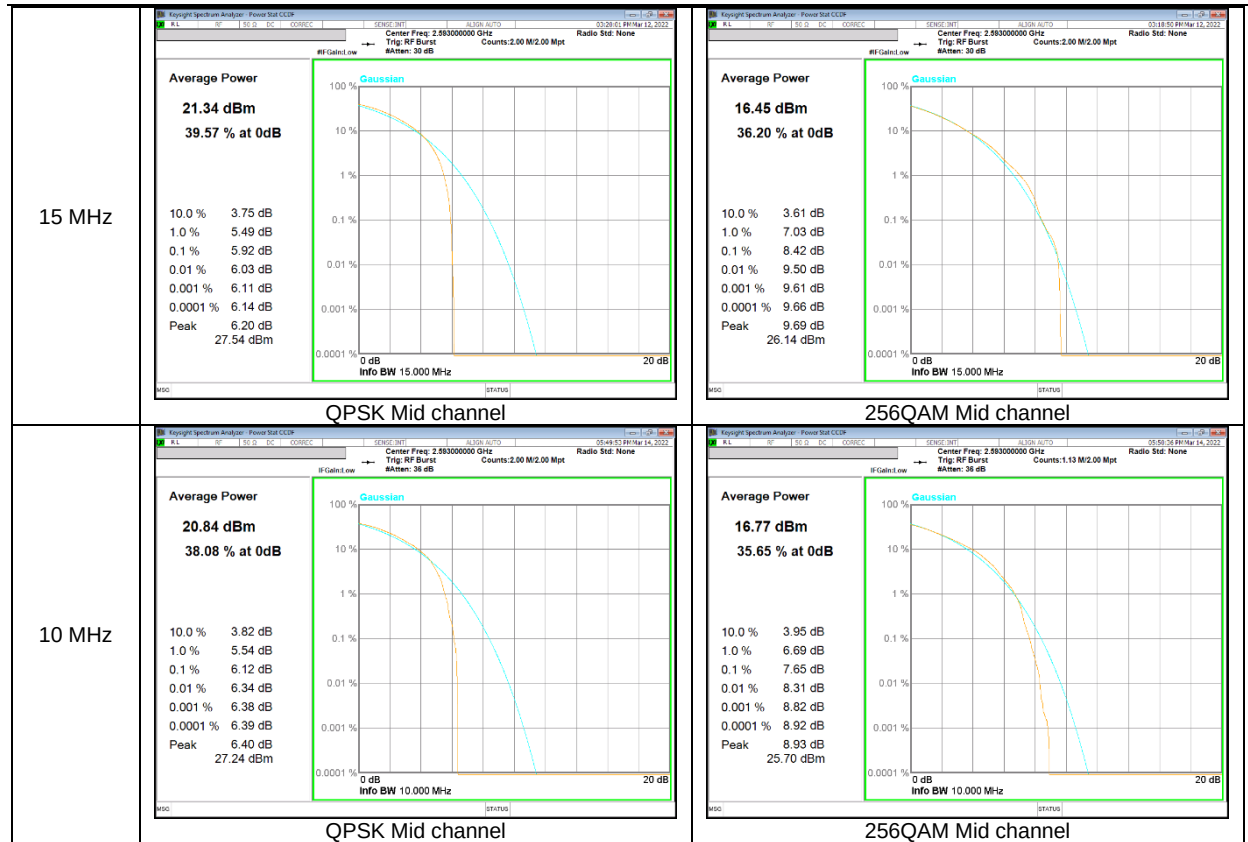
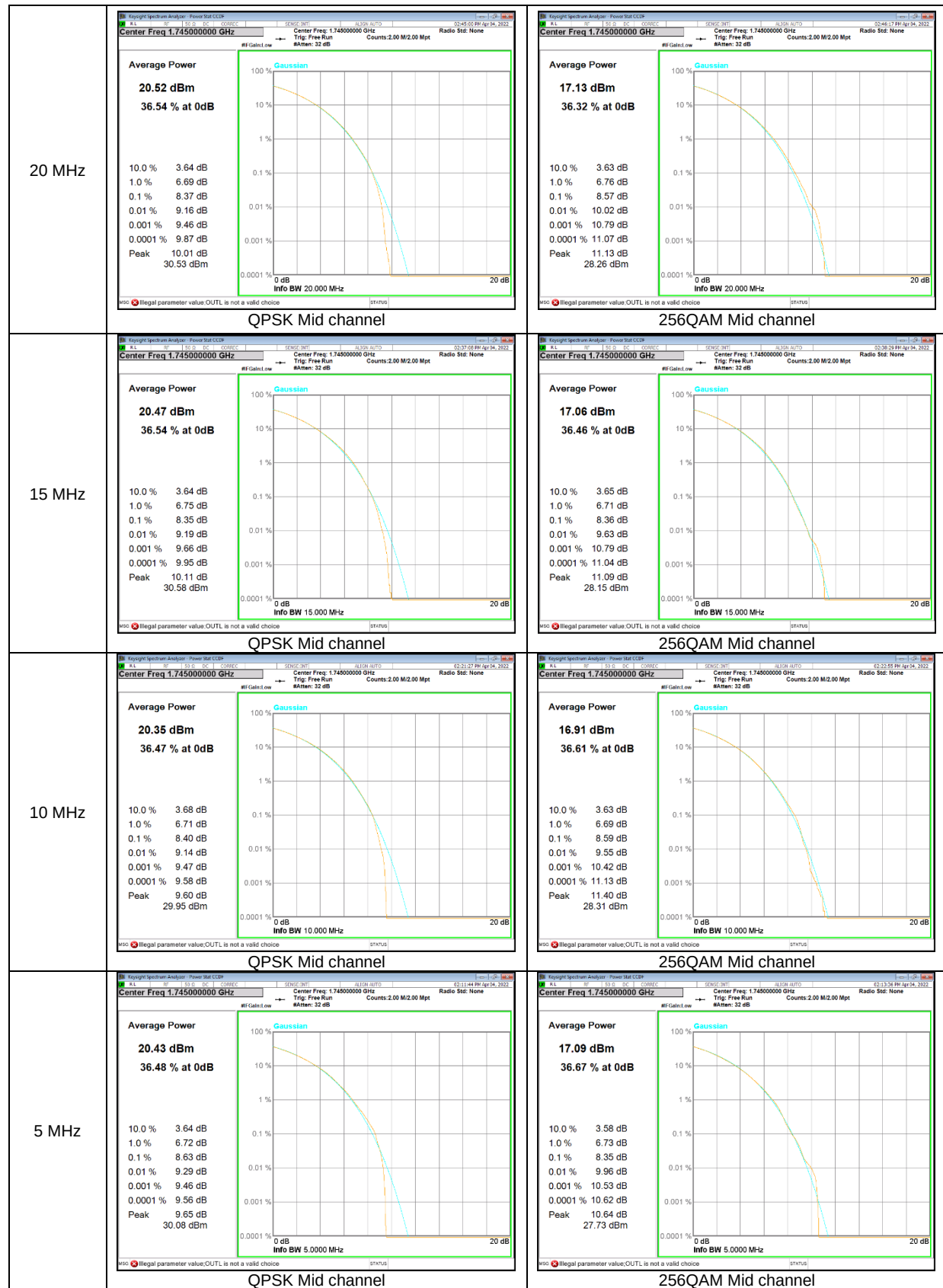




**NR Band n66 CP-OFDM**



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## 9. LIMITS AND CONDUCTED RESULTS

### 9.1. OCCUPIED BANDWIDTH

#### RULE PART(S)

FCC: §2.1049

#### LIMITS

For reporting purposes only

#### TEST PROCEDURE

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

(KDB 971168 D01 Power Meas License Digital Systems v03r01)

#### RESULTS

See the following pages.

**- GSM**

| Band | Modulation | f [MHz] | 99% BW<br>(kHz) | -26dB BW<br>(kHz) |
|------|------------|---------|-----------------|-------------------|
| 850  | GPRS       | 836.6   | 241.6           | 318.8             |
|      | EGPRS      |         | 245.6           | 297.5             |
| 1900 | GPRS       | 1880.0  | 243.2           | 322.0             |
|      | EGPRS      |         | 246.6           | 309.4             |

**- WCDMA**

| Band | Modulation | f [MHz] | 99% BW<br>(MHz) | -26dB BW<br>(MHz) |
|------|------------|---------|-----------------|-------------------|
| B5   | Rel.99     | 836.6   | 4.150           | 4.642             |
|      | HSDPA      |         | 4.166           | 4.634             |
| B4   | Rel.99     | 1732.6  | 4.158           | 4.682             |
|      | HSDPA      |         | 4.149           | 4.675             |
| B2   | Rel.99     | 1880.0  | 4.146           | 4.648             |
|      | HSDPA      |         | 4.156           | 4.636             |

**- LTE Band 2**

| Band   | BW   | Modulation | f [MHz] | 99% BW (MHz) | -26dB BW (MHz) |
|--------|------|------------|---------|--------------|----------------|
| LTE B2 | 20M  | QPSK       | 1880.0  | 17.883       | 19.050         |
|        |      | 16QAM      |         | 17.886       | 19.240         |
|        | 15M  | QPSK       | 1880.0  | 13.417       | 14.460         |
|        |      | 16QAM      |         | 13.421       | 14.530         |
|        | 10M  | QPSK       | 1880.0  | 8.975        | 9.749          |
|        |      | 16QAM      |         | 8.943        | 9.580          |
|        | 5M   | QPSK       | 1880.0  | 4.486        | 4.915          |
|        |      | 16QAM      |         | 4.485        | 4.888          |
|        | 3M   | QPSK       | 1880.0  | 2.685        | 2.914          |
|        |      | 16QAM      |         | 2.685        | 2.935          |
|        | 1.4M | QPSK       | 1880.0  | 1.089        | 1.303          |
|        |      | 16QAM      |         | 1.094        | 1.292          |

**- LTE Band 12**

| Band    | BW   | Modulation | f [MHz] | 99% BW (MHz) | -26dB BW (MHz) |
|---------|------|------------|---------|--------------|----------------|
| LTE B12 | 10M  | QPSK       | 707.5   | 8.968        | 9.657          |
|         |      | 16QAM      |         | 8.946        | 9.685          |
|         | 5M   | QPSK       | 707.5   | 4.483        | 4.913          |
|         |      | 16QAM      |         | 4.477        | 4.896          |
|         | 3M   | QPSK       | 707.5   | 2.688        | 2.910          |
|         |      | 16QAM      |         | 2.682        | 2.939          |
|         | 1.4M | QPSK       | 707.5   | 1.089        | 1.304          |
|         |      | 16QAM      |         | 1.092        | 1.299          |

**- LTE Band 13**

| Band    | BW  | Modulation | f [MHz] | 99% BW (MHz) | -26dB BW (MHz) |
|---------|-----|------------|---------|--------------|----------------|
| LTE B13 | 10M | QPSK       | 782.0   | 8.966        | 9.650          |
|         |     | 16QAM      |         | 8.975        | 9.633          |
|         | 5M  | QPSK       | 782.0   | 4.497        | 4.916          |
|         |     | 16QAM      |         | 4.486        | 4.907          |

**- LTE Band 26 (Part 90)**

| Band    | BW   | Modulation | f [MHz] | 99% BW (MHz) | -26dB BW (MHz) |
|---------|------|------------|---------|--------------|----------------|
| LTE B26 | 15M  | QPSK       | 821.5   | 13.396       | 14.520         |
|         |      | 16QAM      |         | 13.399       | 14.410         |
|         | 10M  | QPSK       | 819.0   | 8.956        | 9.648          |
|         |      | 16QAM      |         | 8.962        | 9.709          |
|         | 5M   | QPSK       | 819.5   | 4.486        | 4.874          |
|         |      | 16QAM      |         | 4.470        | 4.852          |
|         | 3M   | QPSK       | 820.5   | 2.688        | 2.921          |
|         |      | 16QAM      |         | 2.682        | 2.922          |
|         | 1.4M | QPSK       | 820.5   | 1.088        | 1.272          |
|         |      | 16QAM      |         | 1.091        | 1.293          |

**- LTE Band 26 (Straddle)**

| Band    | BW   | Modulation | f [MHz] | 99% BW (MHz) | -26dB BW (MHz) |
|---------|------|------------|---------|--------------|----------------|
| LTE B26 | 15M  | QPSK       | 824.0   | 13.411       | 14.620         |
|         |      | 16QAM      |         | 13.393       | 14.420         |
|         | 10M  | QPSK       |         | 8.957        | 9.752          |
|         |      | 16QAM      |         | 8.960        | 9.576          |
|         | 5M   | QPSK       |         | 4.491        | 4.904          |
|         |      | 16QAM      |         | 4.481        | 4.870          |
|         | 3M   | QPSK       |         | 2.693        | 2.926          |
|         |      | 16QAM      |         | 2.690        | 2.923          |
|         | 1.4M | QPSK       |         | 1.083        | 1.266          |
|         |      | 16QAM      |         | 1.090        | 1.296          |

**- LTE Band 26 (Part 22)**

| Band    | BW   | Modulation | f [MHz] | 99% BW (MHz) | -26dB BW (MHz) |
|---------|------|------------|---------|--------------|----------------|
| LTE B26 | 15M  | QPSK       | 836.5   | 13.411       | 14.400         |
|         |      | 16QAM      |         | 13.388       | 14.450         |
|         | 10M  | QPSK       | 831.5   | 8.959        | 9.732          |
|         |      | 16QAM      |         | 8.949        | 9.730          |
|         | 5M   | QPSK       | 831.5   | 4.482        | 4.907          |
|         |      | 16QAM      |         | 4.481        | 4.932          |
|         | 3M   | QPSK       | 831.5   | 2.688        | 2.896          |
|         |      | 16QAM      |         | 2.682        | 2.932          |
|         | 1.4M | QPSK       | 831.5   | 1.080        | 1.273          |
|         |      | 16QAM      |         | 1.084        | 1.281          |

**- LTE Band 41**

| Band    | BW  | Modulation | f [MHz] | 99% BW (MHz) | -26dB BW (MHz) |
|---------|-----|------------|---------|--------------|----------------|
| LTE B41 | 20M | QPSK       | 2593.0  | 17.875       | 19.990         |
|         |     | 16QAM      |         | 17.869       | 19.170         |
|         | 15M | QPSK       | 2593.0  | 13.406       | 14.500         |
|         |     | 16QAM      |         | 13.431       | 14.710         |
|         | 10M | QPSK       | 2593.0  | 8.976        | 9.939          |
|         |     | 16QAM      |         | 8.957        | 9.813          |
|         | 5M  | QPSK       | 2593.0  | 4.494        | 5.168          |
|         |     | 16QAM      |         | 4.483        | 4.917          |

**- LTE Band 66**

| Band    | BW   | Modulation | f [MHz] | 99% BW (MHz) | -26dB BW (MHz) |
|---------|------|------------|---------|--------------|----------------|
| LTE B66 | 20M  | QPSK       | 1745.0  | 17.867       | 19.060         |
|         |      | 16QAM      |         | 17.915       | 19.910         |
|         | 15M  | QPSK       | 1745.0  | 13.426       | 14.630         |
|         |      | 16QAM      |         | 13.436       | 14.410         |
|         | 10M  | QPSK       | 1745.0  | 8.963        | 9.788          |
|         |      | 16QAM      |         | 8.975        | 9.695          |
|         | 5M   | QPSK       | 1745.0  | 4.479        | 4.867          |
|         |      | 16QAM      |         | 4.473        | 4.876          |
|         | 3M   | QPSK       | 1745.0  | 2.684        | 2.916          |
|         |      | 16QAM      |         | 2.687        | 2.933          |
|         | 1.4M | QPSK       | 1745.0  | 1.081        | 1.282          |
|         |      | 16QAM      |         | 1.086        | 1.311          |

**- NR Band n5 CP-OFDM**

| Band  | BW  | Modulation | f [MHz] | 99% BW (MHz) | -26dB BW (MHz) |
|-------|-----|------------|---------|--------------|----------------|
| NR n5 | 20M | QPSK       | 836.5   | 18.910       | 19.880         |
|       |     | 16QAM      |         | 18.895       | 19.820         |
|       | 15M | QPSK       | 836.5   | 14.142       | 14.780         |
|       |     | 16QAM      |         | 14.105       | 14.850         |
|       | 10M | QPSK       | 836.5   | 9.292        | 9.882          |
|       |     | 16QAM      |         | 9.272        | 9.847          |
|       | 5M  | QPSK       | 836.5   | 4.471        | 4.842          |
|       |     | 16QAM      |         | 4.481        | 4.869          |

**- NR Band n41 CP-OFDM**

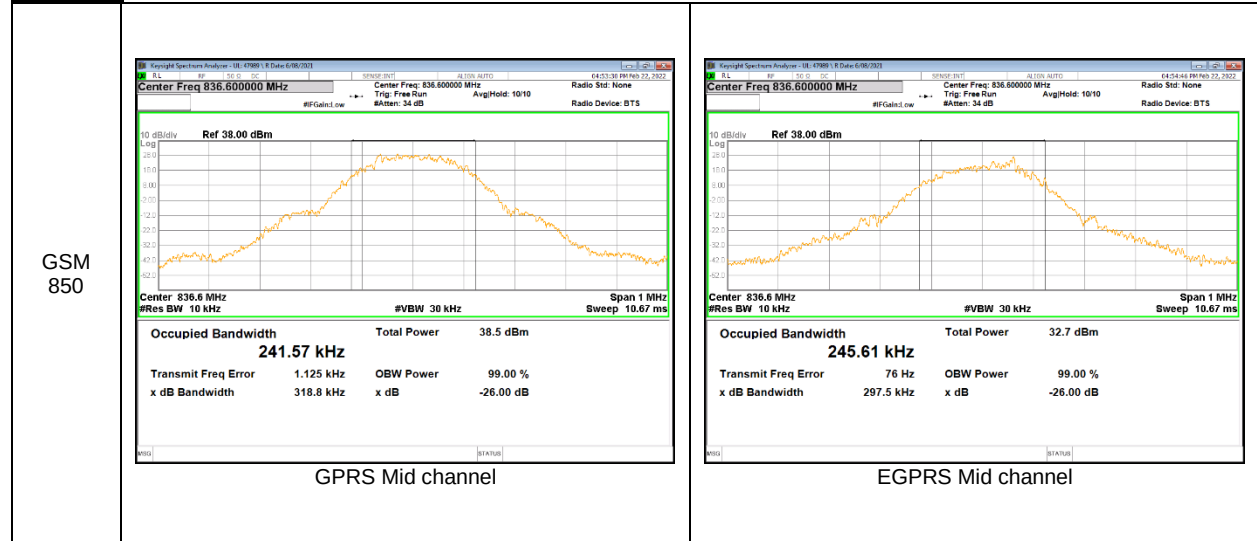
| Band   | BW   | Modulation | f [MHz] | 99% BW (MHz) | -26dB BW (MHz) |
|--------|------|------------|---------|--------------|----------------|
| NR n41 | 100M | QPSK       | 2593.0  | 96.649       | 99.630         |
|        |      | 16QAM      |         | 96.363       | 99.750         |
|        | 90M  | QPSK       | 2593.0  | 86.664       | 89.290         |
|        |      | 16QAM      |         | 86.665       | 89.360         |
|        | 80M  | QPSK       | 2593.0  | 76.731       | 79.380         |
|        |      | 16QAM      |         | 76.820       | 79.040         |
|        | 60M  | QPSK       | 2593.0  | 57.044       | 58.980         |
|        |      | 16QAM      |         | 57.030       | 59.110         |
|        | 50M  | QPSK       | 2593.0  | 47.033       | 48.780         |
|        |      | 16QAM      |         | 47.158       | 48.660         |
|        | 40M  | QPSK       | 2593.0  | 37.533       | 38.880         |
|        |      | 16QAM      |         | 37.403       | 38.770         |
|        | 30M  | QPSK       | 2593.0  | 27.912       | 29.320         |
|        |      | 16QAM      |         | 27.841       | 28.930         |
|        | 20M  | QPSK       | 2593.0  | 18.270       | 19.370         |
|        |      | 16QAM      |         | 18.226       | 19.240         |
|        | 15M  | QPSK       | 2593.0  | 13.607       | 14.680         |
|        |      | 16QAM      |         | 13.557       | 14.390         |
|        | 10M  | QPSK       | 2593.0  | 8.583        | 9.335          |
|        |      | 16QAM      |         | 8.587        | 9.281          |

**- NR Band n66 CP-OFDM**

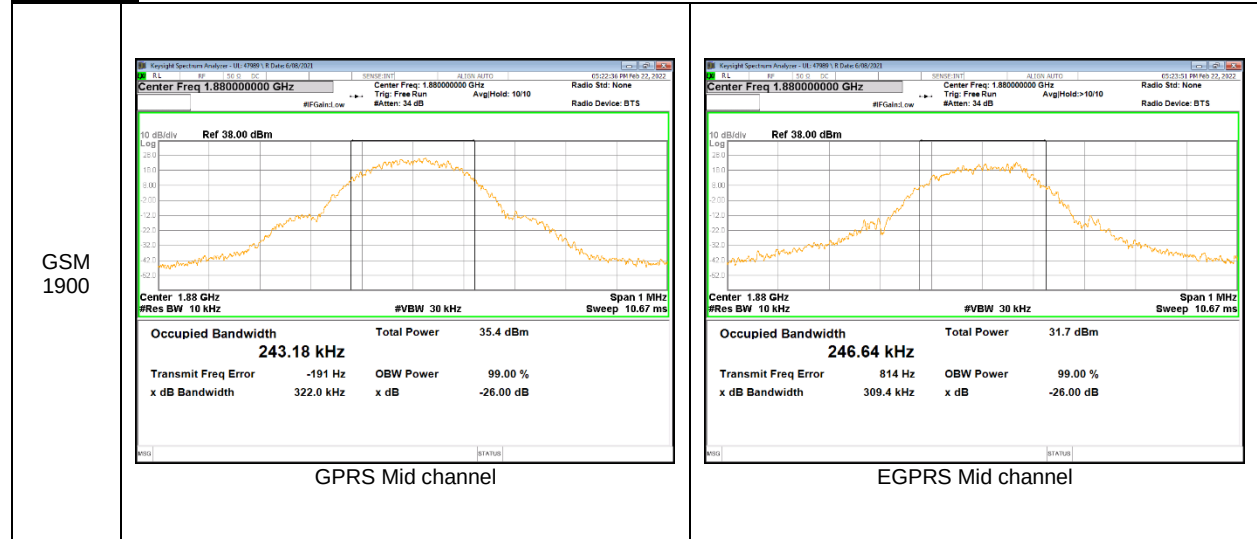
| Band   | BW  | Modulation | f [MHz] | 99% BW (MHz) | -26dB BW (MHz) |
|--------|-----|------------|---------|--------------|----------------|
| NR n66 | 20M | QPSK       | 1745.0  | 18.902       | 20.080         |
|        |     | 16QAM      |         | 18.954       | 19.950         |
|        | 15M | QPSK       | 1745.0  | 14.136       | 14.800         |
|        |     | 16QAM      |         | 14.156       | 14.770         |
|        | 10M | QPSK       | 1745.0  | 9.303        | 9.938          |
|        |     | 16QAM      |         | 9.308        | 9.982          |
|        | 5M  | QPSK       | 1745.0  | 4.471        | 4.865          |
|        |     | 16QAM      |         | 4.483        | 4.814          |

## 9.1.1. OCCUPIED BANDWIDTH RESULTS

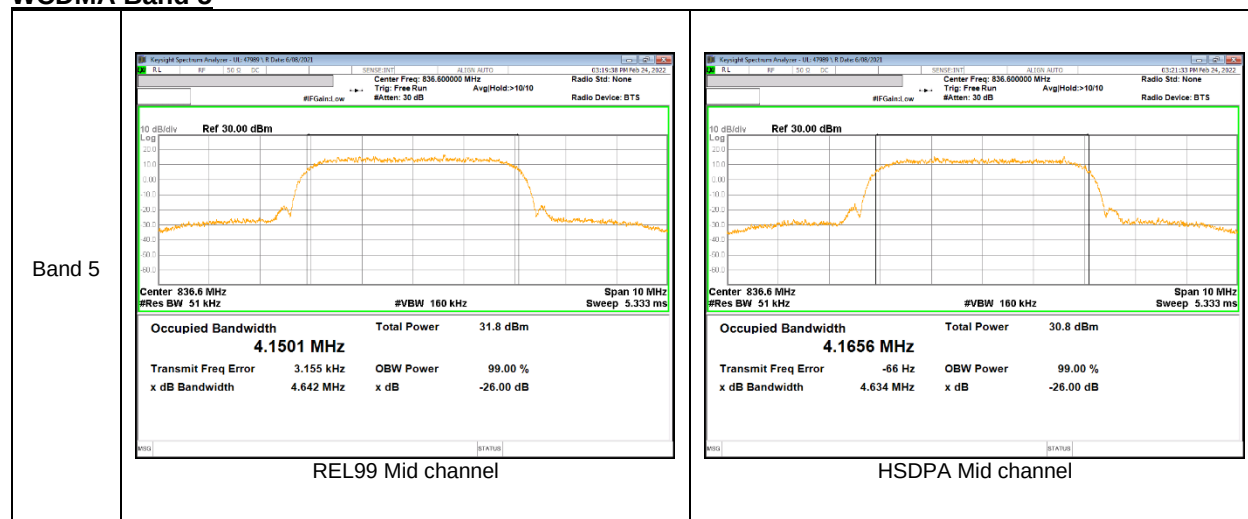
### GSM 850



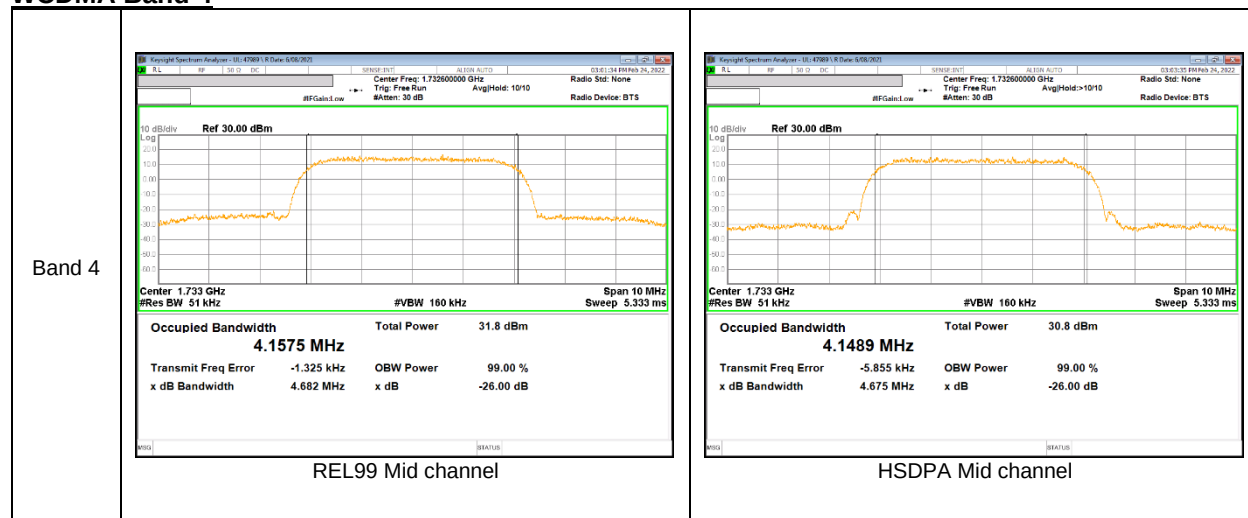
### GSM 1900



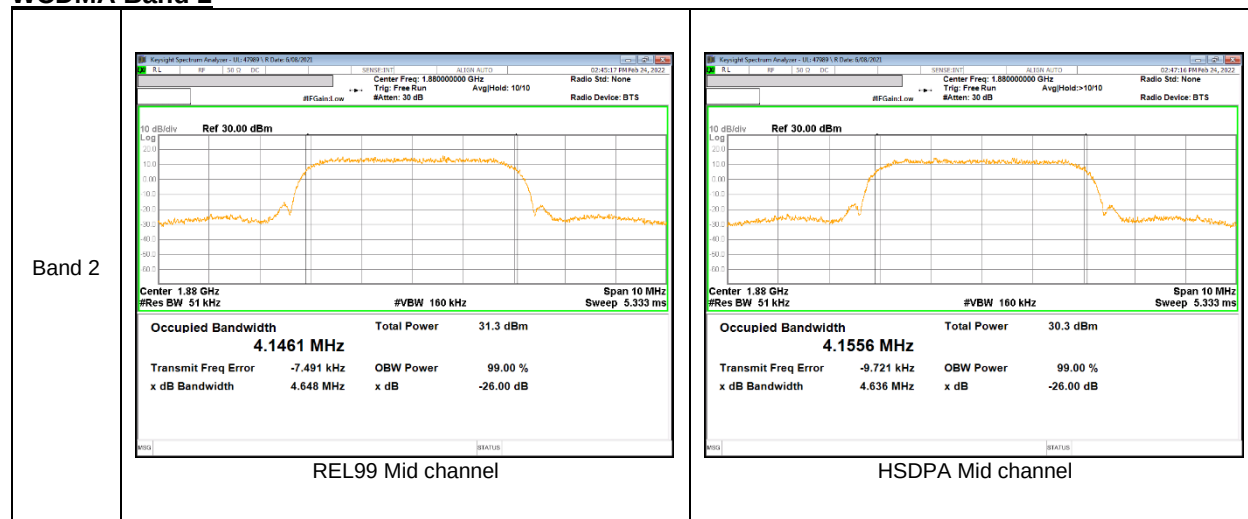
## WCDMA Band 5



## WCDMA Band 4



## WCDMA Band 2



# LTE Band 2

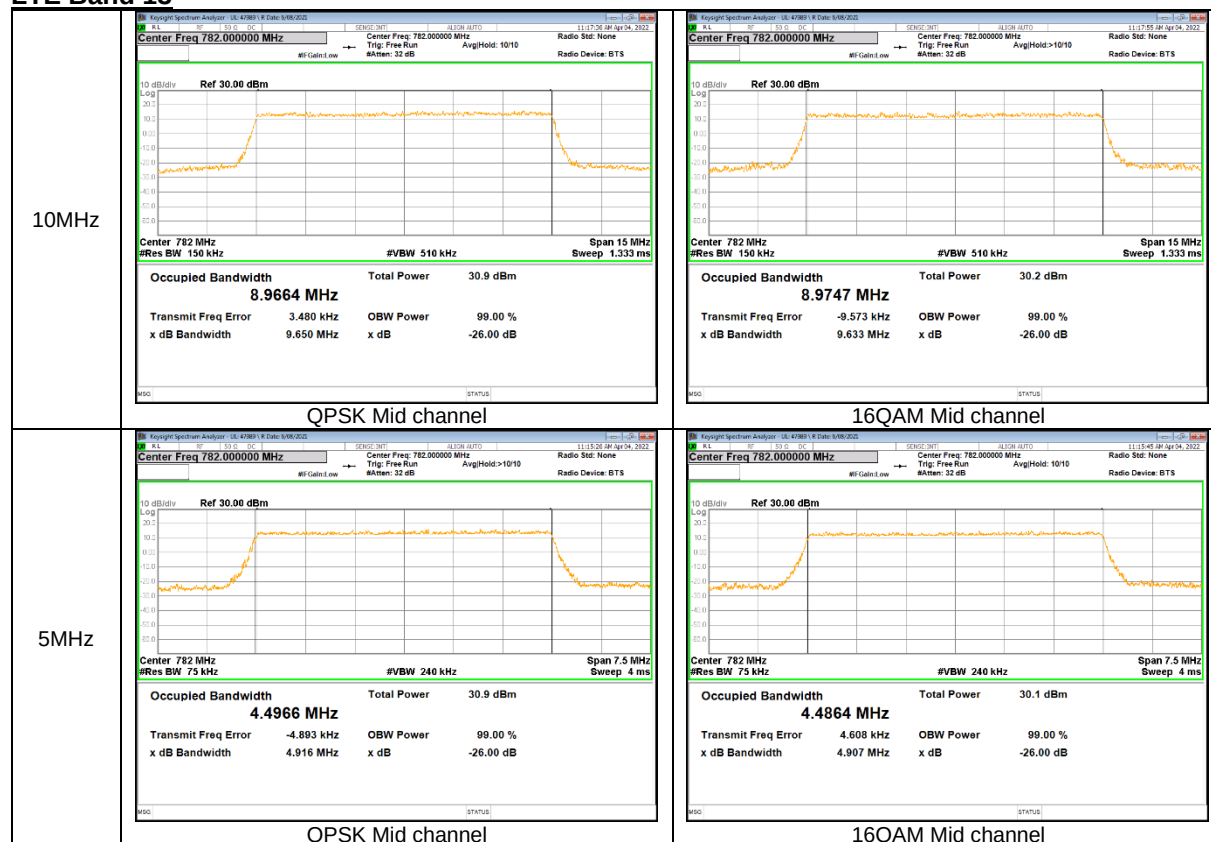




**LTE Band 12**

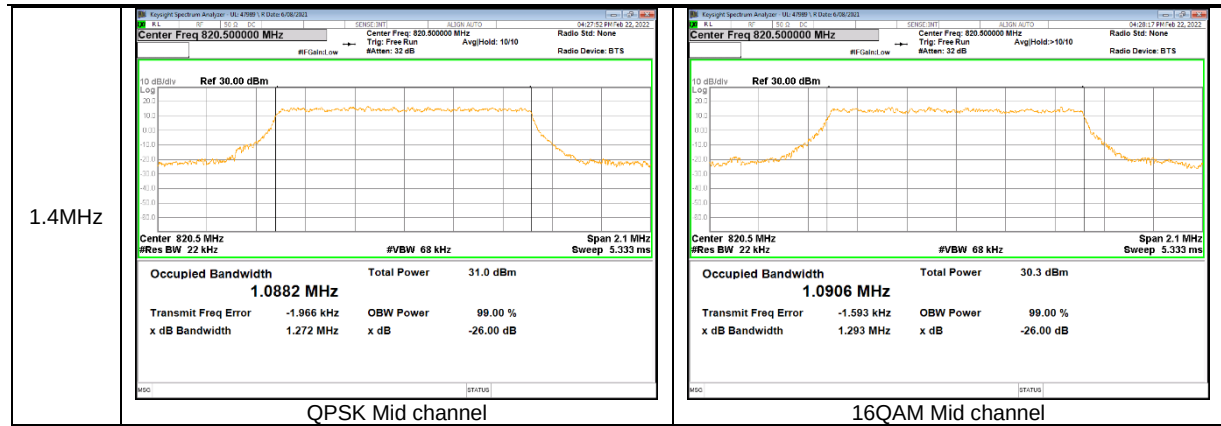


**LTE Band 13**



## LTE Band 26 (Part 90)



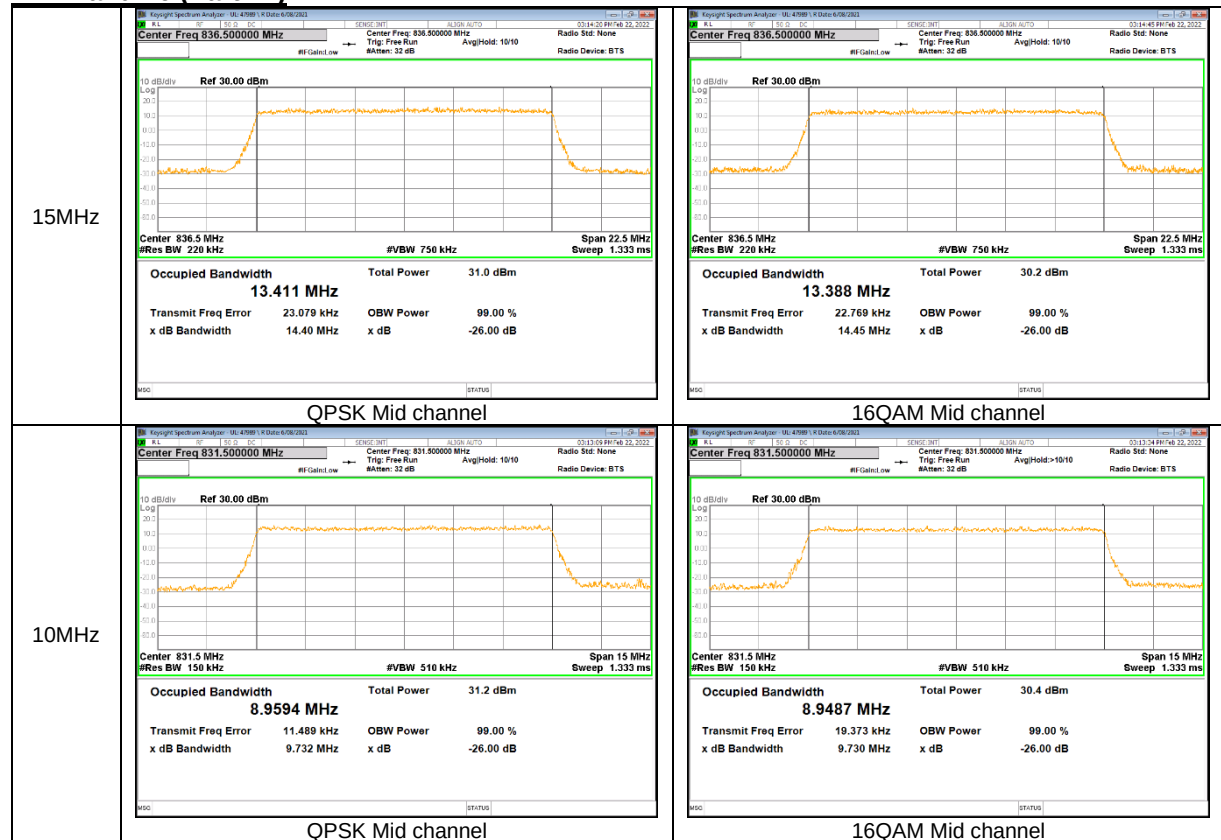


### LTE Band 26 (Straddle)





### LTE Band 26 (Part 22)





**LTE Band 41**



LTE Band 66





NR Band n5 CP-OFDM



NR Band n41 CP-OFDM

