

## Appendix A: Effective (Isotropic) Radiated Power Output Data

### Test Result

| Band    | Channel | PCL | Conducted Power (dBm) | ERP/EIRP (dBm) | ERP/EIRP Limit (dBm) | Verdict |
|---------|---------|-----|-----------------------|----------------|----------------------|---------|
| GSM850  | 128     | 5   | 32.65                 | 29.8           | 38.45                | PASS    |
| GSM850  | 190     | 5   | 32.41                 | 29.56          | 38.45                | PASS    |
| GSM850  | 251     | 5   | 32.09                 | 29.24          | 38.45                | PASS    |
| GSM1900 | 512     | 0   | 28.45                 | 29.25          | 33.00                | PASS    |
| GSM1900 | 661     | 0   | 28.60                 | 29.4           | 33.00                | PASS    |
| GSM1900 | 810     | 0   | 28.53                 | 29.33          | 33.00                | PASS    |

| Band     | Channel | PCL | Slot | Conducted Power (dBm) | ERP/EIRP (dBm) | ERP/EIRP Limit (dBm) | Verdict |
|----------|---------|-----|------|-----------------------|----------------|----------------------|---------|
| GPRS850  | 128     | 5   | 1    | 32.74                 | 29.89          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 2    | 30.40                 | 27.55          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 3    | 28.42                 | 25.57          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 4    | 26.18                 | 23.33          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 1    | 32.48                 | 29.63          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 2    | 30.16                 | 27.31          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 3    | 28.19                 | 25.34          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 4    | 25.99                 | 23.14          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 1    | 32.17                 | 29.32          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 2    | 29.84                 | 26.99          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 3    | 27.86                 | 25.01          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 4    | 25.62                 | 22.77          | 38.45                | PASS    |
| GPRS1900 | 512     | 0   | 1    | 28.41                 | 29.21          | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 2    | 25.94                 | 26.74          | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 3    | 24.26                 | 25.06          | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 4    | 22.18                 | 22.98          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 1    | 28.56                 | 29.36          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 2    | 26.07                 | 26.87          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 3    | 24.35                 | 25.15          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 4    | 22.28                 | 23.08          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 1    | 28.48                 | 29.28          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 2    | 25.99                 | 26.79          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 3    | 24.27                 | 25.07          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 4    | 22.19                 | 22.99          | 33.00                | PASS    |

Remark: EIRP (dBm) = Conducted power (dBm) + Antenna Gain (dBi). (For GSM1900)

ERP (dBm) = EIRP (dBm) - 2.15 (dB). (For GSM850)

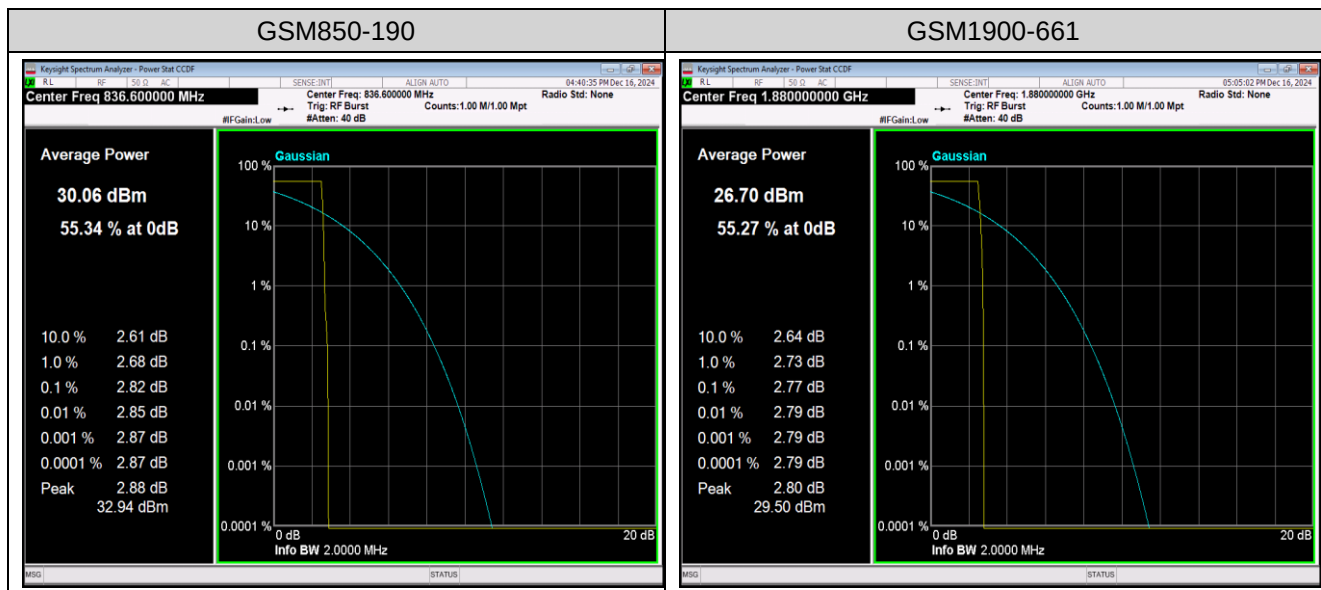
## Appendix B: Peak-to-Average Ratio(CCDF)

### Test Result

| Band    | Channel | PCL | Result(dB) | Limit(dB) | Verdict |
|---------|---------|-----|------------|-----------|---------|
| GSM850  | 190     | 5   | 2.82       | 13        | PASS    |
| GSM1900 | 661     | 0   | 2.77       | 13        | PASS    |

Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

### Test Graphs

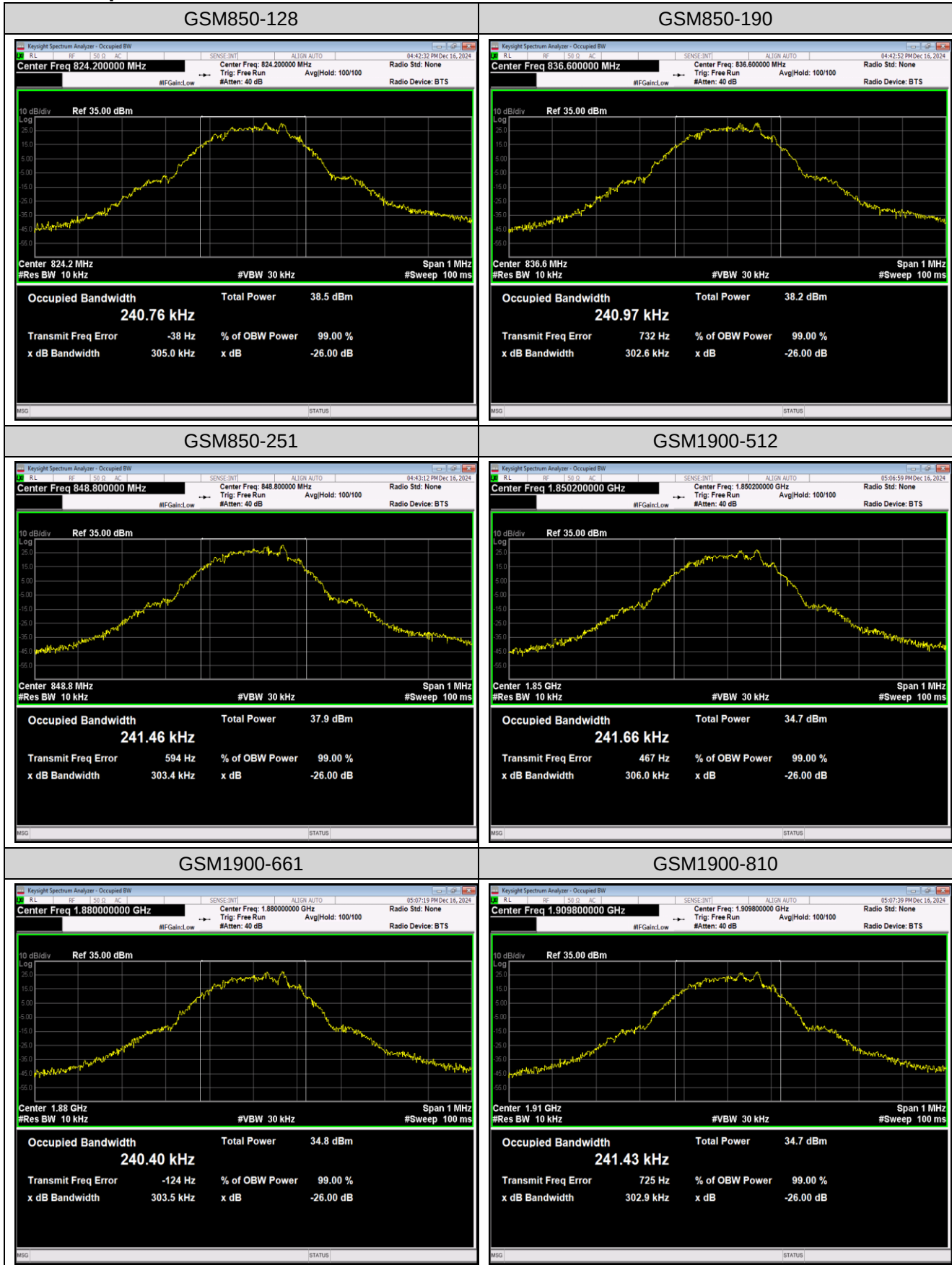


## Appendix C: 26dB Bandwidth and Occupied Bandwidth

### Test Result

| Band    | Channel | PCL | Occupied<br>Bandwidth (MHz) | 26dB Bandwidth<br>(MHz) | Limit<br>(MHz) | Verdict |
|---------|---------|-----|-----------------------------|-------------------------|----------------|---------|
| GSM850  | 128     | 5   | 0.24076                     | 0.3050                  | ---            | PASS    |
| GSM850  | 190     | 5   | 0.24097                     | 0.3026                  | ---            | PASS    |
| GSM850  | 251     | 5   | 0.24146                     | 0.3034                  | ---            | PASS    |
| GSM1900 | 512     | 0   | 0.24166                     | 0.3060                  | ---            | PASS    |
| GSM1900 | 661     | 0   | 0.24040                     | 0.3035                  | ---            | PASS    |
| GSM1900 | 810     | 0   | 0.24143                     | 0.3029                  | ---            | PASS    |

## Test Graphs

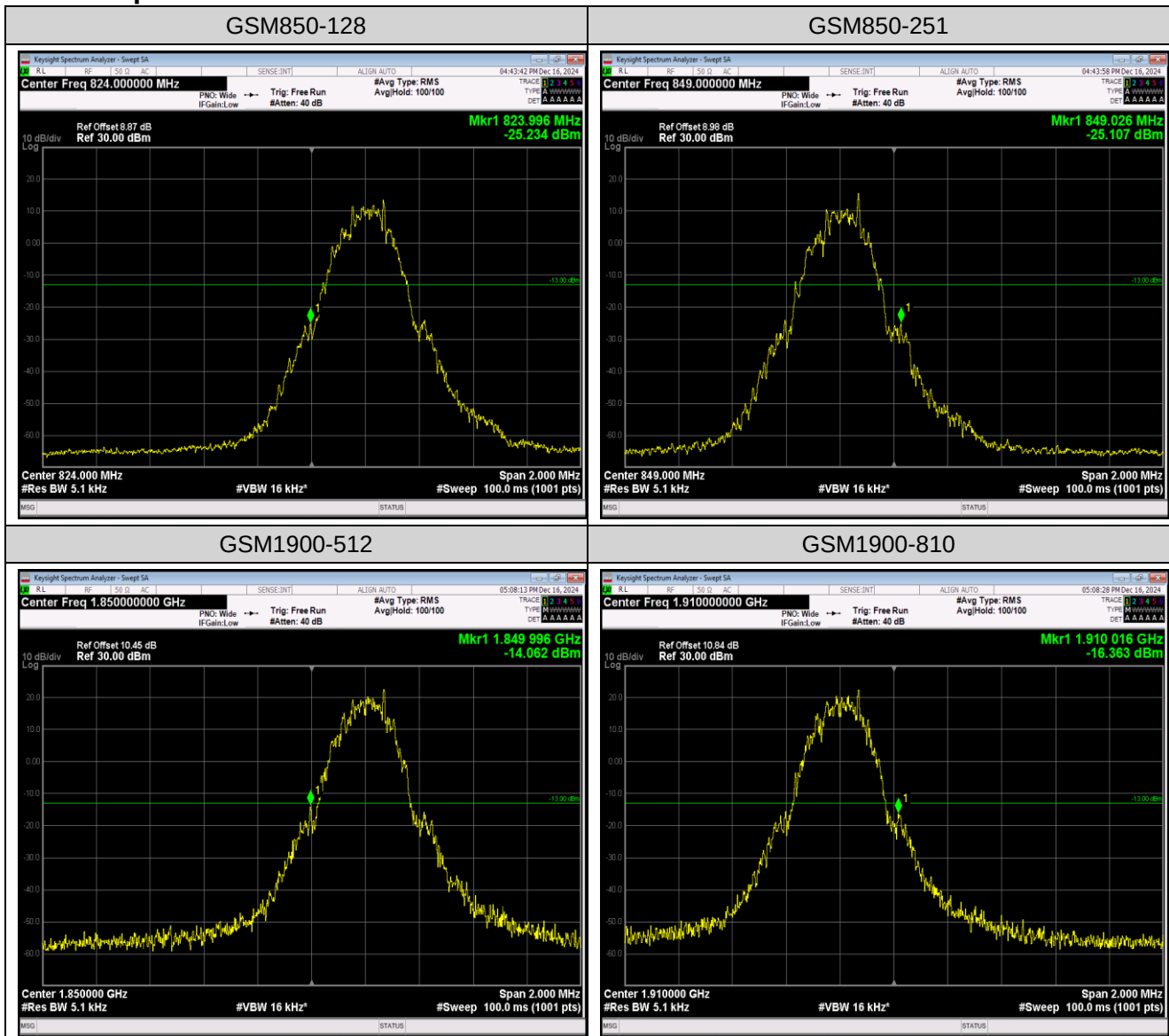


## Appendix D: Band Edge

### Test Result

| Band    | Channel | PCL | Freq (MHz) | Result (dBm) | Limit(dBm) | Verdict |
|---------|---------|-----|------------|--------------|------------|---------|
| GSM850  | 128     | 5   | 824.00     | -25.23       | -13        | PASS    |
| GSM850  | 251     | 5   | 849.03     | -25.11       | -13        | PASS    |
| GSM1900 | 512     | 0   | 1850.00    | -14.06       | -13        | PASS    |
| GSM1900 | 810     | 0   | 1910.02    | -16.36       | -13        | PASS    |

### Test Graphs



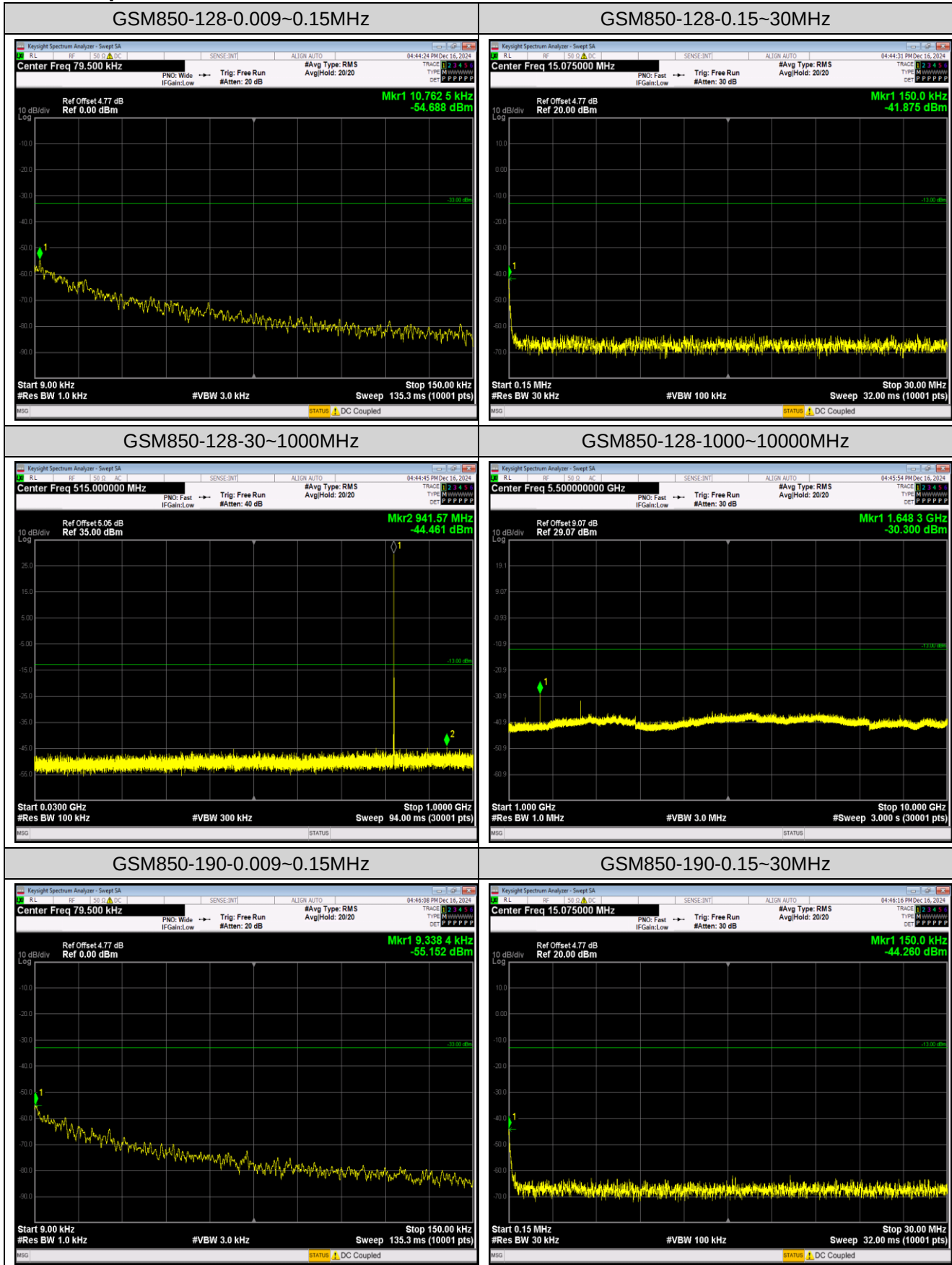
## Appendix E: Conducted Spurious Emission

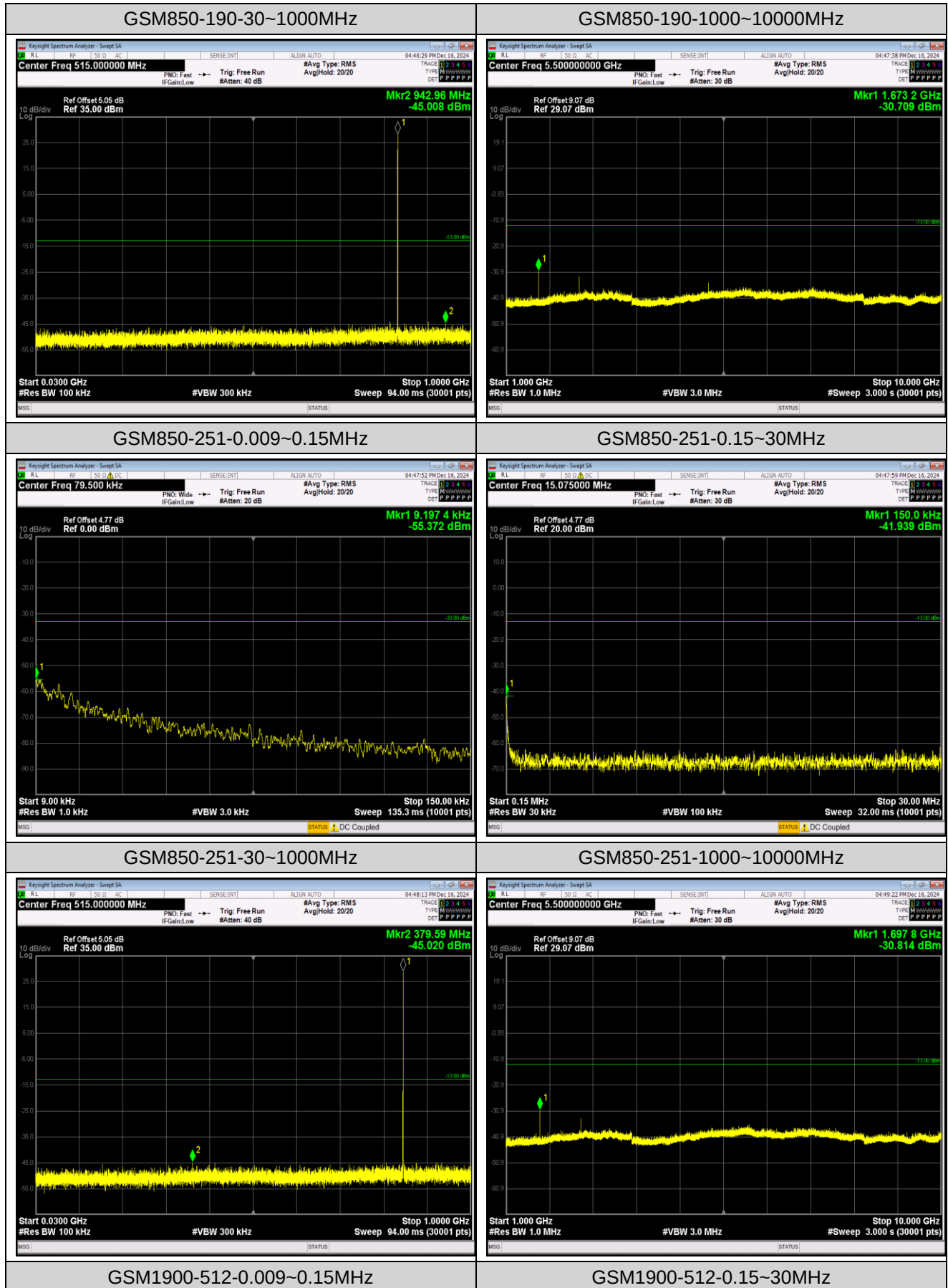
### Test Result

| Band    | Channel | PCL | Frequency Range(MHz) | Max.Freq. (MHz) | Result (dBm) | Limit (dBm) | Verdict |
|---------|---------|-----|----------------------|-----------------|--------------|-------------|---------|
| GSM850  | 128     | 5   | 0.009~0.15MHz        | 0.01            | -54.69       | -33         | PASS    |
| GSM850  | 128     | 5   | 0.15~30MHz           | 0.15            | -41.88       | -13         | PASS    |
| GSM850  | 128     | 5   | 30~1000MHz           | 941.57          | -44.46       | -13         | PASS    |
| GSM850  | 128     | 5   | 1000~10000MHz        | 1648.3          | -30.3        | -13         | PASS    |
| GSM850  | 190     | 5   | 0.009~0.15MHz        | 0.01            | -55.15       | -33         | PASS    |
| GSM850  | 190     | 5   | 0.15~30MHz           | 0.15            | -44.26       | -13         | PASS    |
| GSM850  | 190     | 5   | 30~1000MHz           | 942.96          | -45.01       | -13         | PASS    |
| GSM850  | 190     | 5   | 1000~10000MHz        | 1673.2          | -30.71       | -13         | PASS    |
| GSM850  | 251     | 5   | 0.009~0.15MHz        | 0.01            | -55.37       | -33         | PASS    |
| GSM850  | 251     | 5   | 0.15~30MHz           | 0.15            | -41.94       | -13         | PASS    |
| GSM850  | 251     | 5   | 30~1000MHz           | 379.59          | -45.02       | -13         | PASS    |
| GSM850  | 251     | 5   | 1000~10000MHz        | 1697.8          | -30.81       | -13         | PASS    |
| GSM1900 | 512     | 0   | 0.009~0.15MHz        | 0.01            | -55.67       | -43         | PASS    |
| GSM1900 | 512     | 0   | 0.15~30MHz           | 0.17            | -43.4        | -23         | PASS    |
| GSM1900 | 512     | 0   | 30~1000MHz           | 962.69          | -45.16       | -13         | PASS    |
| GSM1900 | 512     | 0   | 1000~18000MHz        | 16981.7         | -21.99       | -13         | PASS    |
| GSM1900 | 661     | 0   | 0.009~0.15MHz        | 0.01            | -56.43       | -43         | PASS    |
| GSM1900 | 661     | 0   | 0.15~30MHz           | 0.16            | -41.97       | -23         | PASS    |
| GSM1900 | 661     | 0   | 30~1000MHz           | 955.35          | -45.64       | -13         | PASS    |
| GSM1900 | 661     | 0   | 1000~18000MHz        | 16986.8         | -22.26       | -13         | PASS    |
| GSM1900 | 810     | 0   | 0.009~0.15MHz        | 0.01            | -56.95       | -43         | PASS    |
| GSM1900 | 810     | 0   | 0.15~30MHz           | 0.16            | -42.15       | -23         | PASS    |
| GSM1900 | 810     | 0   | 30~1000MHz           | 819.84          | -45.55       | -13         | PASS    |
| GSM1900 | 810     | 0   | 1000~18000MHz        | 16907.47        | -22.4        | -13         | PASS    |

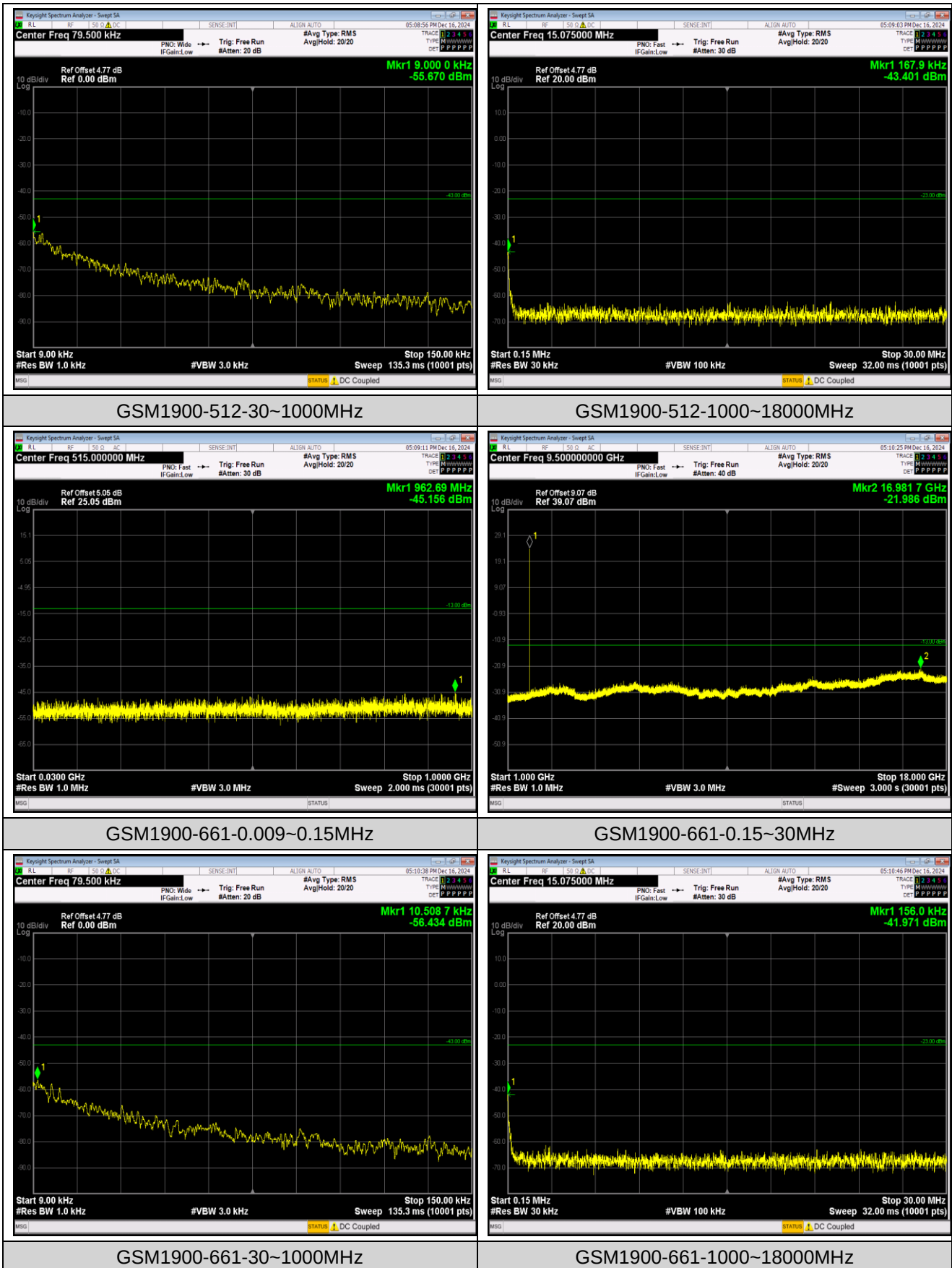
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

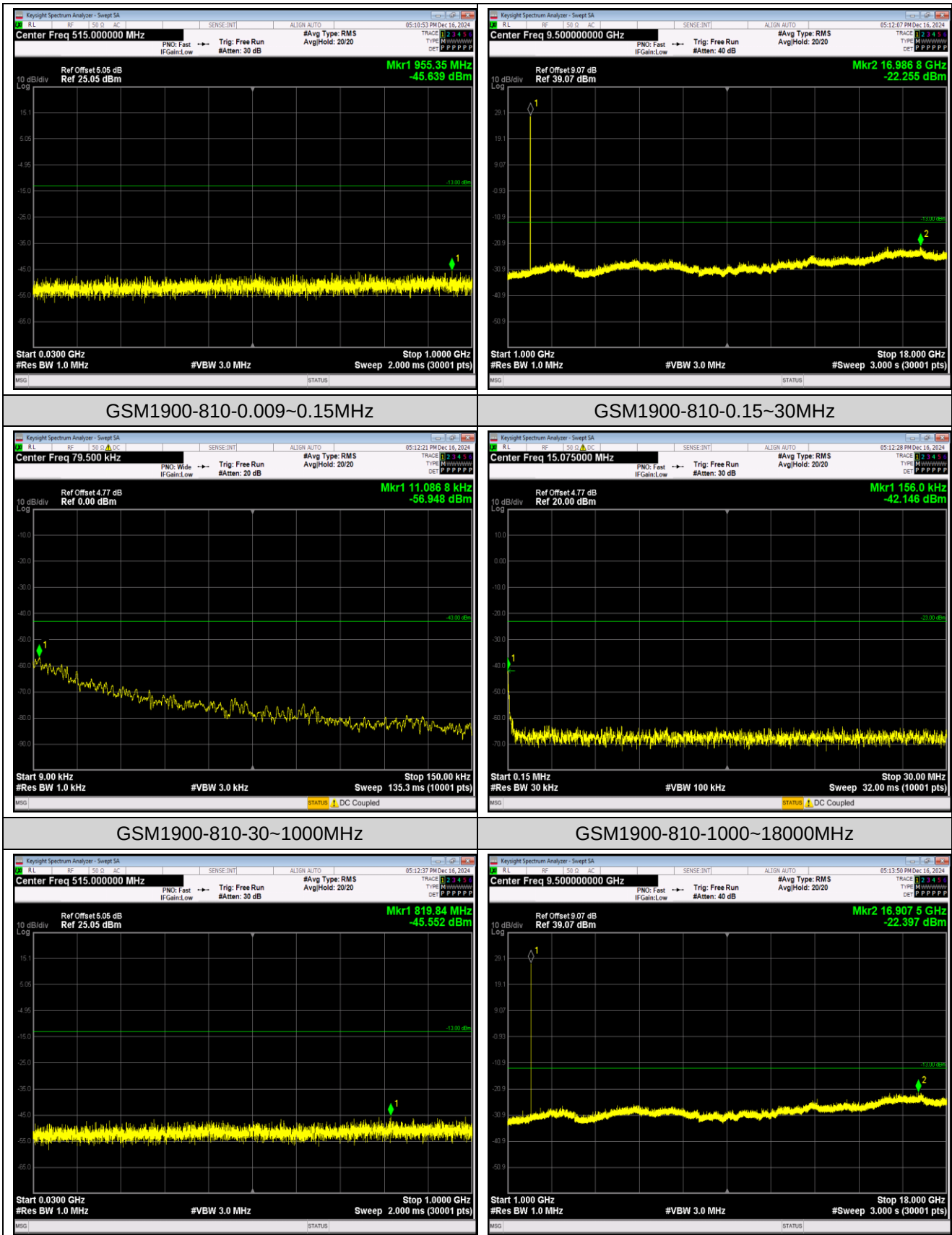
## Test Graphs











## Appendix F: Frequency Stability

### Test Result

| Reference Frequency: GSM850 Middle channel=190 Frequency=836.6MHz                           |                         |                 |           |             |        |
|---------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|-------------|--------|
| Temperature                                                                                 |                         |                 |           |             |        |
| Power supplied<br>(Vdc)                                                                     | Temperature<br>(℃)      | Frequency error |           | Limit (ppm) | Result |
|                                                                                             |                         | Hz              | ppm       |             |        |
| 3.70                                                                                        | -30                     | -0.94           | -0.001124 | ±2.5        | Pass   |
|                                                                                             | -20                     | -3.13           | -0.003741 |             |        |
|                                                                                             | -10                     | -1.68           | -0.002008 |             |        |
|                                                                                             | 0                       | -2.52           | -0.003012 |             |        |
|                                                                                             | 10                      | -5.71           | -0.006825 |             |        |
|                                                                                             | 20                      | -0.65           | -0.000777 |             |        |
|                                                                                             | 30                      | -3.23           | -0.003861 |             |        |
|                                                                                             | 40                      | -2.03           | -0.002426 |             |        |
|                                                                                             | 50                      | -5.97           | -0.007136 |             |        |
| Voltage                                                                                     |                         |                 |           |             |        |
| Temperature<br>(℃)                                                                          | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm) | Result |
|                                                                                             |                         | Hz              | ppm       |             |        |
| 25                                                                                          | 3.55                    | -2.32           | -0.002773 | ±2.5        | Pass   |
|                                                                                             | 3.70                    | -2.10           | -0.002510 |             |        |
|                                                                                             | 4.20                    | 2.26            | 0.002701  |             |        |
| Remark: All channel had been tested, but only the worst case data displayed in this report. |                         |                 |           |             |        |

| Reference Frequency: PCS1900 Middle channel=661 Frequency=1880MHz                           |                         |                 |           |                                           |        |
|---------------------------------------------------------------------------------------------|-------------------------|-----------------|-----------|-------------------------------------------|--------|
| Temperature                                                                                 |                         |                 |           |                                           |        |
| Power supplied<br>(Vdc)                                                                     | Temperature<br>(℃)      | Frequency error |           | Limit (ppm)                               | Result |
|                                                                                             |                         | Hz              | ppm       |                                           |        |
| 3.70                                                                                        | -30                     | 6.65            | 0.003537  | Within<br>authorized band<br>for PCS 1900 | Pass   |
|                                                                                             | -20                     | 0.68            | 0.000362  |                                           |        |
|                                                                                             | -10                     | 4.71            | 0.002505  |                                           |        |
|                                                                                             | 0                       | -5.07           | -0.002697 |                                           |        |
|                                                                                             | 10                      | -3.03           | -0.001612 |                                           |        |
|                                                                                             | 20                      | 0.39            | 0.000207  |                                           |        |
|                                                                                             | 30                      | 1.78            | 0.000947  |                                           |        |
|                                                                                             | 40                      | 3.33            | 0.001771  |                                           |        |
|                                                                                             | 50                      | 1.23            | 0.000654  |                                           |        |
| Voltage                                                                                     |                         |                 |           |                                           |        |
| Temperature<br>(℃)                                                                          | Power supplied<br>(Vdc) | Frequency error |           | Limit (ppm)                               | Result |
|                                                                                             |                         | Hz              | ppm       |                                           |        |
| 25                                                                                          | 3.55                    | 0.74            | 0.000394  | Within<br>authorized band<br>for PCS 1900 | Pass   |
|                                                                                             | 3.70                    | 7.01            | 0.003729  |                                           |        |
|                                                                                             | 4.20                    | -0.06           | -0.000032 |                                           |        |
| Remark: All channel had been tested, but only the worst case data displayed in this report. |                         |                 |           |                                           |        |

## Appendix G: Modulation Characteristics

### Test Result

| Band    | Channel | Result | Verdict |
|---------|---------|--------|---------|
| GSM850  | 190     | PASS   | PASS    |
| GSM1900 | 661     | PASS   | PASS    |

Remark: All channel had been tested, but only the worst case data displayed in this report.

### Test Graphs

