100-0

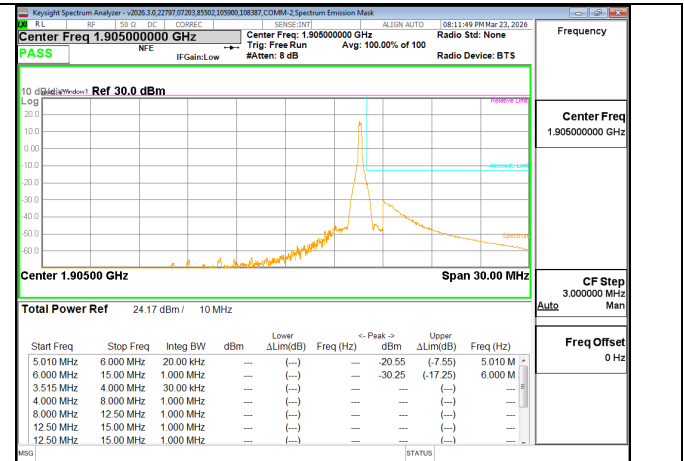


LTE B25 20MHz QPSK High Channel RB100-0

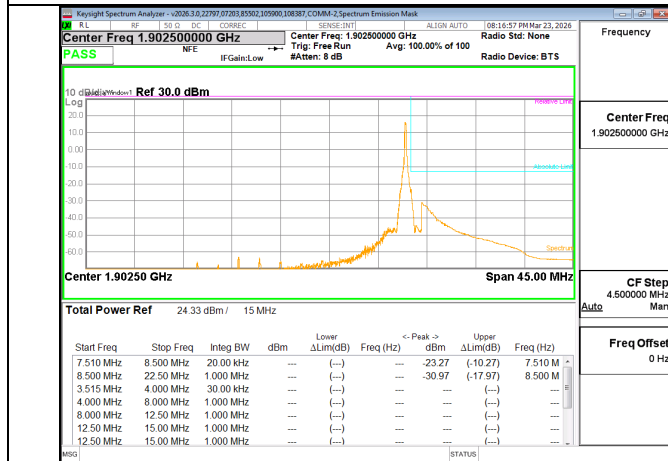
### 8.2.3. 5G NR n2



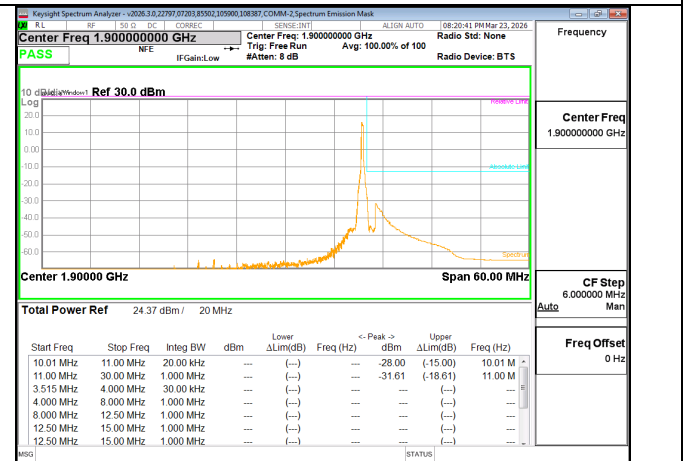
5G NR N2 5MHz QPSK High Channel RB1-24



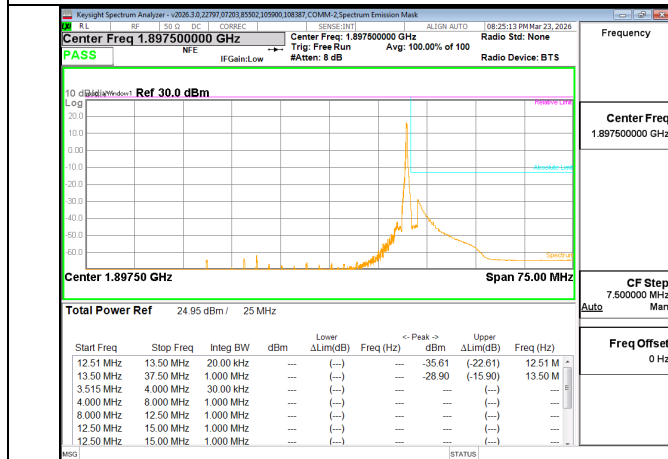
5G NR N2 10MHz QPSK High Channel RB1-51



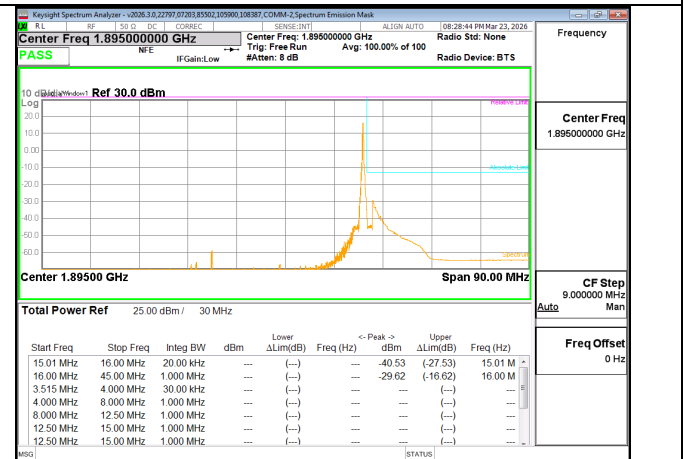
5G NR N2 15MHz QPSK High Channel RB1-78



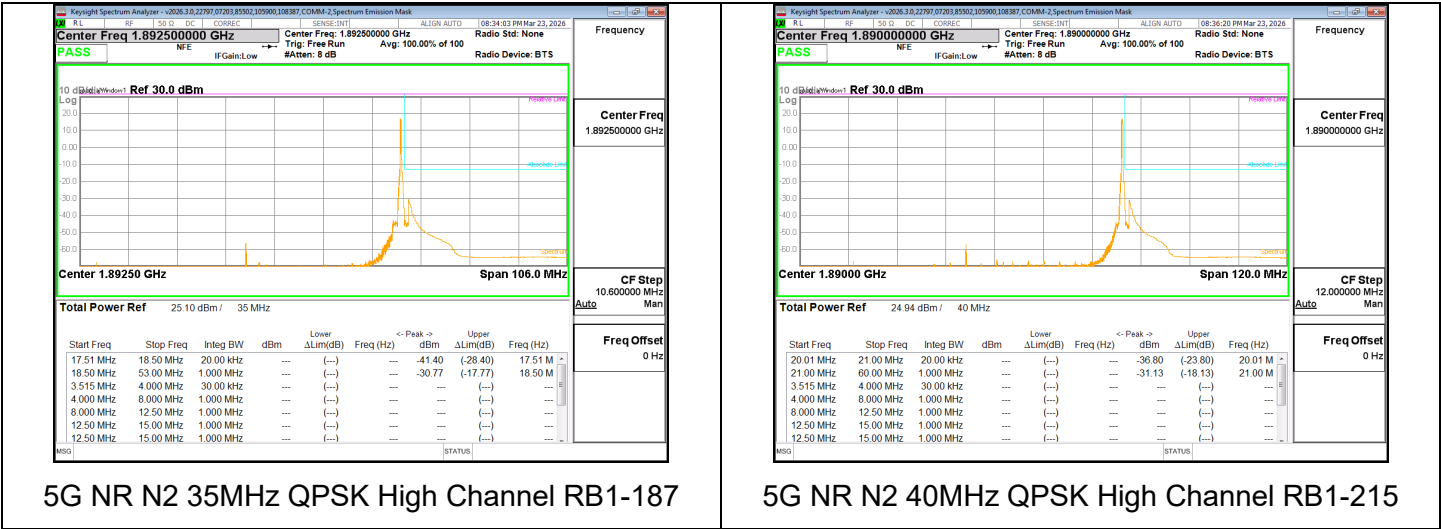
5G NR N2 20MHz QPSK High Channel RB1-105



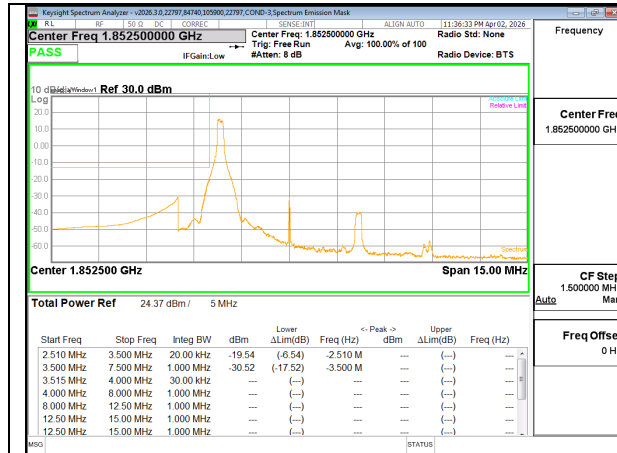
5G NR N2 25MHz QPSK High Channel RB1-132



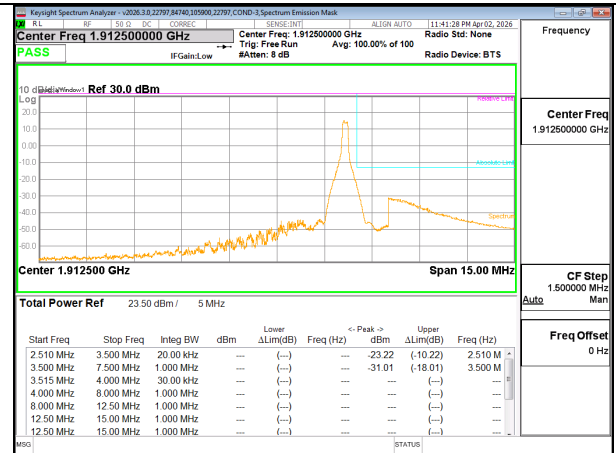
5G NR N2 30MHz QPSK High Channel RB1-159



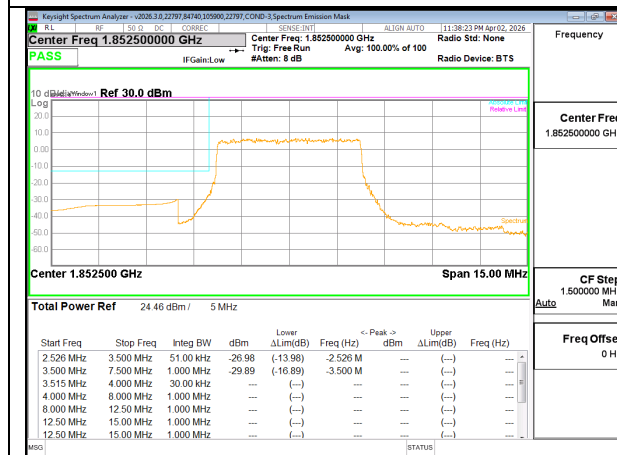
## 8.2.4. 5G NR n25



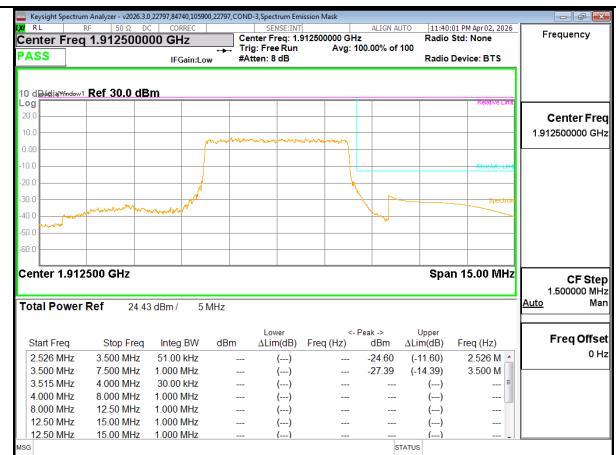
5G NR n25 5MHz BPSK Low Channel RB1-0



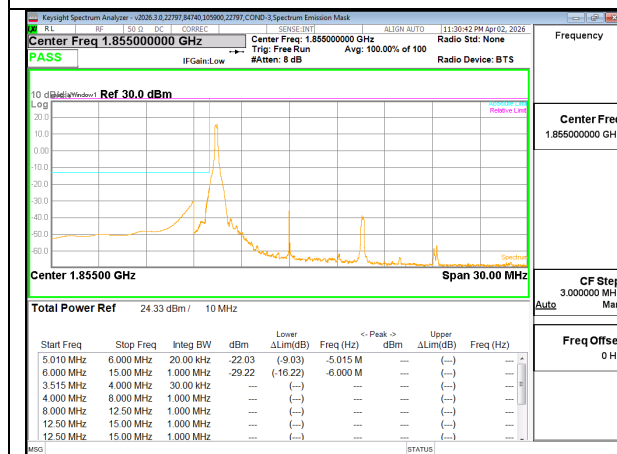
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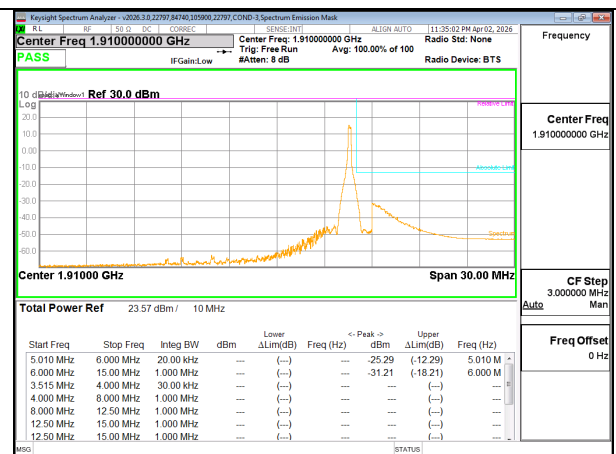
5G NR n25 5MHz BPSK Low Channel RB25-0



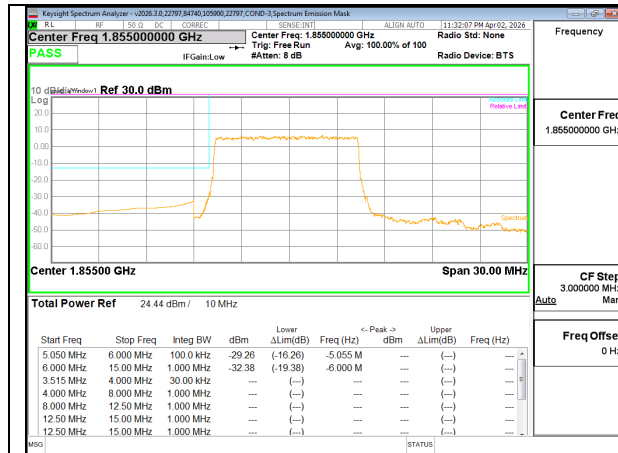
5G NR n25 5MHz BPSK High Channel RB25-0



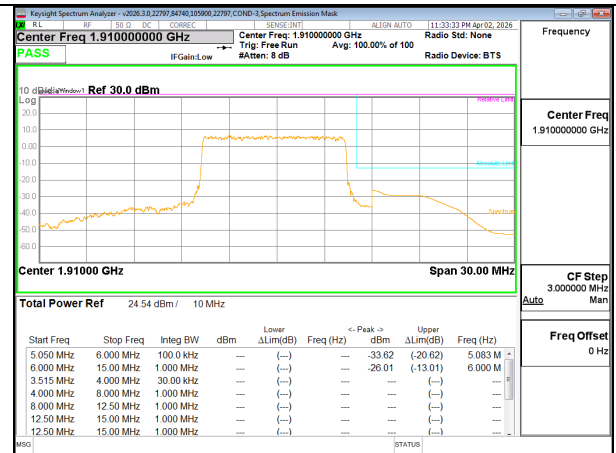
5G NR n25 10MHz BPSK Low Channel RB1-0



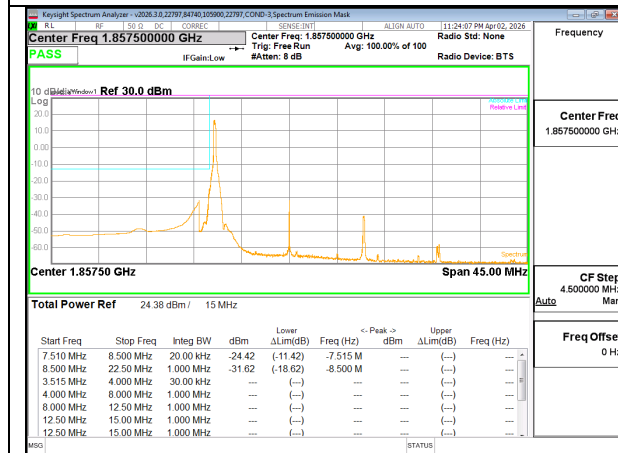
5G NR n25 10MHz BPSK High Channel RB1-51



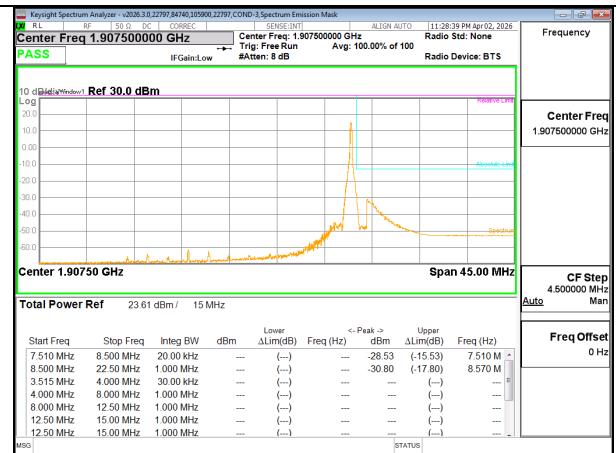
5G NR n25 10MHz BPSK Low Channel RB50-0



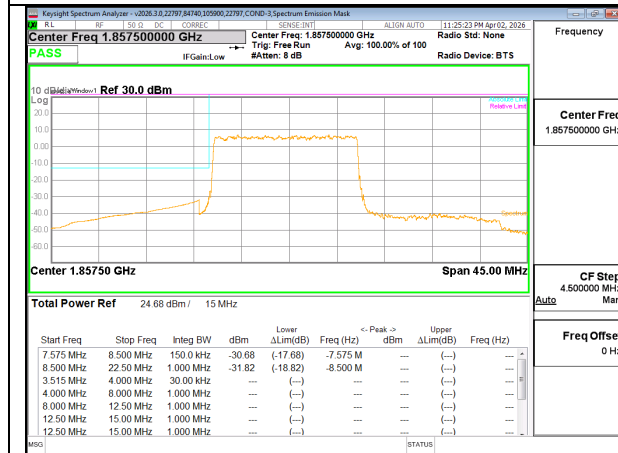
5G NR n25 10MHz BPSK High Channel RB50-0



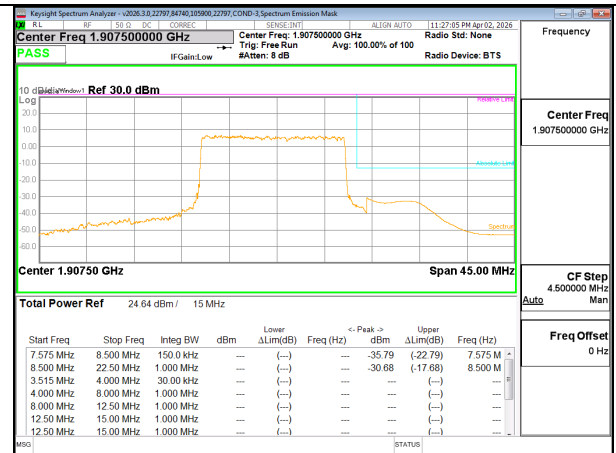
5G NR n25 15MHz BPSK Low Channel RB1-0



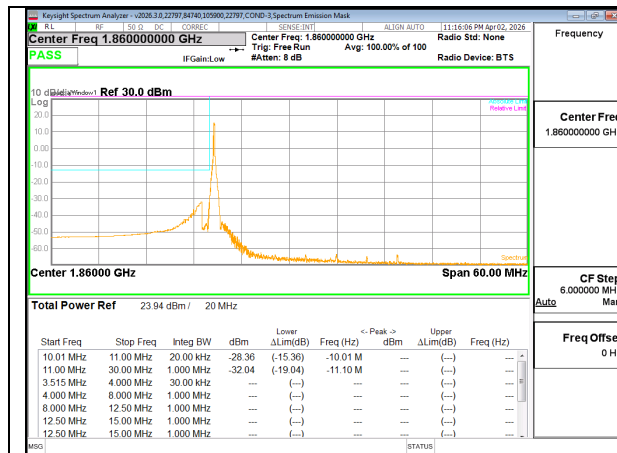
5G NR n25 15MHz BPSK High Channel RB1-78



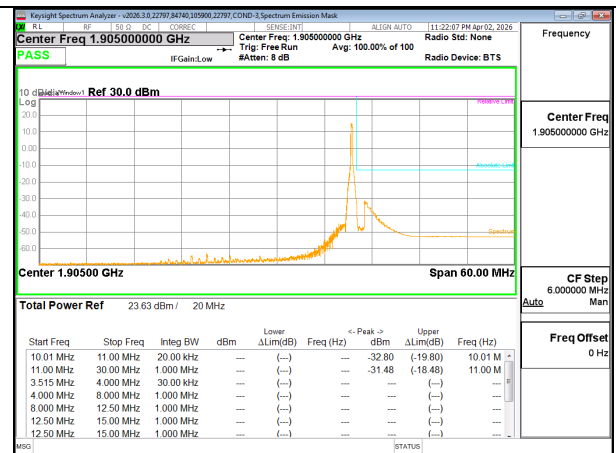
5G NR n25 15MHz BPSK Low Channel RB75-0



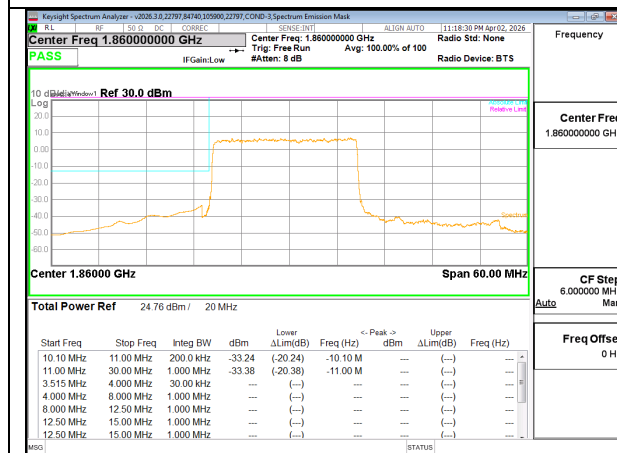
5G NR n25 15MHz BPSK High Channel RB75-0



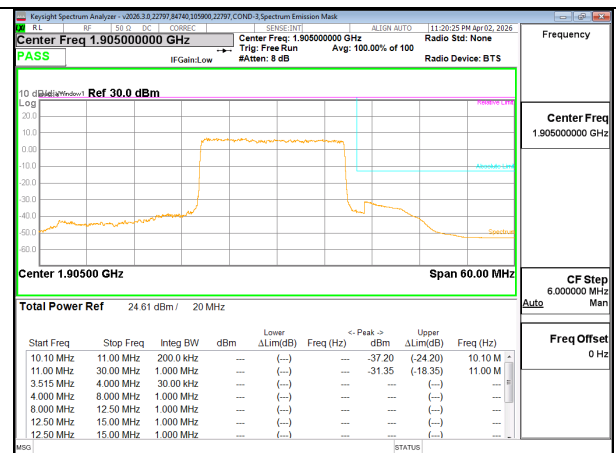
5G NR n25 20MHz BPSK Low Channel RB1-0



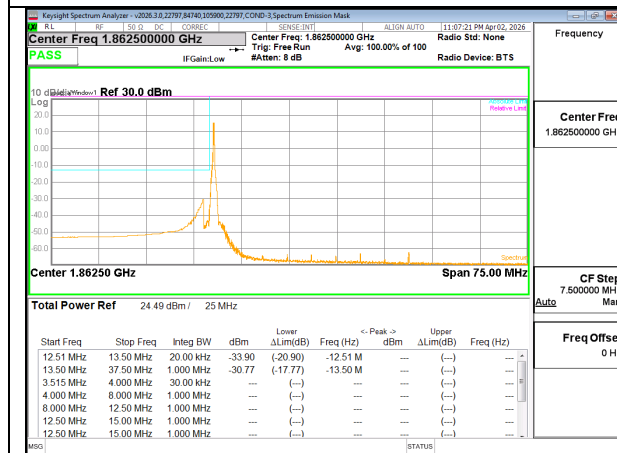
5G NR n25 20MHz BPSK High Channel RB1-05



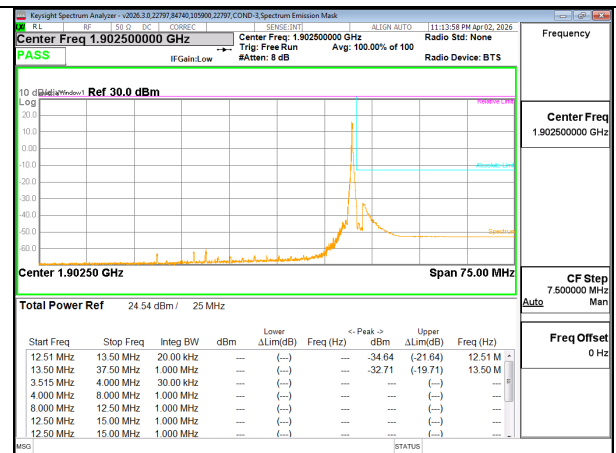
5G NR n25 20MHz BPSK Low Channel RB100-0



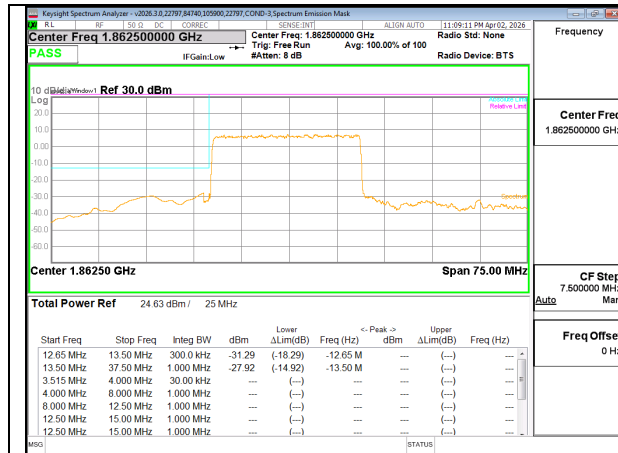
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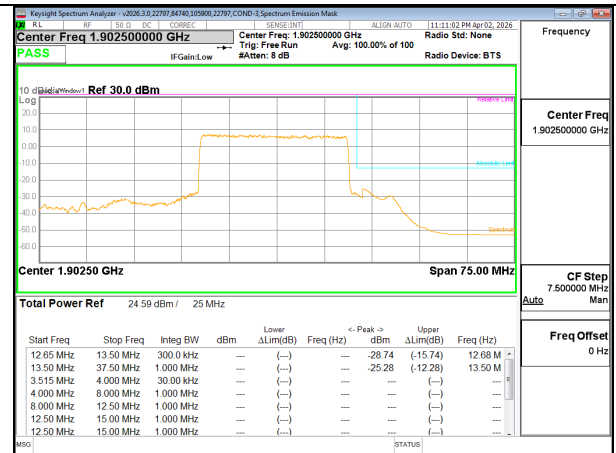
5G NR n25 25MHz BPSK Low Channel RB1-0



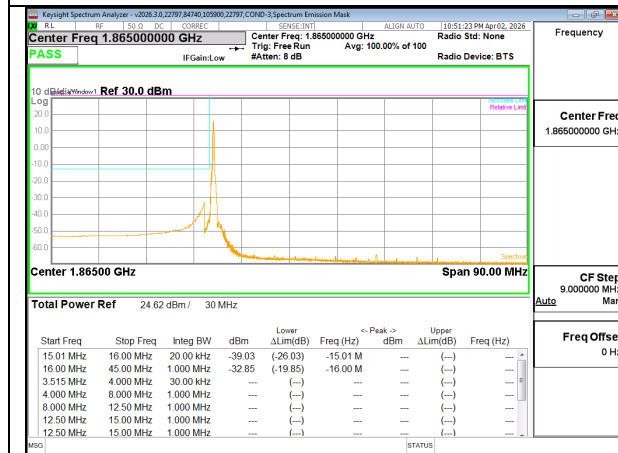
5G NR n25 25MHz BPSK High Channel RB1-132



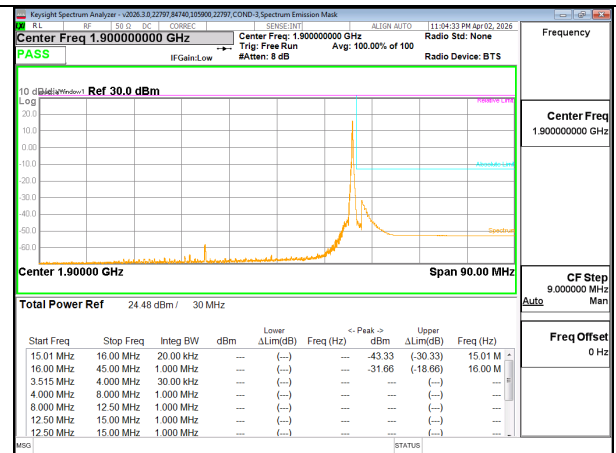
5G NR n25 25MHz BPSK Low Channel RB128-0



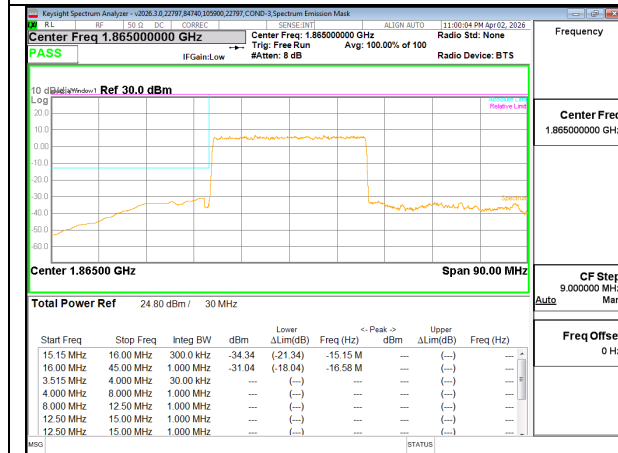
5G NR n25 25MHz BPSK High Channel RB128-0



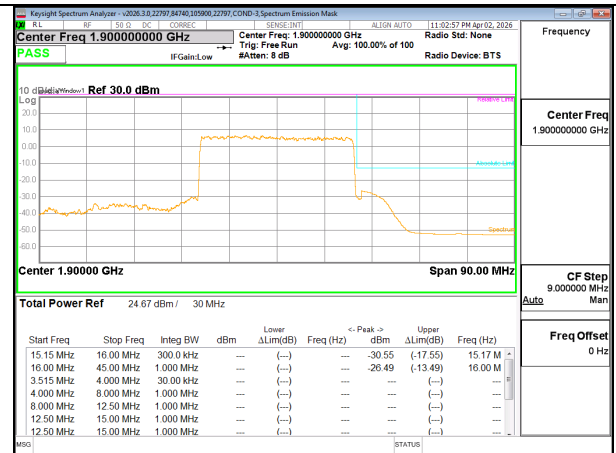
5G NR n25 30MHz BPSK Low Channel RB1-0



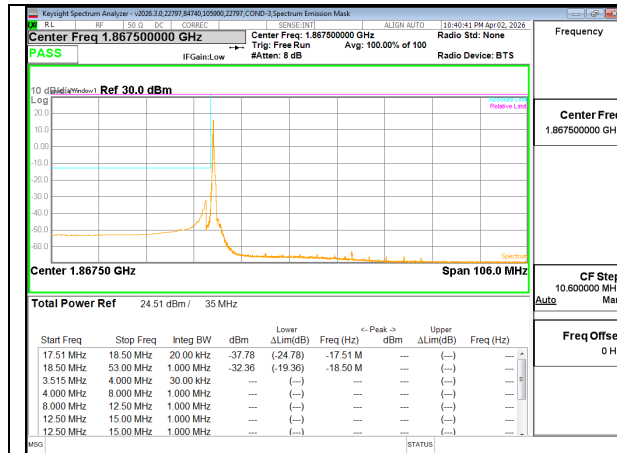
5G NR n25 30MHz BPSK High Channel RB1-159



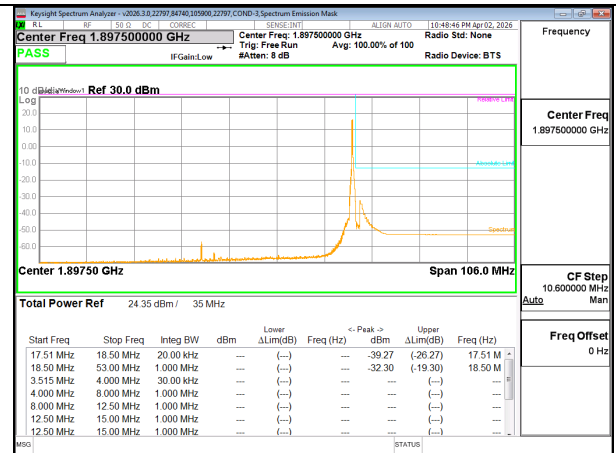
5G NR n25 30MHz BPSK Low Channel RB160-0



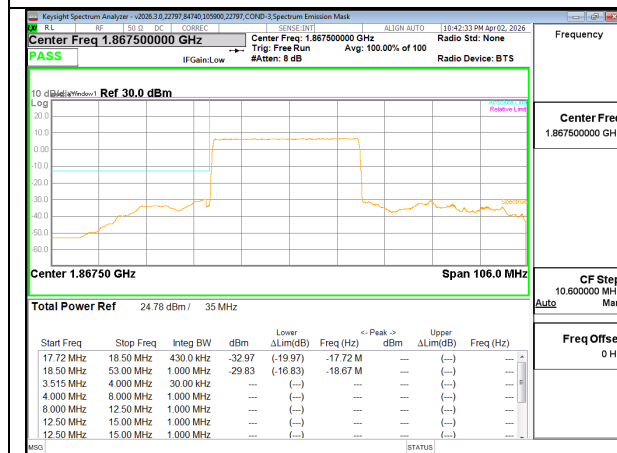
5G NR n25 30MHz BPSK High Channel RB160-0



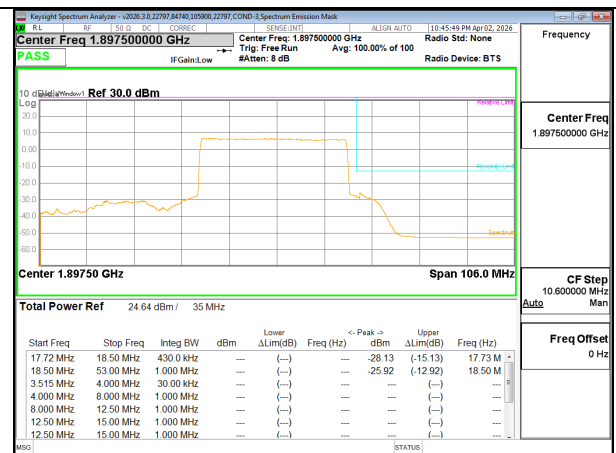
5G NR n25 35MHz BPSK Low Channel RB1-0



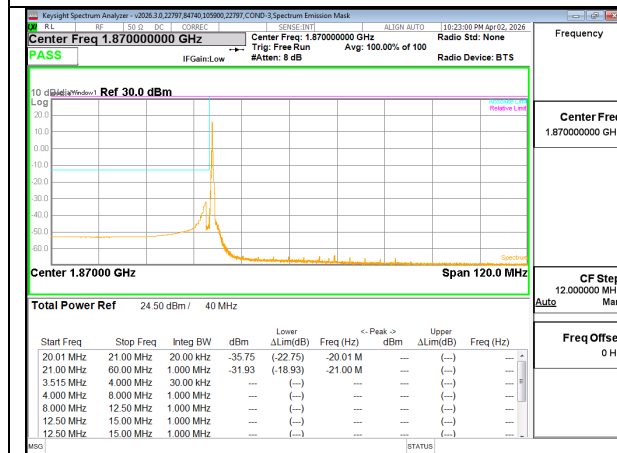
5G NR n25 35MHz BPSK High Channel RB1-187



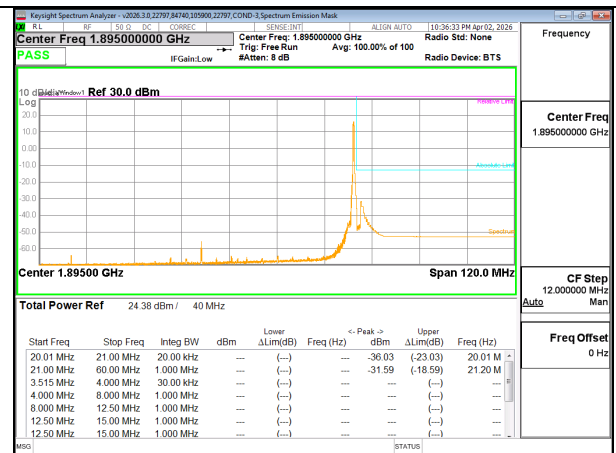
5G NR n25 35MHz BPSK Low Channel RB180-0



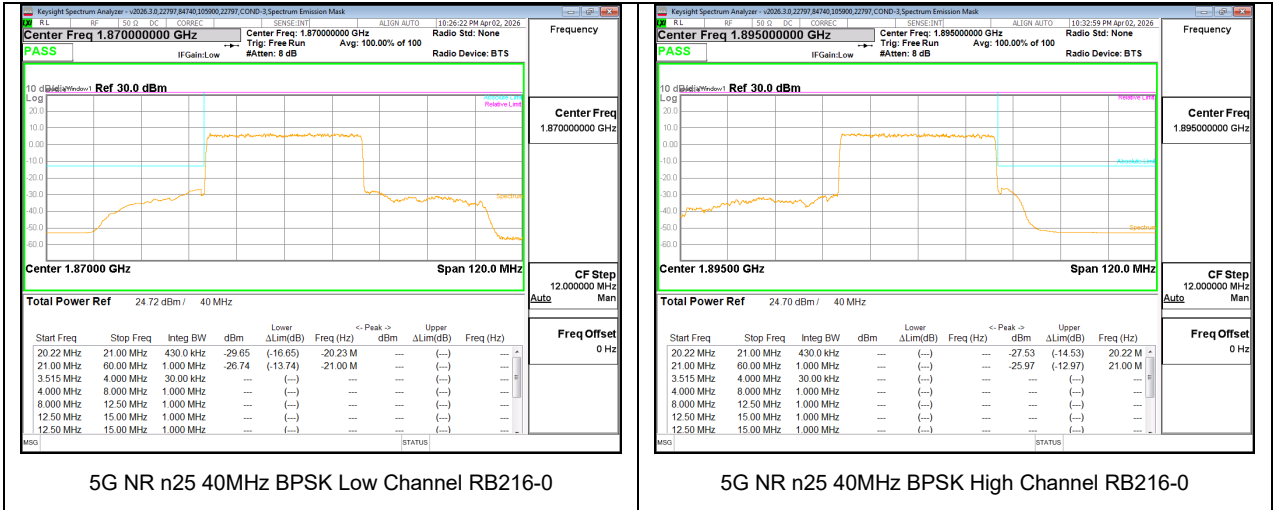
5G NR n25 35MHz BPSK High Channel RB180-0



5G NR n25 40MHz BPSK Low Channel RB1-0



5G NR n25 40MHz BPSK High Channel RB1-215



## 8.3. OUT OF BAND EMISSIONS

### LIMITS

FCC: §24.238 (a)

The minimum permissible attenuation level of any spurious emissions is  $43 + 10 \log (P)$  dB where transmitting power (P) in Watts.

ISED: RSS133§5.6

The minimum permissible attenuation level of any spurious emissions is  $43 + 10 \log (P)$  dB where transmitting power (P) in Watts.

### TEST PROCEDURE

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

For each out of band emissions measurement:

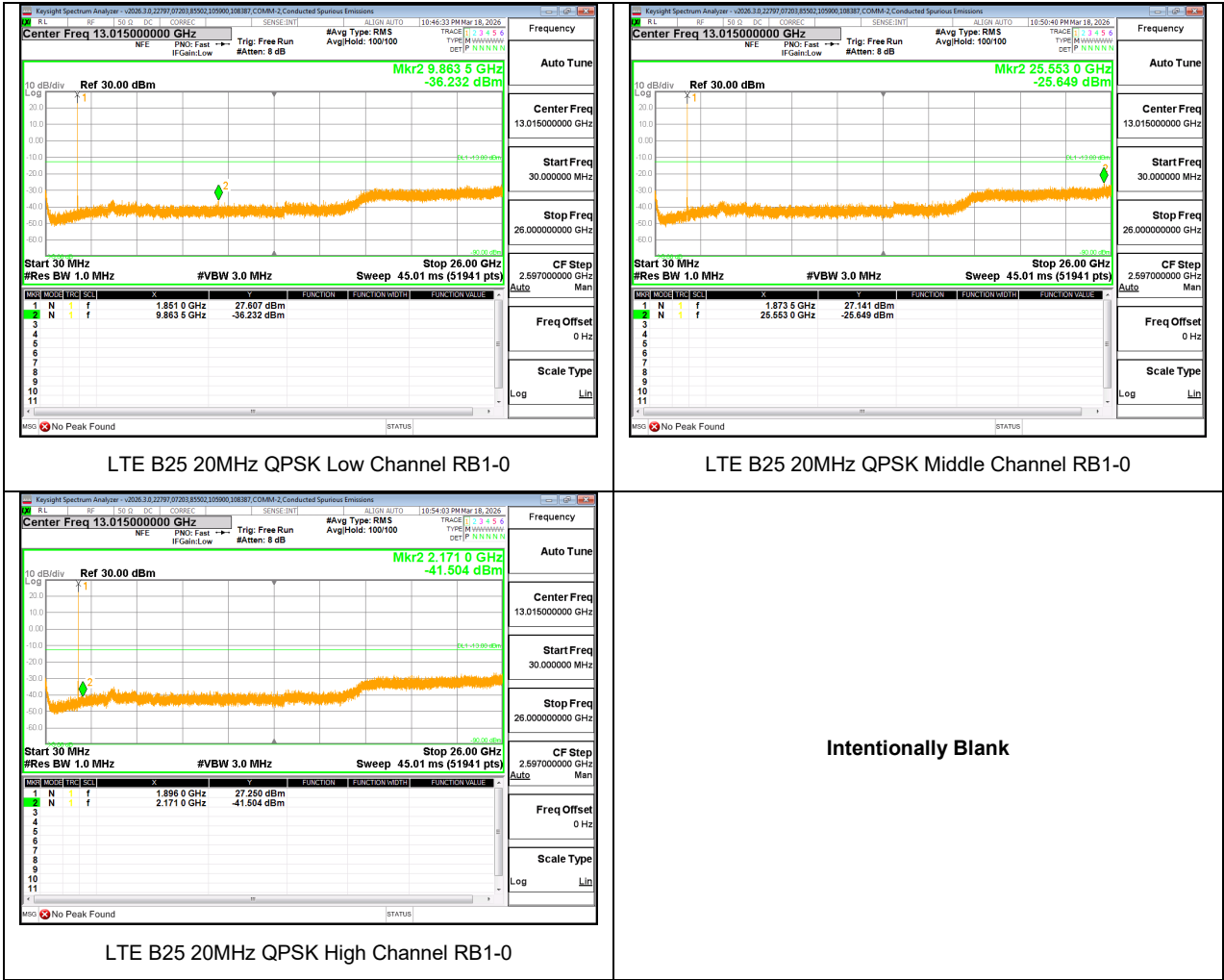
- Set display line at -13 dBm
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.  
(NOTE: Worst case set RBW/VBW to 1MHz/3MHz)

### RESULTS

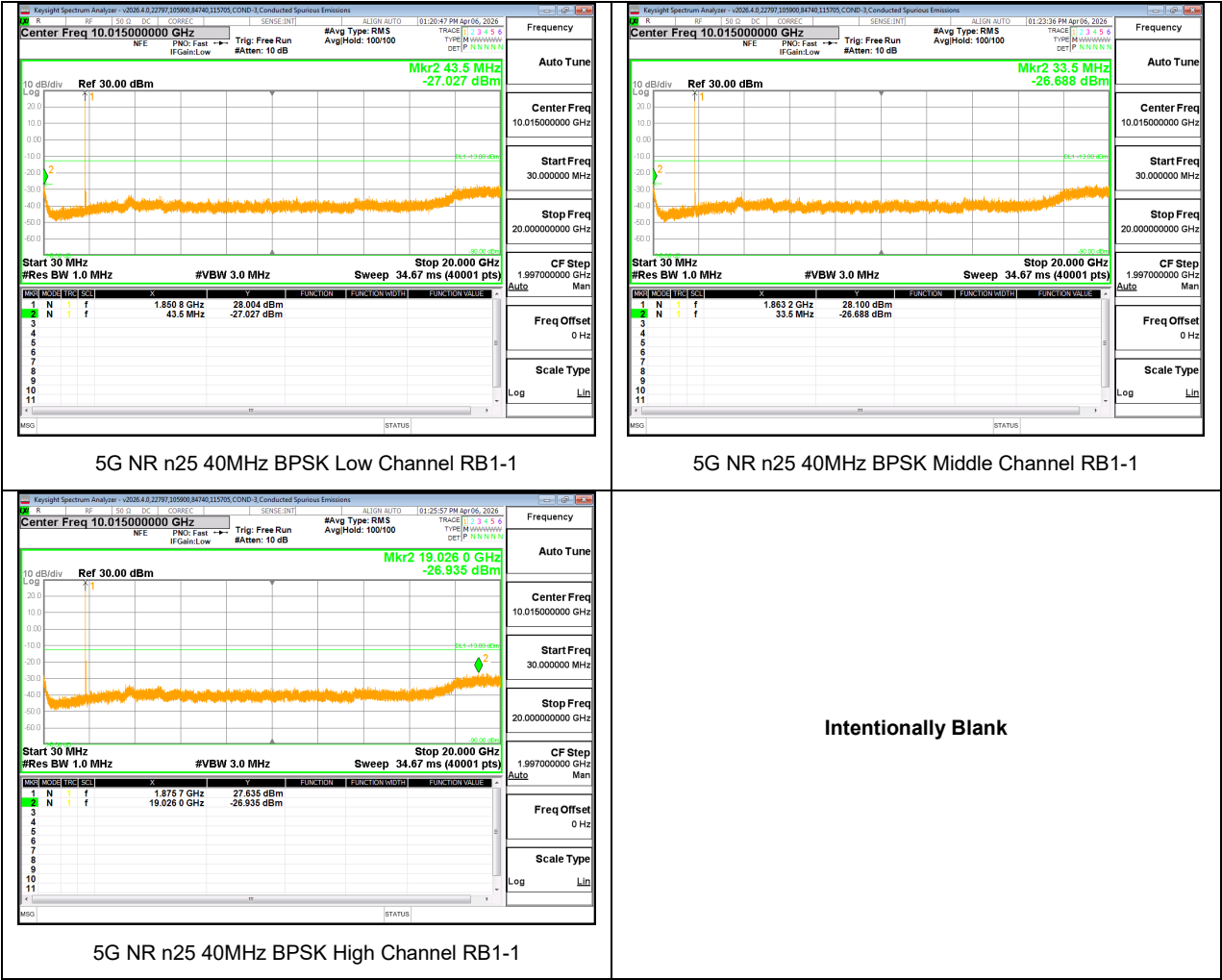
QPSK with 1RB is the highest power to all bandwidth. 1RB has the same frequency and power to all bandwidth. Therefore, QPSK with 1RB and wider bandwidths results are reported as worst case for LTE bands.

BPSK with 1RB is the highest power to all bandwidth. 1RB has the same frequency and power to all bandwidth. Therefore, BPSK with 1RB and wider bandwidths results are reported as worst case for 5G NRs.

8.3.1. LTE BAND 25



8.3.2. 5G NR n25



## 8.4. FREQUENCY STABILITY

### LIMITS

FCC: §24.235

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

ISED: RSS133§5.4

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within the operating frequency block or frequency block group when tested to the temperature and supply voltage variations specified in RSS-Gen.

### TEST PROCEDURE

Use base station simulator with Frequency Error measurement capability.

- Temp. = -30°C to +50°C
- Voltage = (85% - 115%)  
Low voltage, 3.7VDC, Normal, 3.89VDC and High voltage, 4.45VDC.  
End Voltage, 3.7VDC.

#### **Frequency Stability vs Temperature:**

The EUT is placed inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50°C is reached.

#### **Frequency Stability vs Voltage:**

The peak frequency error is recorded (worst-case).

### RESULTS

See the following pages.

### 8.4.1. LTE BAND 25 (QPSK 20MHz BANDWIDTH)

|                   |                   |           |                              |                               |                              |                           |     |
|-------------------|-------------------|-----------|------------------------------|-------------------------------|------------------------------|---------------------------|-----|
| Test Engineer ID: |                   | 105900    | Test Date:                   |                               | 2026-03-05 and 2026-04-08    |                           |     |
| Band              | 25                |           | Frequency Range              |                               | Frequency Error Reading (Hz) | Limit                     |     |
| Condition         |                   |           | 1850                         | 1915                          |                              | 2.5                       |     |
|                   |                   |           | Freq Reading @ Low End (MHz) | Freq Reading @ High End (MHz) |                              | Frequency Stability (ppm) |     |
| Temperature       | Voltage           |           |                              |                               |                              |                           |     |
| Normal (20°C)     | Normal            |           | 1834.6813                    | 1921.8500                     |                              |                           |     |
| Extreme (50°C)    |                   |           | 1834.6812                    | 1921.8500                     | -6.37                        | -0.003                    | Yes |
| Extreme (40°C)    |                   |           | 1834.6812                    | 1921.8500                     | -4.13                        | -0.002                    | Yes |
| Extreme (30°C)    |                   |           | 1834.6812                    | 1921.8500                     | -5.87                        | -0.003                    | Yes |
| Extreme (10°C)    |                   |           | 1834.6812                    | 1921.8500                     | -4.93                        | -0.003                    | Yes |
| Extreme (0°C)     |                   |           | 1834.6812                    | 1921.8500                     | -3.79                        | -0.002                    | Yes |
| Extreme (-10°C)   |                   |           | 1834.6813                    | 1921.8500                     | 3.5                          | 0.002                     | Yes |
| Extreme (-20°C)   |                   |           | 1834.6812                    | 1921.8500                     | -6.42                        | -0.003                    | Yes |
| Extreme (-30°C)   |                   |           | 1834.6812                    | 1921.8500                     | -6.98                        | -0.004                    | Yes |
|                   |                   |           |                              |                               |                              |                           |     |
| 20°C              | End Point Voltage | 1834.6812 | 1921.8500                    | -6.83                         | -0.004                       | Yes                       |     |

### 8.4.2. 5G NR n25 (BPSK 40MHz BANDWIDTH)

|                   |                   |           |                              |                               |                              |                           |                                        |
|-------------------|-------------------|-----------|------------------------------|-------------------------------|------------------------------|---------------------------|----------------------------------------|
| Test Engineer ID: |                   | 105900    | Test Date:                   |                               | 2026-03-03 and 2026-04-09    |                           |                                        |
| Band              | 25                |           | Frequency Range              |                               | Frequency Error Reading (Hz) | Limit                     |                                        |
| Condition         |                   |           | 1850                         | 1915                          |                              | 2.5                       | Within Authorized Frequency Block (Hz) |
|                   |                   |           | Freq Reading @ Low End (MHz) | Freq Reading @ High End (MHz) |                              | Frequency Stability (ppm) |                                        |
| Temperature       | Voltage           |           |                              |                               |                              |                           |                                        |
| Normal (20°C)     | Normal            |           | 1831.6250                    | 1921.8688                     |                              |                           |                                        |
| Extreme (50°C)    |                   |           | 1831.6250                    | 1921.8688                     | 0.0152                       | 0.000                     | Yes                                    |
| Extreme (40°C)    |                   |           | 1831.6250                    | 1921.8688                     | 0.0096                       | 0.000                     | Yes                                    |
| Extreme (30°C)    |                   |           | 1831.6250                    | 1921.8688                     | 0.0146                       | 0.000                     | Yes                                    |
| Extreme (10°C)    |                   |           | 1831.6250                    | 1921.8688                     | 0.0153                       | 0.000                     | Yes                                    |
| Extreme (0°C)     |                   |           | 1831.6250                    | 1921.8688                     | 0.0171                       | 0.000                     | Yes                                    |
| Extreme (-10°C)   |                   |           | 1831.6250                    | 1921.8688                     | 0.0124                       | 0.000                     | Yes                                    |
| Extreme (-20°C)   |                   |           | 1831.6250                    | 1921.8688                     | 0.0127                       | 0.000                     | Yes                                    |
| Extreme (-30°C)   |                   |           | 1831.6250                    | 1921.8688                     | 0.0139                       | 0.000                     | Yes                                    |
|                   |                   |           |                              |                               |                              |                           |                                        |
| 20°C              | End Point Voltage | 1831.6250 | 1921.8688                    | 0.0179                        | 0.000                        | Yes                       |                                        |

## **8.5. PEAK-TO-AVERAGE POWER RATIO**

### **LIMIT**

FCC: §24.232 (d)

In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

ISED: RSS133§5.5

In addition, the peak-to-average power ratio (PAPR) of the equipment shall not exceed 13 dB for more than 0.1% of the time, using a signal corresponding to the highest PAPR during periods of continuous transmission.

### **RESULT**

The worst-case antenna port for conducted power shown. Config 0 was used to measure as the worst case; full resource block (FRB) for each bandwidth was used to measure as the worst case. The results from all CCDF measurements are passed with 13dB peak-to-average power ratio criteria.

### **Test Procedure**

The EUT was connected to a Wideband Power Sensor to measure Peak and Average Conducted output power.

### 8.5.1. LTE BAND 25

| Test Engineer ID:                                                                          |                 | 105900          | Test Date:    |           | 2026-03-27 |                       |         |                       |
|--------------------------------------------------------------------------------------------|-----------------|-----------------|---------------|-----------|------------|-----------------------|---------|-----------------------|
| Band                                                                                       | Bandwidth (MHz) | Frequency (MHz) | RB Allocation | RB OffSet | Modulation | Conducted Power (dBm) |         | Peak-to-Average Power |
|                                                                                            |                 |                 |               |           |            | Peak                  | Average |                       |
| LTE<br>Band 25                                                                             | 1.4MHz          | 1882.5          | 6             | 0         | QPSK       | 26.68                 | 22.21   | 4.47                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 26.49                 | 21.29   | 5.20                  |
|                                                                                            | 3MHz            |                 | 15            | 0         | QPSK       | 27.07                 | 22.29   | 4.78                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 26.96                 | 21.33   | 5.63                  |
|                                                                                            | 5MHz            |                 | 25            | 0         | QPSK       | 26.99                 | 22.29   | 4.70                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 27.08                 | 21.33   | 5.75                  |
|                                                                                            | 10MHz           |                 | 50            | 0         | QPSK       | 27.14                 | 22.31   | 4.83                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 26.99                 | 21.33   | 5.66                  |
|                                                                                            | 15MHz           |                 | 75            | 0         | QPSK       | 27.41                 | 22.25   | 5.16                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 27.48                 | 21.30   | 6.18                  |
|                                                                                            | 20MHz           |                 | 100           | 0         | QPSK       | 27.36                 | 22.27   | 5.09                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 27.57                 | 21.27   | 6.30                  |
| Duty Cycle Correction Factor (dB) =                                                        |                 |                 |               |           |            |                       |         |                       |
| Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor |                 |                 |               |           |            |                       |         |                       |

### 8.5.2. 5G NR n25

| Test Engineer ID:                                                                          |                 | 105900          | Test Date:    |           | 2026-03-27 |                       |         |                       |
|--------------------------------------------------------------------------------------------|-----------------|-----------------|---------------|-----------|------------|-----------------------|---------|-----------------------|
| Band                                                                                       | Bandwidth (MHz) | Frequency (MHz) | RB Allocation | RB OffSet | Modulation | Conducted Power (dBm) |         | Peak-to-Average Power |
|                                                                                            |                 |                 |               |           |            | Peak                  | Average |                       |
| 5G NR<br>n25                                                                               | 5MHz            | 1882.5          | 25            | 0         | BPSK       | 26.29                 | 22.65   | 3.64                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 26.25                 | 21.07   | 5.18                  |
|                                                                                            | 10MHz           |                 | 50            | 0         | BPSK       | 26.03                 | 22.58   | 3.45                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 26.52                 | 22.12   | 4.40                  |
|                                                                                            | 15MHz           |                 | 75            | 0         | BPSK       | 26.4                  | 22.65   | 3.75                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 26.42                 | 21.27   | 5.15                  |
|                                                                                            | 20MHz           |                 | 100           | 0         | BPSK       | 26.61                 | 22.69   | 3.92                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 26.35                 | 21.06   | 5.29                  |
|                                                                                            | 25MHz           |                 | 128           | 0         | BPSK       | 26.95                 | 22.57   | 4.38                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 26.82                 | 21.01   | 5.81                  |
|                                                                                            | 30MHz           |                 | 160           | 0         | BPSK       | 26.67                 | 22.63   | 4.04                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 26.65                 | 21.00   | 5.65                  |
|                                                                                            | 35MHz           |                 | 180           | 0         | BPSK       | 26.6                  | 22.62   | 3.98                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 26.78                 | 21.00   | 5.78                  |
|                                                                                            | 40MHz           |                 | 216           | 0         | BPSK       | 26.66                 | 22.59   | 4.07                  |
|                                                                                            |                 |                 |               |           | 16QAM      | 26.33                 | 21.03   | 5.30                  |
| Duty Cycle Correction Factor (dB) =                                                        |                 |                 |               |           |            |                       |         |                       |
| Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor |                 |                 |               |           |            |                       |         |                       |

## 9. RADIATED TEST RESULTS

### Radiated measurement using the Field Strength Method

Using the test configuration shown in Figure 6 below, the radiated emissions is measured directly from the EUT and convert the measured field strength or received power to ERP or EIRP, as required, for comparison to the applicable limits. As stated in 5.5.1 of ANSI C63.26-2015, the field strength measurement method using a test site validated to the requirements of ANSI C63.4 is an alternative to the substitution measurement.

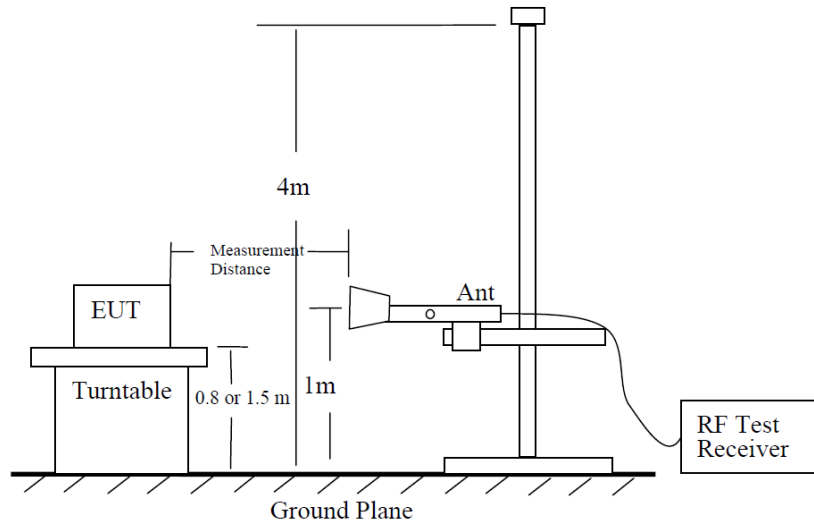


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

### Radiated Power Measurement Calculation According to ANSI C63.26-2015

- a)  $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}.$
- b)  $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}.$
- c)  $E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20\log(D) + 104.8;$  where D is the measurement distance (in the far field region) in m.
- d)  $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8;$  where D is the measurement distance (in the far field region) in m.

So, from d)

The measuring distance is usually at 3m, then  $20 \cdot \log(3) = 9.5424$

Then,  $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 9.5424 - 104.8 = E \text{ (dB}\mu\text{V/m)} - 95.2576$

Note: Confidence check of each chamber is performed daily to see if any degradation from expected/normal reading reference data. Ambient check of each chamber is performed monthly.

## 9.1. EFFECTIVE RADIATED POWER ERP/EIRP

### RULE PART(S)

FCC: §2.1046, §24.232 (c)

RSS133§5.5

### LIMITS

24.232(c) - Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

RSS133§5.5 - The maximum power spectral density of this equipment, measured in terms of average values, shall not exceed 3280 W/MHz e.i.r.p for the purpose of certification and may not apply to all deployment scenarios. Consult SRSP-510 for more deployment details in the band 1930-1995 MHz.

Mobile stations and hand-held portables are limited to 2 watts maximum e.i.r.p. The equipment shall employ means to limit the power to the minimum necessary for successful communication.

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13dB.

### TEST PROCEDURE

ANSI 63.26:2015

For average power measurements:

- a) Set span to at least 1.5 times the OBW;
- b) Set RBW = 1-5% of the OBW, not to exceed 1 MHz;
- c) Set VBW  $\geq 3 \times$  RBW;
- d) Set number of points in sweep  $\geq 2 \times$  span / RBW;
- e) Sweep time = auto-couple;
- f) Detector = RMS (power averaging);
- g) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- h) Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function.

### TEST RESULTS

#### High Frequency Substitution Measurement UL Morrisville Chamber 4

**Company:** Samsung  
**Project #:** 16238088  
**Date:** 2026-03-05 – 2026-04-14  
**Test Engineer:** 19289

### 9.1.1. LTE BAND 25

| Freq (MHz) | Band/Bandwidth              | RB Size-Offset | Modulation (Of EUT) | EIRP (W) | EIRP <sub>DUT</sub> (dBm) | Limit (dBm) | Margin (dB) |
|------------|-----------------------------|----------------|---------------------|----------|---------------------------|-------------|-------------|
| 1850.700   | LTE25 (2) / 1.4 MHz (ANT B) | RB1-0          | QPSK                | 0.150    | 21.77                     | 33.01       | -11.24      |
| 1882.500   |                             | RB1-3          | QPSK                | 0.145    | 21.63                     | 33.01       | -11.38      |
| 1914.300   |                             | RB1-5          | QPSK                | 0.154    | 21.87                     | 33.01       | -11.14      |
| 1850.700   |                             | RB1-0          | 16QAM               | 0.130    | 21.14                     | 33.01       | -11.87      |
| 1882.500   |                             | RB1-3          | 16QAM               | 0.122    | 20.85                     | 33.01       | -12.16      |
| 1914.300   |                             | RB1-5          | 16QAM               | 0.104    | 20.17                     | 33.01       | -12.84      |
| 1851.500   | LTE25 (2) / 3MHz (ANT B)    | RB1-0          | QPSK                | 0.149    | 21.75                     | 33.01       | -11.26      |
| 1882.500   |                             | RB1-8          | QPSK                | 0.151    | 21.78                     | 33.01       | -11.23      |
| 1913.500   |                             | RB1-14         | QPSK                | 0.155    | 21.90                     | 33.01       | -11.11      |
| 1851.500   |                             | RB1-0          | 16QAM               | 0.127    | 21.05                     | 33.01       | -11.96      |
| 1882.500   |                             | RB1-8          | 16QAM               | 0.130    | 21.13                     | 33.01       | -11.88      |
| 1913.500   |                             | RB1-14         | 16QAM               | 0.134    | 21.28                     | 33.01       | -11.73      |
| 1852.500   | LTE25 (2) / 5MHz (ANT B)    | RB1-0          | QPSK                | 0.152    | 21.83                     | 33.01       | -11.18      |
| 1882.500   |                             | RB1-12         | QPSK                | 0.152    | 21.82                     | 33.01       | -11.19      |
| 1912.500   |                             | RB1-24         | QPSK                | 0.157    | 21.97                     | 33.01       | -11.04      |
| 1852.500   |                             | RB1-0          | 16QAM               | 0.133    | 21.25                     | 33.01       | -11.76      |
| 1882.500   |                             | RB1-12         | 16QAM               | 0.127    | 21.04                     | 33.01       | -11.97      |
| 1912.500   |                             | RB1-24         | 16QAM               | 0.113    | 20.52                     | 33.01       | -12.49      |
| 1855.000   | LTE25 (2) / 10MHz (ANT B)   | RB1-0          | QPSK                | 0.151    | 21.80                     | 33.01       | -11.21      |
| 1882.500   |                             | RB1-25         | QPSK                | 0.149    | 21.73                     | 33.01       | -11.28      |
| 1910.000   |                             | RB1-49         | QPSK                | 0.155    | 21.92                     | 33.01       | -11.09      |
| 1855.000   |                             | RB1-0          | 16QAM               | 0.129    | 21.12                     | 33.01       | -11.89      |
| 1882.500   |                             | RB1-25         | 16QAM               | 0.125    | 20.98                     | 33.01       | -12.03      |
| 1910.000   |                             | RB1-49         | 16QAM               | 0.131    | 21.17                     | 33.01       | -11.84      |
| 1857.500   | LTE25 (2) / 15MHz (ANT B)   | RB1-0          | QPSK                | 0.153    | 21.84                     | 33.01       | -11.17      |
| 1882.500   |                             | RB1-37         | QPSK                | 0.151    | 21.79                     | 33.01       | -11.22      |
| 1907.500   |                             | RB1-74         | QPSK                | 0.153    | 21.84                     | 33.01       | -11.17      |
| 1857.500   |                             | RB1-0          | 16QAM               | 0.128    | 21.07                     | 33.01       | -11.94      |
| 1882.500   |                             | RB1-37         | 16QAM               | 0.126    | 21.01                     | 33.01       | -12.00      |
| 1907.500   |                             | RB1-74         | 16QAM               | 0.130    | 21.13                     | 33.01       | -11.88      |
| 1860.000   | LTE25(2) / 20MHz (ANT B)    | RB1-0          | QPSK                | 0.104    | 20.18                     | 33.01       | -12.83      |
| 1882.500   |                             | RB1-49         | QPSK                | 0.121    | 20.81                     | 33.01       | -12.20      |
| 1905.000   |                             | RB1-99         | QPSK                | 0.153    | 21.85                     | 33.01       | -11.16      |
| 1860.000   |                             | RB1-0          | 16QAM               | 0.089    | 19.48                     | 33.01       | -13.53      |
| 1882.500   |                             | RB1-49         | 16QAM               | 0.100    | 20.01                     | 33.01       | -13.00      |
| 1905.000   |                             | RB1-99         | 16QAM               | 0.127    | 21.05                     | 33.01       | -11.96      |

### CONFIG 0

| Freq<br>(MHz) | Band/Bandwidth                 | RB<br>Size-Offset | Modulation<br>(Of EUT) | EIRP (W) | EIRP <sub>DUT</sub><br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|---------------|--------------------------------|-------------------|------------------------|----------|------------------------------|----------------|----------------|
| 1850.700      | LTE25 (2) / 1.4 MHz<br>(ANT G) | RB1-0             | QPSK                   | 0.257    | 24.10                        | 33.01          | -8.91          |
| 1882.500      |                                | RB1-3             | QPSK                   | 0.247    | 23.93                        | 33.01          | -9.08          |
| 1914.300      |                                | RB1-5             | QPSK                   | 0.259    | 24.14                        | 33.01          | -8.87          |
| 1850.700      |                                | RB1-0             | 16QAM                  | 0.237    | 23.75                        | 33.01          | -9.26          |
| 1882.500      |                                | RB1-3             | 16QAM                  | 0.214    | 23.31                        | 33.01          | -9.70          |
| 1914.300      |                                | RB1-5             | 16QAM                  | 0.230    | 23.62                        | 33.01          | -9.39          |
| 1851.500      | LTE25 (2) / 3MHz<br>(ANT G)    | RB1-0             | QPSK                   | 0.234    | 23.70                        | 33.01          | -9.31          |
| 1882.500      |                                | RB1-8             | QPSK                   | 0.265    | 24.23                        | 33.01          | -8.78          |
| 1913.500      |                                | RB1-14            | QPSK                   | 0.247    | 23.92                        | 33.01          | -9.09          |
| 1851.500      |                                | RB1-0             | 16QAM                  | 0.231    | 23.63                        | 33.01          | -9.38          |
| 1882.500      |                                | RB1-8             | 16QAM                  | 0.219    | 23.41                        | 33.01          | -9.60          |
| 1913.500      |                                | RB1-14            | 16QAM                  | 0.237    | 23.75                        | 33.01          | -9.26          |
| 1852.500      | LTE25 (2) / 5MHz<br>(ANT G)    | RB1-0             | QPSK                   | 0.255    | 24.07                        | 33.01          | -8.94          |
| 1882.500      |                                | RB1-12            | QPSK                   | 0.248    | 23.95                        | 33.01          | -9.06          |
| 1912.500      |                                | RB1-24            | QPSK                   | 0.266    | 24.25                        | 33.01          | -8.76          |
| 1852.500      |                                | RB1-0             | 16QAM                  | 0.234    | 23.69                        | 33.01          | -9.32          |
| 1882.500      |                                | RB1-12            | 16QAM                  | 0.215    | 23.32                        | 33.01          | -9.69          |
| 1912.500      |                                | RB1-24            | 16QAM                  | 0.209    | 23.20                        | 33.01          | -9.81          |
| 1855.000      | LTE25 (2) / 10MHz<br>(ANT G)   | RB1-0             | QPSK                   | 0.247    | 23.93                        | 33.01          | -9.08          |
| 1882.500      |                                | RB1-25            | QPSK                   | 0.250    | 23.98                        | 33.01          | -9.03          |
| 1910.000      |                                | RB1-49            | QPSK                   | 0.269    | 24.29                        | 33.01          | -8.72          |
| 1855.000      |                                | RB1-0             | 16QAM                  | 0.238    | 23.77                        | 33.01          | -9.24          |
| 1882.500      |                                | RB1-25            | 16QAM                  | 0.215    | 23.33                        | 33.01          | -9.68          |
| 1910.000      |                                | RB1-49            | 16QAM                  | 0.208    | 23.18                        | 33.01          | -9.83          |
| 1857.500      | LTE25 (2) / 15MHz<br>(ANT G)   | RB1-0             | QPSK                   | 0.278    | 24.44                        | 33.01          | -8.57          |
| 1882.500      |                                | RB1-37            | QPSK                   | 0.249    | 23.97                        | 33.01          | -9.04          |
| 1907.500      |                                | RB1-74            | QPSK                   | 0.284    | 24.53                        | 33.01          | -8.48          |
| 1857.500      |                                | RB1-0             | 16QAM                  | 0.203    | 23.07                        | 33.01          | -9.94          |
| 1882.500      |                                | RB1-37            | 16QAM                  | 0.234    | 23.70                        | 33.01          | -9.31          |
| 1907.500      |                                | RB1-74            | 16QAM                  | 0.201    | 23.04                        | 33.01          | -9.97          |
| 1860.000      | LTE25(2) / 20MHz<br>(ANT G)    | RB1-0             | QPSK                   | 0.206    | 23.13                        | 33.01          | -9.88          |
| 1882.500      |                                | RB1-49            | QPSK                   | 0.233    | 23.68                        | 33.01          | -9.33          |
| 1905.000      |                                | RB1-99            | QPSK                   | 0.269    | 24.29                        | 33.01          | -8.72          |
| 1860.000      |                                | RB1-0             | 16QAM                  | 0.169    | 22.29                        | 33.01          | -10.72         |
| 1882.500      |                                | RB1-49            | 16QAM                  | 0.196    | 22.93                        | 33.01          | -10.08         |
| 1905.000      |                                | RB1-99            | 16QAM                  | 0.231    | 23.63                        | 33.01          | -9.38          |
| CONFIG 1      |                                |                   |                        |          |                              |                |                |

## 9.1.2. 5G NR n25

| Freq (MHz) | Band/Bandwidth          | RB Size-Offset | Modulation (Of EUT) | EIRP (W) | EIRP <sub>DUT</sub> (dBm) | Limit (dBm) | Margin (dB) |
|------------|-------------------------|----------------|---------------------|----------|---------------------------|-------------|-------------|
| 1852.500   | n25 (2) / 5MHz (ANT B)  | RB1-1          | BPSK                | 0.141    | 21.49                     | 33.01       | -11.52      |
| 1882.500   |                         | RB1-12         | BPSK                | 0.140    | 21.45                     | 33.01       | -11.56      |
| 1912.500   |                         | RB1-23         | BPSK                | 0.141    | 21.49                     | 33.01       | -11.52      |
| 1852.500   |                         | RB1-1          | 16QAM               | 0.106    | 20.26                     | 33.01       | -12.75      |
| 1882.500   |                         | RB1-12         | 16QAM               | 0.105    | 20.23                     | 33.01       | -12.78      |
| 1912.500   |                         | RB1-23         | 16QAM               | 0.105    | 20.23                     | 33.01       | -12.78      |
| 1855.000   | n25 (2) / 10MHz (ANT B) | RB1-1          | BPSK                | 0.143    | 21.56                     | 33.01       | -11.45      |
| 1882.500   |                         | RB1-26         | BPSK                | 0.142    | 21.51                     | 33.01       | -11.50      |
| 1910.000   |                         | RB1-50         | BPSK                | 0.142    | 21.51                     | 33.01       | -11.50      |
| 1855.000   |                         | RB1-1          | 16QAM               | 0.105    | 20.22                     | 33.01       | -12.79      |
| 1882.500   |                         | RB1-26         | 16QAM               | 0.107    | 20.28                     | 33.01       | -12.73      |
| 1910.000   |                         | RB1-50         | 16QAM               | 0.105    | 20.23                     | 33.01       | -12.78      |
| 1857.500   | n25 (2) / 15MHz (ANT B) | RB1-1          | BPSK                | 0.041    | 16.09                     | 33.01       | -16.92      |
| 1882.500   |                         | RB1-39         | BPSK                | 0.144    | 21.58                     | 33.01       | -11.43      |
| 1907.500   |                         | RB1-77         | BPSK                | 0.142    | 21.53                     | 33.01       | -11.48      |
| 1857.500   |                         | RB1-1          | 16QAM               | 0.108    | 20.35                     | 33.01       | -12.66      |
| 1882.500   |                         | RB1-39         | 16QAM               | 0.106    | 20.27                     | 33.01       | -12.74      |
| 1907.500   |                         | RB1-77         | 16QAM               | 0.106    | 20.25                     | 33.01       | -12.76      |
| 1860.000   | n25 (2) / 20MHz (ANT B) | RB1-1          | BPSK                | 0.140    | 21.45                     | 33.01       | -11.56      |
| 1882.500   |                         | RB1-53         | BPSK                | 0.143    | 21.55                     | 33.01       | -11.46      |
| 1905.000   |                         | RB1-104        | BPSK                | 0.143    | 21.55                     | 33.01       | -11.46      |
| 1860.000   |                         | RB1-1          | 16QAM               | 0.039    | 15.96                     | 33.01       | -17.05      |
| 1882.500   |                         | RB1-53         | 16QAM               | 0.105    | 20.21                     | 33.01       | -12.80      |
| 1905.000   |                         | RB1-104        | 16QAM               | 0.109    | 20.39                     | 33.01       | -12.62      |
| 1862.500   | n25 (2) / 25MHz (ANT B) | RB1-1          | BPSK                | 0.144    | 21.58                     | 33.01       | -11.43      |
| 1882.500   |                         | RB1-66         | BPSK                | 0.148    | <b>21.69</b>              | 33.01       | -11.32      |
| 1902.500   |                         | RB1-131        | BPSK                | 0.138    | 21.40                     | 33.01       | -11.61      |
| 1862.500   |                         | RB1-1          | 16QAM               | 0.107    | 20.31                     | 33.01       | -12.70      |
| 1882.500   |                         | RB1-66         | 16QAM               | 0.106    | 20.27                     | 33.01       | -12.74      |
| 1902.500   |                         | RB1-131        | 16QAM               | 0.105    | 20.23                     | 33.01       | -12.78      |
| 1865.000   | n25 (2) / 30MHz (ANT B) | RB1-1          | BPSK                | 0.053    | 17.23                     | 33.01       | -15.78      |
| 1882.500   |                         | RB1-80         | BPSK                | 0.144    | 21.57                     | 33.01       | -11.44      |
| 1897.500   |                         | RB1-158        | BPSK                | 0.143    | 21.54                     | 33.01       | -11.47      |
| 1865.000   |                         | RB1-1          | 16QAM               | 0.108    | 20.35                     | 33.01       | -12.66      |
| 1882.500   |                         | RB1-80         | 16QAM               | 0.106    | 20.25                     | 33.01       | -12.76      |
| 1897.500   |                         | RB1-158        | 16QAM               | 0.105    | 20.22                     | 33.01       | -12.79      |
| 1870.000   | n25 (2) / 35MHz (ANT B) | RB1-1          | BPSK                | 0.141    | 21.48                     | 33.01       | -11.53      |
| 1882.500   |                         | RB1-94         | BPSK                | 0.089    | 19.51                     | 33.01       | -13.50      |
| 1895.000   |                         | RB1-186        | BPSK                | 0.136    | 21.34                     | 33.01       | -11.67      |
| 1870.000   |                         | RB1-1          | 16QAM               | 0.107    | 20.30                     | 33.01       | -12.71      |
| 1882.500   |                         | RB1-94         | 16QAM               | 0.110    | <b>20.43</b>              | 33.01       | -12.58      |
| 1895.000   |                         | RB1-186        | 16QAM               | 0.105    | 20.23                     | 33.01       | -12.78      |
| 1870.000   | n25(2) / 40MHz (ANT B)  | RB1-1          | BPSK                | 0.126    | 21.00                     | 33.01       | -12.01      |
| 1882.500   |                         | RB1-108        | BPSK                | 0.076    | 18.82                     | 33.01       | -14.19      |
| 1895.000   |                         | RB1-214        | BPSK                | 0.136    | <b>21.35</b>              | 33.01       | -11.66      |
| 1870.000   |                         | RB1-1          | 16QAM               | 0.099    | 19.94                     | 33.01       | -13.07      |
| 1882.500   |                         | RB1-108        | 16QAM               | 0.061    | 17.88                     | 33.01       | -15.13      |
| 1895.000   |                         | RB1-214        | 16QAM               | 0.105    | <b>20.23</b>              | 33.01       | -12.78      |

### CONFIG 0

| Freq (MHz) | Band/Bandwidth          | RB Size-Offset | Modulation (Of EUT) | EIRP (W) | EIRP <sub>DUT</sub> (dBm) | Limit (dBm) | Margin (dB) |
|------------|-------------------------|----------------|---------------------|----------|---------------------------|-------------|-------------|
| 1852.500   | n25 (2) / 5MHz (ANT G)  | RB1-1          | BPSK                | 0.328    | 25.16                     | 33.01       | -7.85       |
| 1882.500   |                         | RB1-12         | BPSK                | 0.361    | 25.58                     | 33.01       | -7.43       |
| 1912.500   |                         | RB1-23         | BPSK                | 0.311    | 24.93                     | 33.01       | -8.08       |
| 1852.500   |                         | RB1-1          | 16QAM               | 0.256    | 24.09                     | 33.01       | -8.92       |
| 1882.500   |                         | RB1-12         | 16QAM               | 0.265    | 24.23                     | 33.01       | -8.78       |
| 1912.500   |                         | RB1-23         | 16QAM               | 0.238    | 23.76                     | 33.01       | -9.25       |
| 1855.000   | n25 (2) / 10MHz (ANT G) | RB1-1          | BPSK                | 0.333    | 25.22                     | 33.01       | -7.79       |
| 1882.500   |                         | RB1-26         | BPSK                | 0.362    | 25.59                     | 33.01       | -7.42       |
| 1910.000   |                         | RB1-50         | BPSK                | 0.320    | 25.05                     | 33.01       | -7.96       |
| 1855.000   |                         | RB1-1          | 16QAM               | 0.251    | 24.00                     | 33.01       | -9.01       |
| 1882.500   |                         | RB1-26         | 16QAM               | 0.273    | 24.36                     | 33.01       | -8.65       |
| 1910.000   |                         | RB1-50         | 16QAM               | 0.243    | 23.85                     | 33.01       | -9.16       |
| 1857.500   | n25 (2) / 15MHz (ANT G) | RB1-1          | BPSK                | 0.335    | 25.25                     | 33.01       | -7.76       |
| 1882.500   |                         | RB1-39         | BPSK                | 0.362    | 25.59                     | 33.01       | -7.42       |
| 1907.500   |                         | RB1-77         | BPSK                | 0.315    | 24.98                     | 33.01       | -8.03       |
| 1857.500   |                         | RB1-1          | 16QAM               | 0.256    | 24.08                     | 33.01       | -8.93       |
| 1882.500   |                         | RB1-39         | 16QAM               | 0.279    | 24.45                     | 33.01       | -8.56       |
| 1907.500   |                         | RB1-77         | 16QAM               | 0.243    | 23.85                     | 33.01       | -9.16       |
| 1860.000   | n25 (2) / 20MHz (ANT G) | RB1-1          | BPSK                | 0.328    | 25.16                     | 33.01       | -7.85       |
| 1882.500   |                         | RB1-53         | BPSK                | 0.366    | 25.63                     | 33.01       | -7.38       |
| 1905.000   |                         | RB1-104        | BPSK                | 0.327    | 25.15                     | 33.01       | -7.86       |
| 1860.000   |                         | RB1-1          | 16QAM               | 0.247    | 23.93                     | 33.01       | -9.08       |
| 1882.500   |                         | RB1-53         | 16QAM               | 0.278    | 24.44                     | 33.01       | -8.57       |
| 1905.000   |                         | RB1-104        | 16QAM               | 0.240    | 23.81                     | 33.01       | -9.20       |
| 1862.500   | n25 (2) / 25MHz (ANT G) | RB1-1          | BPSK                | 0.333    | 25.22                     | 33.01       | -7.79       |
| 1882.500   |                         | RB1-66         | BPSK                | 0.378    | 25.78                     | 33.01       | -7.23       |
| 1902.500   |                         | RB1-131        | BPSK                | 0.383    | <b>25.83</b>              | 33.01       | -7.18       |
| 1862.500   |                         | RB1-1          | 16QAM               | 0.258    | 24.12                     | 33.01       | -8.89       |
| 1882.500   |                         | RB1-66         | 16QAM               | 0.265    | 24.24                     | 33.01       | -8.77       |
| 1902.500   |                         | RB1-131        | 16QAM               | 0.279    | <b>24.46</b>              | 33.01       | -8.55       |
| 1865.000   | n25 (2) / 30MHz (ANT G) | RB1-1          | BPSK                | 0.338    | 25.29                     | 33.01       | -7.72       |
| 1882.500   |                         | RB1-80         | BPSK                | 0.369    | 25.67                     | 33.01       | -7.34       |
| 1897.500   |                         | RB1-158        | BPSK                | 0.377    | 25.76                     | 33.01       | -7.25       |
| 1865.000   |                         | RB1-1          | 16QAM               | 0.259    | 24.14                     | 33.01       | -8.87       |
| 1882.500   |                         | RB1-80         | 16QAM               | 0.257    | 24.10                     | 33.01       | -8.91       |
| 1897.500   |                         | RB1-158        | 16QAM               | 0.279    | 24.45                     | 33.01       | -8.56       |
| 1870.000   | n25 (2) / 35MHz (ANT G) | RB1-1          | BPSK                | 0.324    | 25.11                     | 33.01       | -7.90       |
| 1882.500   |                         | RB1-94         | BPSK                | 0.371    | 25.69                     | 33.01       | -7.32       |
| 1895.000   |                         | RB1-186        | BPSK                | 0.375    | 25.74                     | 33.01       | -7.27       |
| 1870.000   |                         | RB1-1          | 16QAM               | 0.261    | 24.17                     | 33.01       | -8.84       |
| 1882.500   |                         | RB1-94         | 16QAM               | 0.275    | 24.40                     | 33.01       | -8.61       |
| 1895.000   |                         | RB1-186        | 16QAM               | 0.264    | 24.21                     | 33.01       | -8.80       |
| 1870.000   | n25(2) / 40MHz (ANT G)  | RB1-1          | BPSK                | 0.330    | 25.19                     | 33.01       | -7.82       |
| 1882.500   |                         | RB1-108        | BPSK                | 0.251    | 23.99                     | 33.01       | -9.02       |
| 1895.000   |                         | RB1-214        | BPSK                | 0.366    | <b>25.64</b>              | 33.01       | -7.37       |
| 1870.000   |                         | RB1-1          | 16QAM               | 0.256    | 24.08                     | 33.01       | -8.93       |
| 1882.500   |                         | RB1-108        | 16QAM               | 0.189    | 22.77                     | 33.01       | -10.24      |
| 1895.000   |                         | RB1-214        | 16QAM               | 0.274    | <b>24.37</b>              | 33.01       | -8.64       |

### CONFIG 1

9.2. FIELD STRENGTH OF SPURIOUS RADIATION

LIMITS

FCC: §24.238(a)

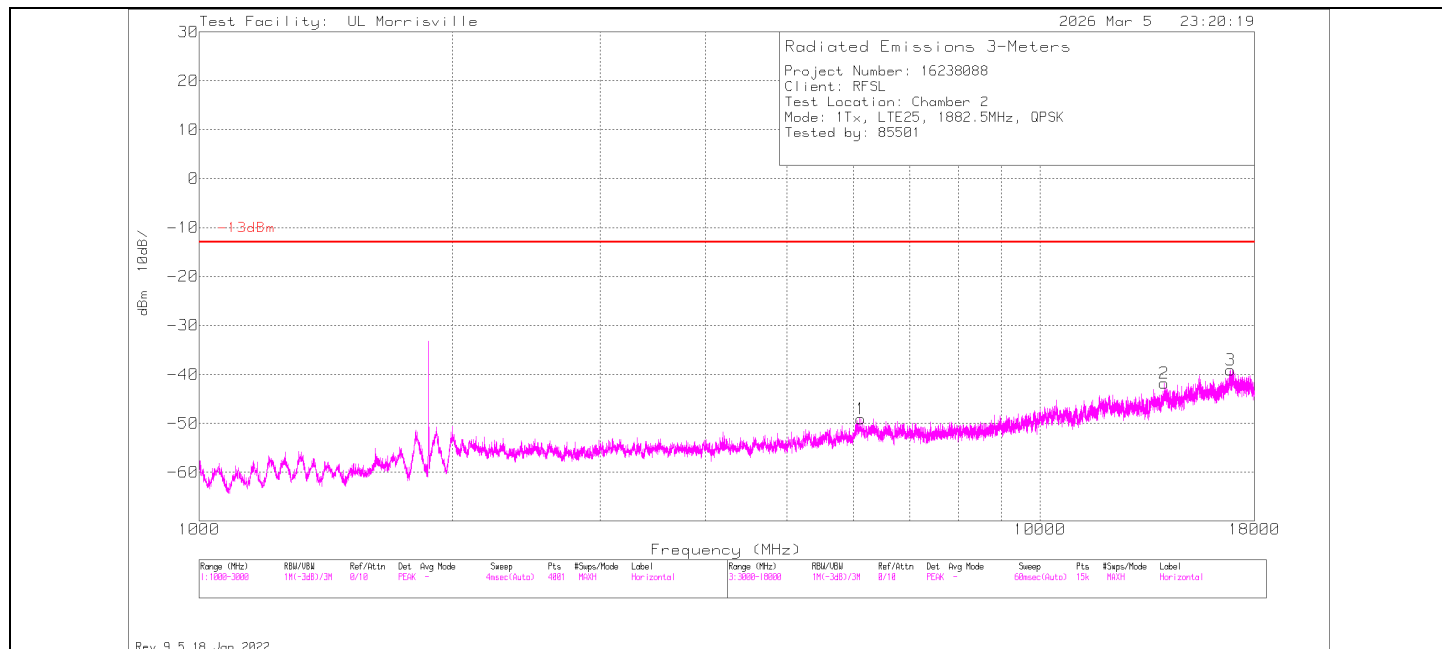
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

ISED: RSS133§5.6

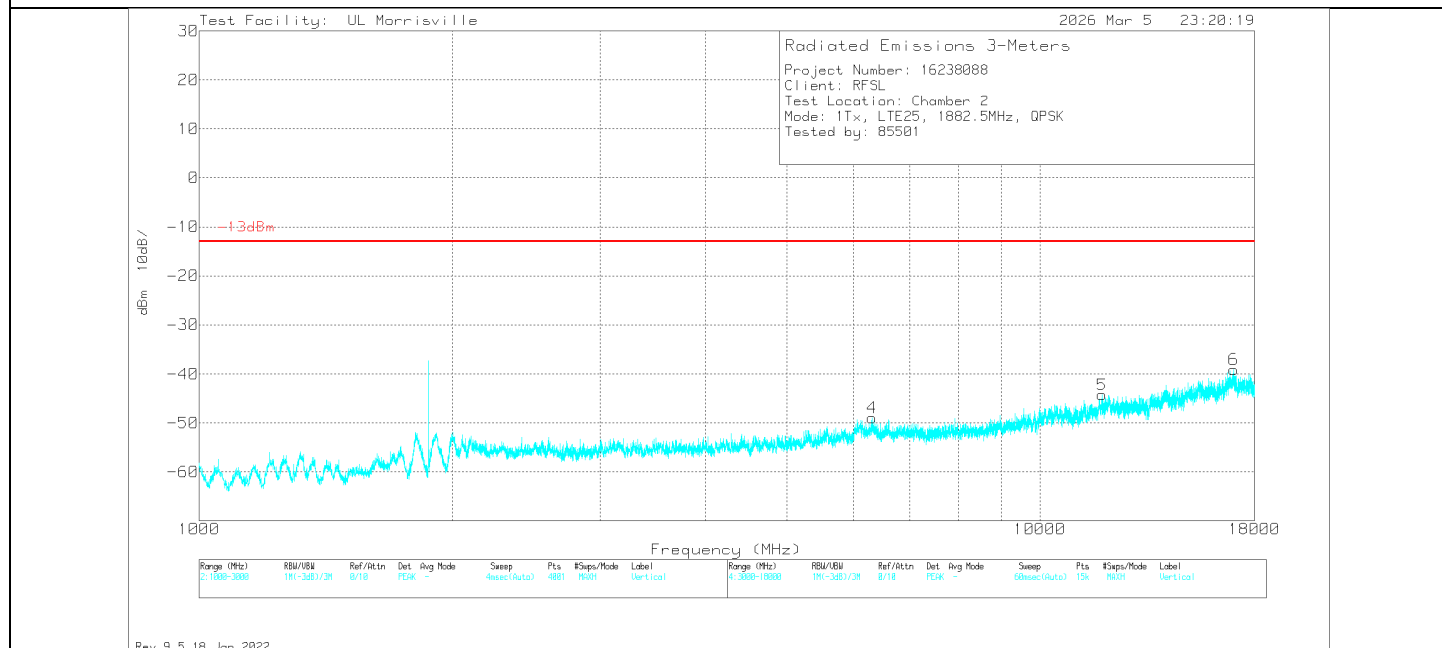
For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors), where applicable, of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in the table 3.

| Table 3: Unwanted emission limits for all equipment               |                         |
|-------------------------------------------------------------------|-------------------------|
| Offset frequency from the edge of the frequency block group (MHz) | Unwanted emission limit |
| ≤ 1                                                               | -13 dBm/(1% of OBW)     |
| > 1                                                               | -13 dBm/MHz             |

## Example Plot



Horizontal Polarity



Vertical Polarity

## **Trace Markers**

| Marker | Frequency (MHz) | Meter Reading (dBm) | Det | 88761 (dB/m) | Gain/Loss (dB) | CF (dB) | Filter (dB) | Corrected Reading dBm | -13dBm | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|---------------------|-----|--------------|----------------|---------|-------------|-----------------------|--------|-------------|----------------|-------------|----------|
| 1      | 6124            | -54.23              | Pk  | 35.6         | -42.2          | 11.8    | 0           | -49.03                | -13    | -36.03      | 0-360          | 299         | H        |
| 4      | 6320            | -54.97              | Pk  | 35.7         | -41.5          | 11.8    | 0           | -48.97                | -13    | -35.97      | 0-360          | 299         | V        |
| 5      | 11851           | -56.08              | Pk  | 39           | -39            | 11.8    | 0           | -44.28                | -13    | -31.28      | 0-360          | 200         | V        |
| 2      | 14056           | -54.85              | Pk  | 39.1         | -37.8          | 11.8    | 0           | -41.75                | -13    | -28.75      | 0-360          | 101         | H        |
| 3      | 16851           | -55.93              | Pk  | 41.1         | -36.1          | 11.8    | 0           | -39.13                | -13    | -26.13      | 0-360          | 101         | H        |
| 6      | 17005           | -57.95              | Pk  | 41.3         | -34.3          | 11.8    | 0           | -39.15                | -13    | -26.15      | 0-360          | 299         | V        |

## **TEST PROCEDURE**

KDB 971168 D01 /D02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz

## **RESULTS**

## 9.2.1. LTE BAND 25

### LTE BAND 25 (QPSK 20.0MHZ BANDWIDTH, ANT B (Config 0))

|                |                                       |
|----------------|---------------------------------------|
| Date:          | 2026-03-06, 2026-03-10                |
| Test Engineer: | 115746 / 11993, 115752 / 11993, 85501 |
| Configuration: | EUT Only                              |
| Mode:          | LTE 25 QPSK 20MHz                     |
| Chamber #:     | Chamber 2                             |

| Frequency (GHz)               | Meter Reading (dBuV) | Det | 88761 (dB/m) | CF   | Gain/Loss (dB) | Corrected Reading (dBm) | LIMIT (dBm) | Margin (dB) | Polarity |
|-------------------------------|----------------------|-----|--------------|------|----------------|-------------------------|-------------|-------------|----------|
| <b>Low Channel, 1860MHz</b>   |                      |     |              |      |                |                         |             |             |          |
| 4446                          | -52.07               | Pk  | 33.9         | 11.8 | -45.2          | -51.57                  | -13         | -38.57      | H        |
| 4577                          | -52.69               | Pk  | 34           | 11.8 | -45.2          | -52.09                  | -13         | -39.09      | V        |
| 5878                          | -52.95               | Pk  | 35.1         | 11.8 | -43.3          | -49.35                  | -13         | -36.35      | H        |
| 5312                          | -53.07               | Pk  | 34.3         | 11.8 | -43.4          | -50.37                  | -13         | -37.37      | V        |
| 9144                          | -54.36               | Pk  | 36.1         | 11.8 | -40.6          | -47.06                  | -13         | -34.06      | H        |
| 12072                         | -57.21               | Pk  | 39.1         | 11.8 | -37.6          | -43.91                  | -13         | -30.91      | V        |
| <b>Mid Channel, 1882.5MHz</b> |                      |     |              |      |                |                         |             |             |          |
| 6124                          | -54.23               | Pk  | 35.6         | 11.8 | -42.2          | -49.03                  | -13         | -36.03      | H        |
| 6320                          | -54.97               | Pk  | 35.7         | 11.8 | -41.5          | -48.97                  | -13         | -35.97      | V        |
| 14056                         | -54.85               | Pk  | 39.1         | 11.8 | -37.8          | -41.75                  | -13         | -28.75      | H        |
| 11851                         | -56.08               | Pk  | 39           | 11.8 | -39            | -44.28                  | -13         | -31.28      | V        |
| 16851                         | -55.93               | Pk  | 41.1         | 11.8 | -36.1          | -39.13                  | -13         | -26.13      | H        |
| 17005                         | -57.95               | Pk  | 41.3         | 11.8 | -34.3          | -39.15                  | -13         | -26.15      | V        |
| <b>High Channel, 1905MHz</b>  |                      |     |              |      |                |                         |             |             |          |
| 4591                          | -52.84               | Pk  | 34           | 11.8 | -44.9          | -51.94                  | -13         | -38.94      | H        |
| 3439                          | -51.77               | Pk  | 32.9         | 11.8 | -45.2          | -52.27                  | -13         | -39.27      | V        |
| 5330                          | -52.2                | Pk  | 34.3         | 11.8 | -44.2          | -50.3                   | -13         | -37.3       | H        |
| 6111                          | -54.08               | Pk  | 35.6         | 11.8 | -42            | -48.68                  | -13         | -35.68      | V        |
| 8105                          | -55.24               | Pk  | 36           | 11.8 | -41.3          | -48.74                  | -13         | -35.74      | H        |
| 12534                         | -56.03               | Pk  | 38.8         | 11.8 | -38.2          | -43.63                  | -13         | -30.63      | V        |

**LTE BAND 25 (QPSK 20.0MHZ BANDWIDTH, ANT G (Config 1))**

|                |                   |
|----------------|-------------------|
| Date:          | 2026-03-09        |
| Test Engineer: | 115747 / 11993    |
| Configuration: | EUT Only          |
| Mode:          | LTE 25 QPSK 20MHz |
| Chamber #:     | Chamber 2         |

| Frequency (GHz)               | Meter Reading (dBuV) | Det | 88761 (dB/m) | CF   | Gain/Loss (dB) | Corrected Reading (dBm) | LIMIT (dBm) | Margin (dB) | Polarity |
|-------------------------------|----------------------|-----|--------------|------|----------------|-------------------------|-------------|-------------|----------|
| <b>Low Channel, 1860MHz</b>   |                      |     |              |      |                |                         |             |             |          |
| 3702                          | -45.14               | Pk  | 33.1         | 11.8 | -46.5          | -46.74                  | -13         | -33.74      | H        |
| 3702                          | -47.6                | Pk  | 33.1         | 11.8 | -46.5          | -49.2                   | -13         | -36.2       | V        |
| 5553                          | -49.47               | Pk  | 34.6         | 11.8 | -43.8          | -46.87                  | -13         | -33.87      | H        |
| 5553                          | -48.83               | Pk  | 34.6         | 11.8 | -43.8          | -46.23                  | -13         | -33.23      | V        |
| 12101                         | -57.45               | Pk  | 39.1         | 11.8 | -38            | -44.55                  | -13         | -31.55      | H        |
| 12071                         | -57.05               | Pk  | 39.1         | 11.8 | -37.6          | -43.75                  | -13         | -30.75      | V        |
| <b>Mid Channel, 1882.5MHz</b> |                      |     |              |      |                |                         |             |             |          |
| 3747                          | -44.62               | Pk  | 33.2         | 11.8 | -46            | -45.62                  | -13         | -32.62      | H        |
| 3747                          | -47.48               | Pk  | 33.2         | 11.8 | -46            | -48.48                  | -13         | -35.48      | V        |
| 5621                          | -50.33               | Pk  | 34.6         | 11.8 | -44.4          | -48.33                  | -13         | -35.33      | H        |
| 5621                          | -46.96               | Pk  | 34.6         | 11.8 | -44.4          | -44.96                  | -13         | -31.96      | V        |
| 11535                         | -55.93               | Pk  | 38.3         | 11.8 | -38.8          | -44.63                  | -13         | -31.63      | H        |
| 11527                         | -57.22               | Pk  | 38.3         | 11.8 | -39.2          | -46.32                  | -13         | -33.32      | V        |
| <b>High Channel, 1905MHz</b>  |                      |     |              |      |                |                         |             |             |          |
| 3792                          | -44.36               | Pk  | 33.3         | 11.8 | -45.3          | -44.56                  | -13         | -31.56      | H        |
| 3792                          | -46.91               | Pk  | 33.3         | 11.8 | -45.3          | -47.11                  | -13         | -34.11      | V        |
| 5688                          | -49.65               | Pk  | 34.7         | 11.8 | -43.6          | -46.75                  | -13         | -33.75      | H        |
| 5688                          | -44.67               | Pk  | 34.7         | 11.8 | -43.6          | -41.77                  | -13         | -28.77      | V        |
| 8831                          | -56.79               | Pk  | 35.9         | 11.8 | -39.3          | -48.39                  | -13         | -35.39      | H        |
| 8831                          | -57.06               | Pk  | 35.9         | 11.8 | -39.3          | -48.66                  | -13         | -35.66      | V        |

## 9.2.2. 5G NR n25

### 5G NR n25 (BPSK 40.0MHZ BANDWIDTH, ANT B (Config 0))

|                |                      |
|----------------|----------------------|
| Date:          | 2026-03-19           |
| Test Engineer: | 84740/11993          |
| Configuration: | EUT Only             |
| Mode:          | 5G NR n25 BPSK 40MHz |
| Chamber #:     | Chamber 4            |

| Frequency (GHz)        | Meter Reading (dBuV) | Det | 206211 (dB/m) | CF   | Gain/Loss (dB) | Corrected Reading (dBm) | LIMIT (dBm) | Margin (dB) | Polarity |
|------------------------|----------------------|-----|---------------|------|----------------|-------------------------|-------------|-------------|----------|
| Low Channel, 1870MHz   |                      |     |               |      |                |                         |             |             |          |
| 2.5775                 | -62.23               | Pk  | 32.3          | 11.8 | -35.6          | -53.13                  | -13         | -40.13      | H        |
| 2.5235                 | -61.7                | Pk  | 32.4          | 11.8 | -35.7          | -52.7                   | -13         | -39.7       | V        |
| 9.353                  | -65.76               | Pk  | 36.4          | 11.8 | -23.5          | -41.06                  | -13         | -28.06      | H        |
| 9.042                  | -66.44               | Pk  | 36            | 11.8 | -23.3          | -41.94                  | -13         | -28.94      | V        |
| 17.617                 | -65.99               | Pk  | 41.2          | 11.8 | -16.3          | -29.29                  | -13         | -16.29      | H        |
| 17.585                 | -67.18               | Pk  | 41.2          | 11.8 | -15.5          | -29.68                  | -13         | -16.68      | V        |
| Mid Channel, 1882.5MHz |                      |     |               |      |                |                         |             |             |          |
| 2.6385                 | -62.43               | Pk  | 32.3          | 11.8 | -35.5          | -53.33                  | -13         | -40.33      | H        |
| 2.669                  | -62.23               | Pk  | 32.1          | 11.8 | -35.5          | -53.33                  | -13         | -40.33      | V        |
| 9.123                  | -65.29               | Pk  | 36.1          | 11.8 | -24.4          | -41.79                  | -13         | -28.79      | H        |
| 9.109                  | -64.86               | Pk  | 36            | 11.8 | -24.4          | -41.46                  | -13         | -28.46      | V        |
| 17.54                  | -65.99               | Pk  | 41.1          | 11.8 | -15.8          | -28.89                  | -13         | -15.89      | H        |
| 17.578                 | -67.69               | Pk  | 41.2          | 11.8 | -15.3          | -29.99                  | -13         | -16.99      | V        |
| High Channel, 1895MHz  |                      |     |               |      |                |                         |             |             |          |
| 2.966                  | -62.14               | Pk  | 32.6          | 11.8 | -34.9          | -52.24                  | -13         | -39.24      | H        |
| 2.653                  | -62                  | Pk  | 32.3          | 11.8 | -35.2          | -52.6                   | -13         | -39.6       | V        |
| 9.058                  | -66.63               | Pk  | 36            | 11.8 | -23.3          | -42.13                  | -13         | -29.13      | H        |
| 9.053                  | -66.16               | Pk  | 36            | 11.8 | -23.2          | -41.56                  | -13         | -28.56      | V        |
| 17.673                 | -65.53               | Pk  | 41.2          | 11.8 | -16.7          | -29.23                  | -13         | -16.23      | H        |
| 17.571                 | -67.18               | Pk  | 41.1          | 11.8 | -15.3          | -29.58                  | -13         | -16.58      | V        |

**5G NR n25 (BPSK 40.0MHZ BANDWIDTH, ANT G (Config 1))**

|                |                      |
|----------------|----------------------|
| Date:          | 2026-03-20           |
| Test Engineer: | 84740 / 11993        |
| Configuration: | EUT Only             |
| Mode:          | 5G NR n25 BPSK 40MHz |
| Chamber #:     | Chamber 4            |

| Frequency (GHz)               | Meter Reading (dBuV) | Det | 206211 (dB/m) | CF   | Gain/Loss (dB) | Corrected Reading (dBm) | LIMIT (dBm) | Margin (dB) | Polarity |
|-------------------------------|----------------------|-----|---------------|------|----------------|-------------------------|-------------|-------------|----------|
| <b>Low Channel, 1870MHz</b>   |                      |     |               |      |                |                         |             |             |          |
| 2.765                         | -61.96               | Pk  | 32.2          | 11.8 | -35.3          | -52.86                  | -13         | -39.86      | H        |
| 2.8425                        | -63.05               | Pk  | 32.3          | 11.8 | -34.8          | -53.35                  | -13         | -40.35      | V        |
| 9.078                         | -66.09               | Pk  | 36            | 11.8 | -23.6          | -41.89                  | -13         | -28.89      | H        |
| 9.048                         | -66.14               | Pk  | 36            | 11.8 | -23.3          | -41.64                  | -13         | -28.64      | V        |
| 17.575                        | -67.44               | Pk  | 41.2          | 11.8 | -15.3          | -29.74                  | -13         | -16.74      | H        |
| 17.561                        | -66.58               | Pk  | 41.1          | 11.8 | -15.8          | -29.48                  | -13         | -16.48      | V        |
| <b>Mid Channel, 1882.5MHz</b> |                      |     |               |      |                |                         |             |             |          |
| 2.79                          | -61.78               | Pk  | 32.3          | 11.8 | -35.1          | -52.38                  | -13         | -39.38      | H        |
| 2.745                         | -62.28               | Pk  | 32            | 11.8 | -35.1          | -53.18                  | -13         | -40.18      | V        |
| 9.051                         | -66.44               | Pk  | 36            | 11.8 | -23.3          | -41.94                  | -13         | -28.94      | H        |
| 9.072                         | -66.39               | Pk  | 36            | 11.8 | -23.5          | -42.09                  | -13         | -29.09      | V        |
| 17.569                        | -67.36               | Pk  | 41.1          | 11.8 | -15.4          | -29.86                  | -13         | -16.86      | H        |
| 17.561                        | -67.11               | Pk  | 41.1          | 11.8 | -15.8          | -30.01                  | -13         | -17.01      | V        |
| <b>High Channel, 1895MHz</b>  |                      |     |               |      |                |                         |             |             |          |
| 2.836                         | -62.32               | Pk  | 32.3          | 11.8 | -35.1          | -52.82                  | -13         | -39.82      | H        |
| 2.876                         | -62.51               | Pk  | 32.3          | 11.8 | -35            | -53.01                  | -13         | -40.01      | V        |
| 8.956                         | -65.19               | Pk  | 36            | 11.8 | -24.5          | -41.89                  | -13         | -28.89      | H        |
| 9.067                         | -66.23               | Pk  | 36            | 11.8 | -23.5          | -41.93                  | -13         | -28.93      | V        |
| 17.581                        | -66.46               | Pk  | 41.2          | 11.8 | -15.4          | -28.86                  | -13         | -15.86      | H        |
| 17.588                        | -66.82               | Pk  | 41.2          | 11.8 | -15.7          | -29.52                  | -13         | -16.52      | V        |

## **10. SETUP PHOTOS**

Refer to R16238088-EP1d for setup photos.

**END OF REPORT**