

## 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   | 32.52                 | 24.62          | 38.45                | PASS    |
| GSM850  | 190     | 5   | 32.75                 | 24.85          | 38.45                | PASS    |
| GSM850  | 251     | 5   | 32.45                 | 24.55          | 38.45                | PASS    |
| GSM1900 | 512     | 0   | 28.82                 | 25.95          | 33.00                | PASS    |
| GSM1900 | 661     | 0   | 29.10                 | 26.23          | 33.00                | PASS    |
| GSM1900 | 810     | 0   | 29.15                 | 26.28          | 33.00                | PASS    |

| Band     | Channel | PCL | Slot | Conducted Power (dBm) | ERP/EIRP (dBm) | ERP/EIRP Limit (dBm) | Verdict |
|----------|---------|-----|------|-----------------------|----------------|----------------------|---------|
| GPRS850  | 128     | 5   | 1    | 32.47                 | 24.57          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 2    | 30.36                 | 22.46          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 3    | 28.50                 | 20.6           | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 4    | 26.42                 | 18.52          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 1    | 32.70                 | 24.8           | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 2    | 30.65                 | 22.75          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 3    | 28.83                 | 20.93          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 4    | 26.80                 | 18.9           | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 1    | 32.39                 | 24.49          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 2    | 30.44                 | 22.54          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 3    | 28.60                 | 20.7           | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 4    | 26.55                 | 18.65          | 38.45                | PASS    |
| GPRS1900 | 512     | 0   | 1    | 28.88                 | 26.01          | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 2    | 26.47                 | 23.6           | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 3    | 24.77                 | 21.9           | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 4    | 22.57                 | 19.7           | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 1    | 29.15                 | 26.28          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 2    | 26.82                 | 23.95          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 3    | 25.15                 | 22.28          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 4    | 22.97                 | 20.1           | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 1    | 29.20                 | 26.33          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 2    | 26.88                 | 24.01          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 3    | 25.26                 | 22.39          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 4    | 23.11                 | 20.24          | 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   | 2.64       | 13        | PASS    |
| GSM1900 | 661     | 0   | 2.66       | 13        | PASS    |

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

### Test Graphs

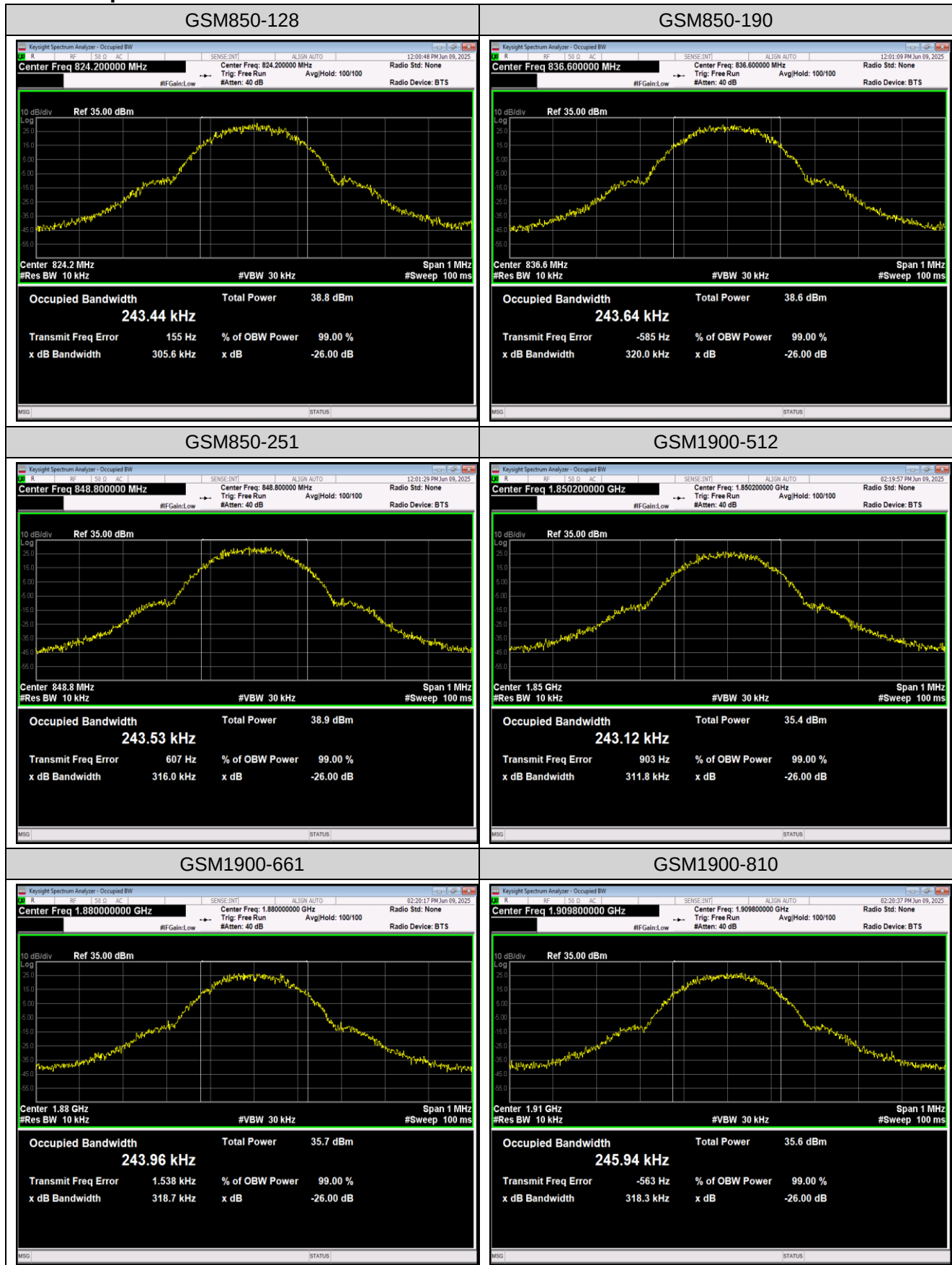


## Appendix C: 26dB Bandwidth and Occupied Bandwidth

### Test Result

| Band    | Channel | PCL | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
|---------|---------|-----|--------------------------|----------------------|-------------|---------|
| GSM850  | 128     | 5   | 0.24344                  | 0.3056               | ---         | PASS    |
| GSM850  | 190     | 5   | 0.24364                  | 0.3200               | ---         | PASS    |
| GSM850  | 251     | 5   | 0.24353                  | 0.3160               | ---         | PASS    |
| GSM1900 | 512     | 0   | 0.24312                  | 0.3118               | ---         | PASS    |
| GSM1900 | 661     | 0   | 0.24396                  | 0.3187               | ---         | PASS    |
| GSM1900 | 810     | 0   | 0.24594                  | 0.3183               | ---         | PASS    |

## Test Graphs

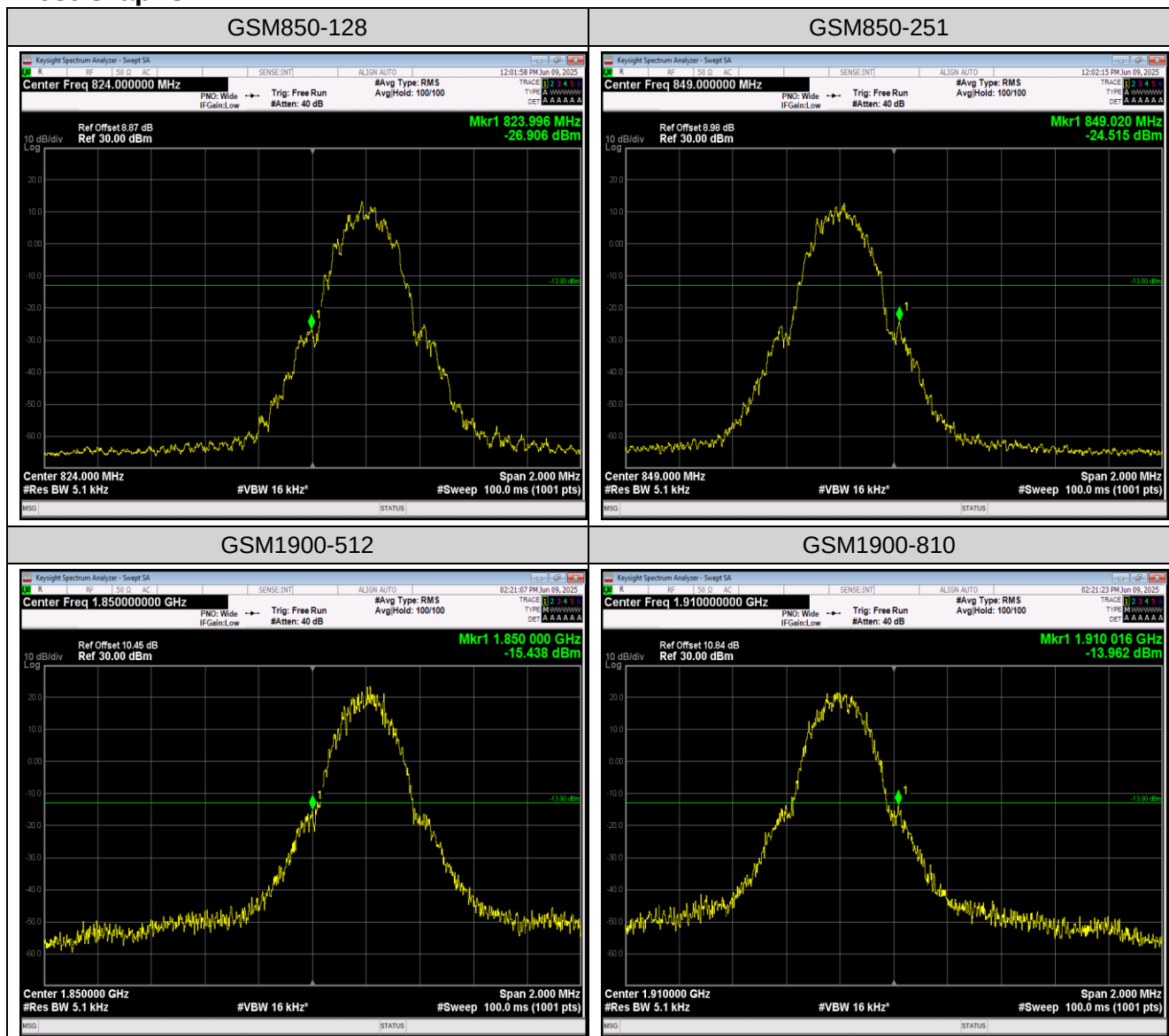


## Appendix D: Band Edge

### Test Result

| Band    | Channel | PCL | Freq (MHz) | Result (dBm) | Limit(dBm) | Verdict |
|---------|---------|-----|------------|--------------|------------|---------|
| GSM850  | 128     | 5   | 824.00     | -26.91       | -13        | PASS    |
| GSM850  | 251     | 5   | 849.02     | -24.52       | -13        | PASS    |
| GSM1900 | 512     | 0   | 1850.00    | -15.44       | -13        | PASS    |
| GSM1900 | 810     | 0   | 1910.02    | -13.96       | -13        | PASS    |

### Test Graphs



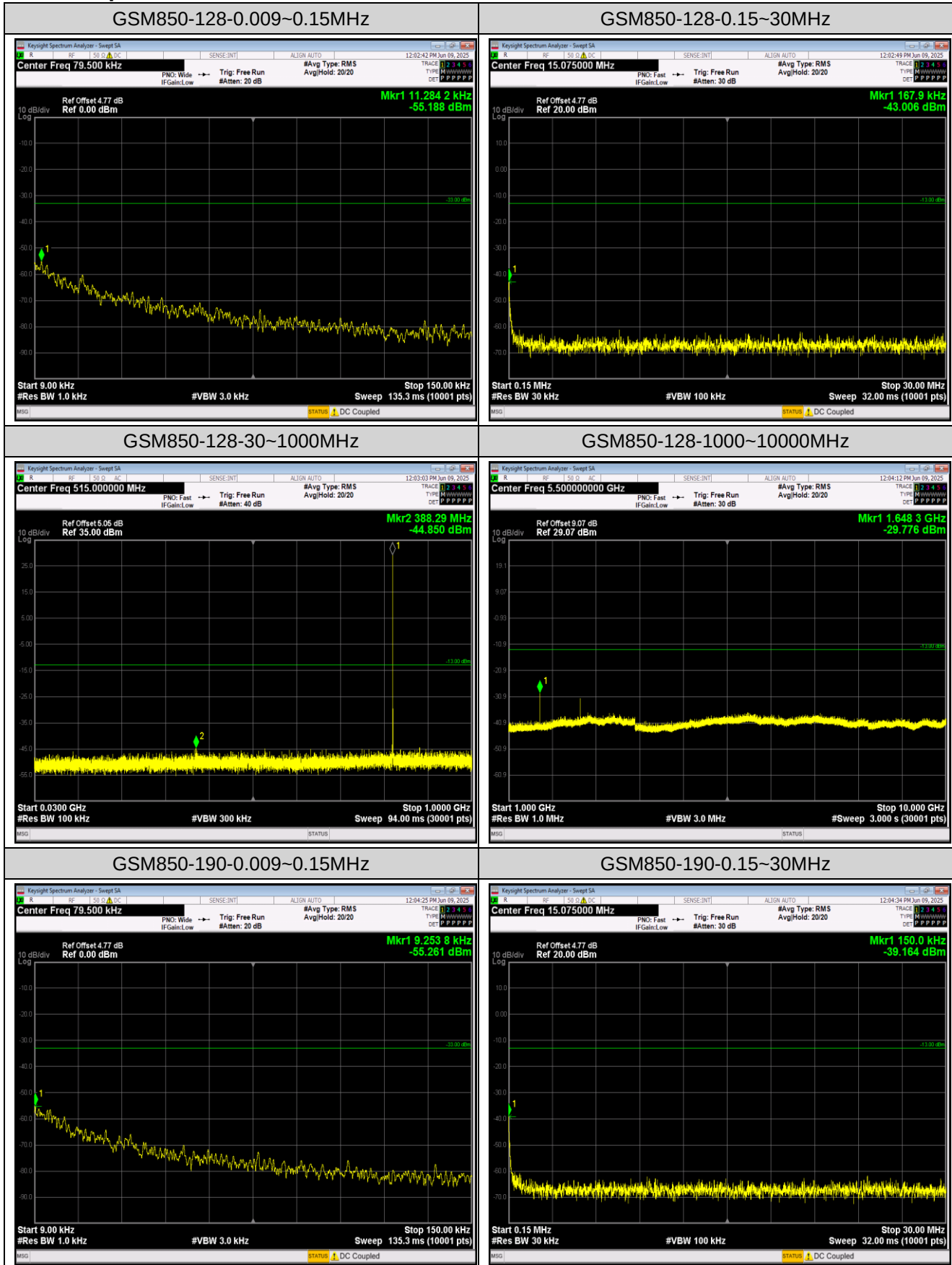
## Appendix E: Conducted Spurious Emission

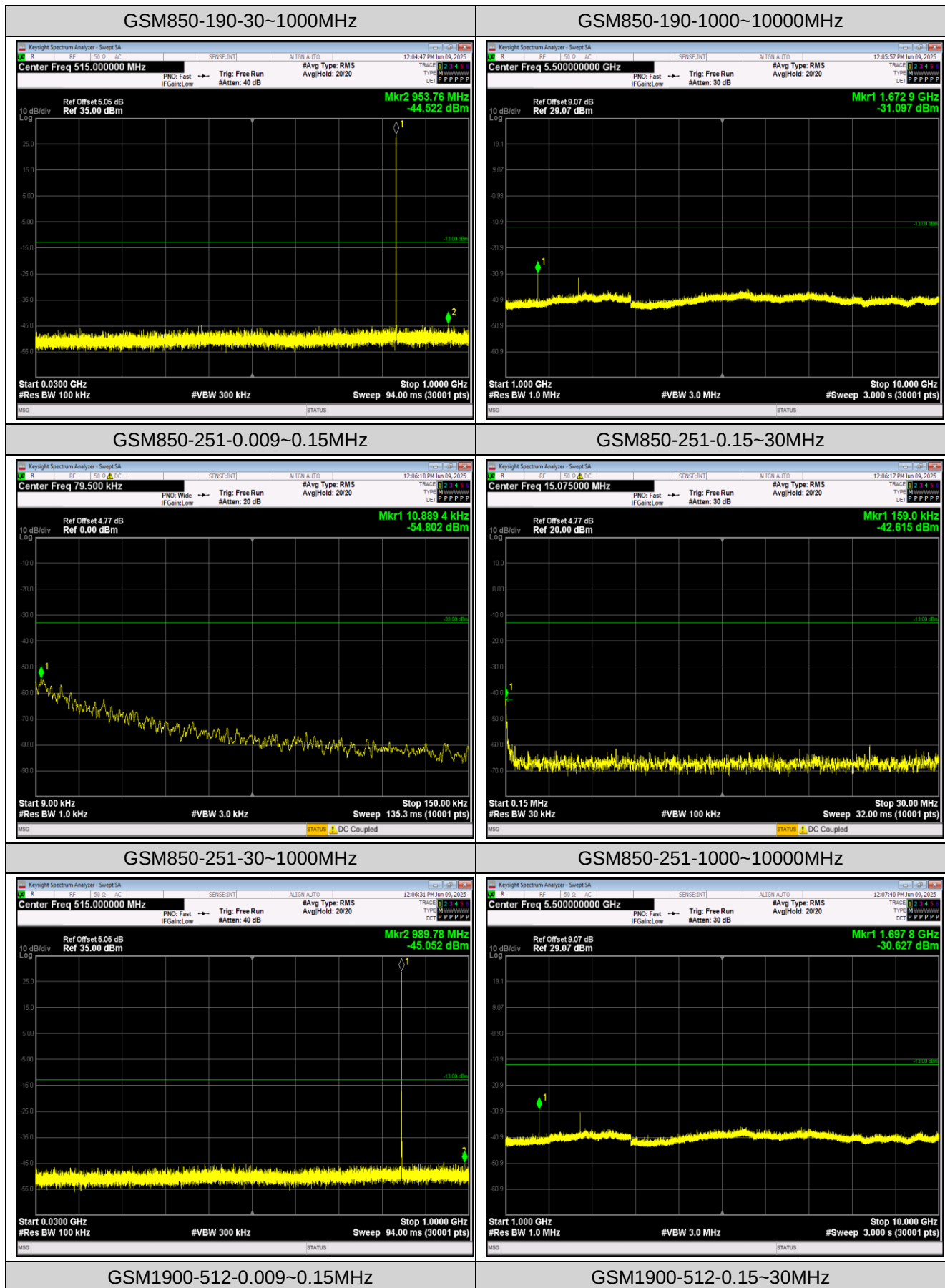
### Test Result

| Band    | Channel | PCL | Frequency Range(MHz) | Max.Freq. (MHz) | Result (dBm) | Limit (dBm) | Verdict |
|---------|---------|-----|----------------------|-----------------|--------------|-------------|---------|
| GSM850  | 128     | 5   | 0.009~0.15MHz        | 0.01            | -55.19       | -33         | PASS    |
| GSM850  | 128     | 5   | 0.15~30MHz           | 0.17            | -43.01       | -13         | PASS    |
| GSM850  | 128     | 5   | 30~1000MHz           | 388.29          | -44.85       | -13         | PASS    |
| GSM850  | 128     | 5   | 1000~10000MHz        | 1648.3          | -29.78       | -13         | PASS    |
| GSM850  | 190     | 5   | 0.009~0.15MHz        | 0.01            | -55.26       | -33         | PASS    |
| GSM850  | 190     | 5   | 0.15~30MHz           | 0.15            | -39.16       | -13         | PASS    |
| GSM850  | 190     | 5   | 30~1000MHz           | 953.76          | -44.52       | -13         | PASS    |
| GSM850  | 190     | 5   | 1000~10000MHz        | 1672.9          | -31.1        | -13         | PASS    |
| GSM850  | 251     | 5   | 0.009~0.15MHz        | 0.01            | -54.8        | -33         | PASS    |
| GSM850  | 251     | 5   | 0.15~30MHz           | 0.16            | -42.62       | -13         | PASS    |
| GSM850  | 251     | 5   | 30~1000MHz           | 989.78          | -45.05       | -13         | PASS    |
| GSM850  | 251     | 5   | 1000~10000MHz        | 1697.8          | -30.63       | -13         | PASS    |
| GSM1900 | 512     | 0   | 0.009~0.15MHz        | 0.01            | -56.32       | -43         | PASS    |
| GSM1900 | 512     | 0   | 0.15~30MHz           | 0.15            | -41.71       | -23         | PASS    |
| GSM1900 | 512     | 0   | 30~1000MHz           | 773.08          | -44.15       | -13         | PASS    |
| GSM1900 | 512     | 0   | 1000~18000MHz        | 16196.3         | -22.01       | -13         | PASS    |
| GSM1900 | 661     | 0   | 0.009~0.15MHz        | 0.01            | -55.27       | -43         | PASS    |
| GSM1900 | 661     | 0   | 0.15~30MHz           | 0.15            | -39.68       | -23         | PASS    |
| GSM1900 | 661     | 0   | 30~1000MHz           | 472.35          | -45.29       | -13         | PASS    |
| GSM1900 | 661     | 0   | 1000~18000MHz        | 17059.33        | -21.83       | -13         | PASS    |
| GSM1900 | 810     | 0   | 0.009~0.15MHz        | 0.01            | -53.85       | -43         | PASS    |
| GSM1900 | 810     | 0   | 0.15~30MHz           | 0.17            | -42.73       | -23         | PASS    |
| GSM1900 | 810     | 0   | 30~1000MHz           | 370.28          | -44.28       | -13         | PASS    |
| GSM1900 | 810     | 0   | 1000~18000MHz        | 17036.1         | -21.98       | -13         | PASS    |

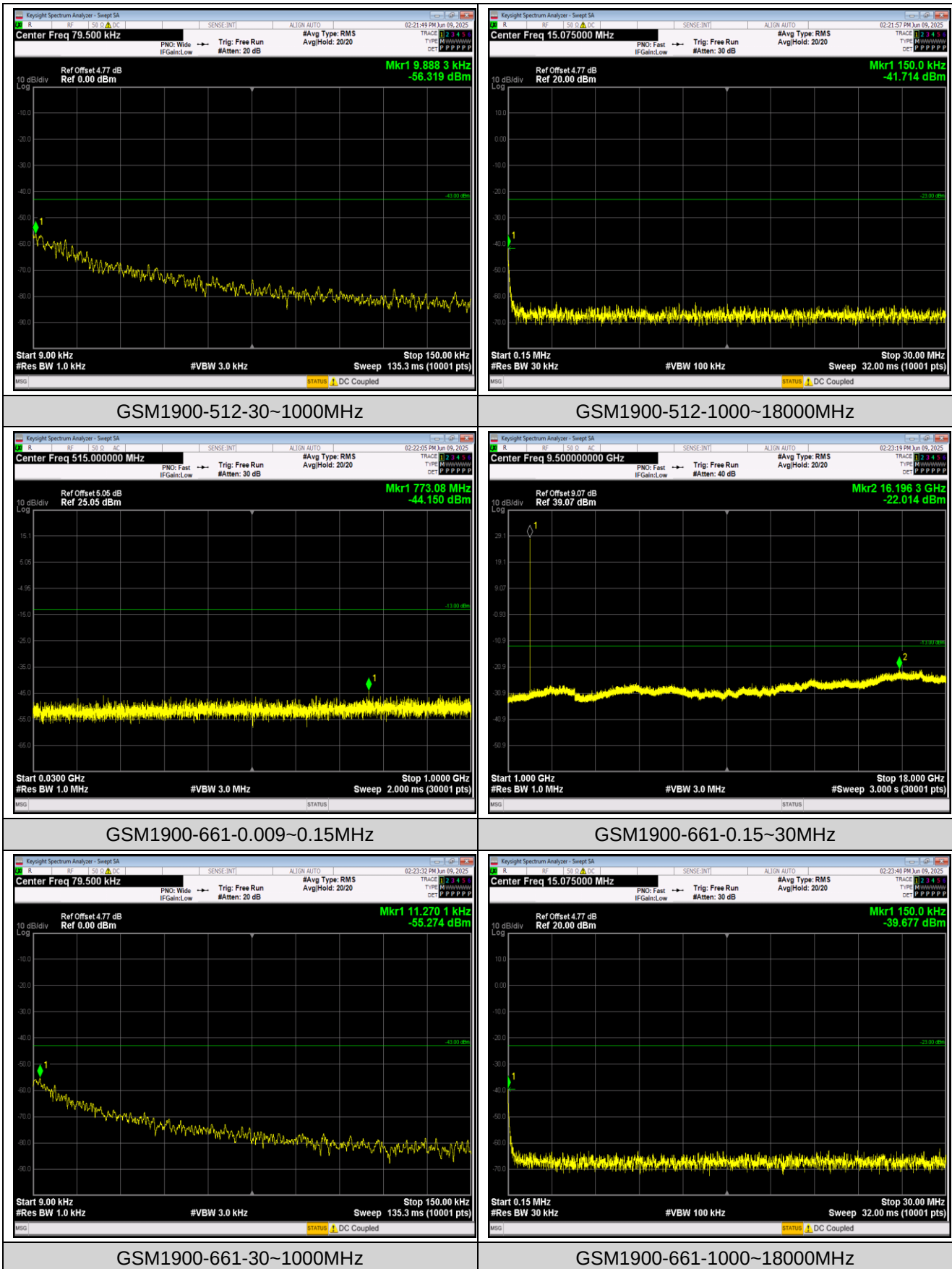
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

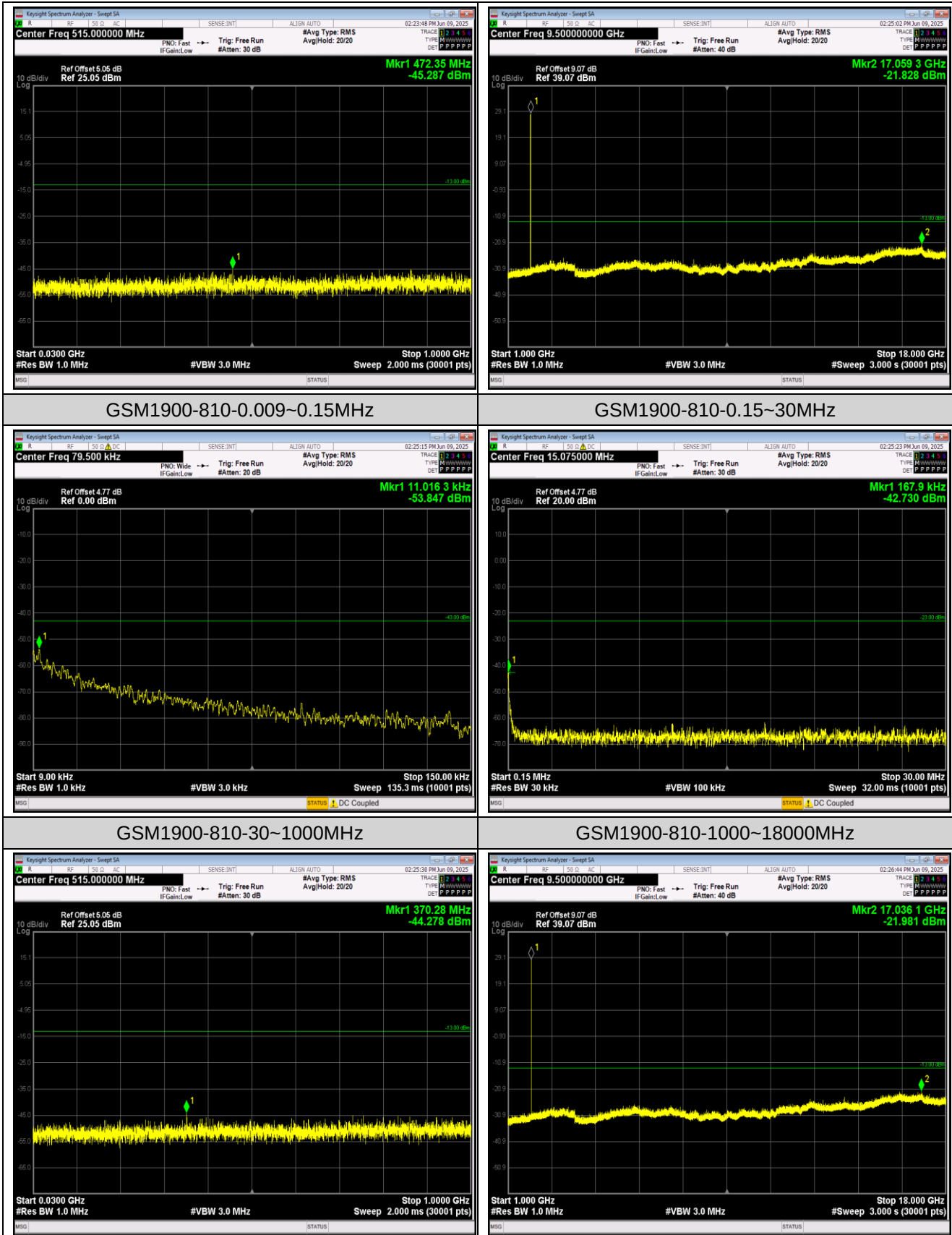
## Test Graphs











## Appendix F: Frequency Stability

### Test Result

| Reference Frequency: GSM850 Middle channel=190 Frequency=836.6MHz                           |                         |                 |          |             |        |
|---------------------------------------------------------------------------------------------|-------------------------|-----------------|----------|-------------|--------|
| Temperature                                                                                 |                         |                 |          |             |        |
| Power supplied<br>(Vdc)                                                                     | Temperature<br>(°C)     | Frequency error |          | Limit (ppm) | Result |
|                                                                                             |                         | Hz              | ppm      |             |        |
| 3.85                                                                                        | -30                     | 6.94            | 0.008295 | ±2.5        | Pass   |
|                                                                                             | -20                     | 14.37           | 0.017177 |             |        |
|                                                                                             | -10                     | 10.43           | 0.012467 |             |        |
|                                                                                             | 0                       | 17.31           | 0.020691 |             |        |
|                                                                                             | 10                      | 11.27           | 0.013471 |             |        |
|                                                                                             | 20                      | 19.34           | 0.023117 |             |        |
|                                                                                             | 30                      | 14.85           | 0.017750 |             |        |
|                                                                                             | 40                      | 16.14           | 0.019292 |             |        |
|                                                                                             | 50                      | 10.65           | 0.012730 |             |        |
| Voltage                                                                                     |                         |                 |          |             |        |
| Temperature<br>(°C)                                                                         | Power supplied<br>(Vdc) | Frequency error |          | Limit (ppm) | Result |
|                                                                                             |                         | Hz              | ppm      |             |        |
| 25                                                                                          | 3.60                    | 16.53           | 0.019759 | ±2.5        | Pass   |
|                                                                                             | 3.85                    | 22.92           | 0.027397 |             |        |
|                                                                                             | 4.40                    | 15.66           | 0.018719 |             |        |
| 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>(°C)     | Frequency error |          | Limit (ppm)                               | Result |
|                                                                                             |                         | Hz              | ppm      |                                           |        |
| 3.85                                                                                        | -30                     | 14.85           | 0.007899 | Within<br>authorized band<br>for PCS 1900 | Pass   |
|                                                                                             | -20                     | 24.57           | 0.013069 |                                           |        |
|                                                                                             | -10                     | 16.85           | 0.008963 |                                           |        |
|                                                                                             | 0                       | 8.59            | 0.004569 |                                           |        |
|                                                                                             | 10                      | 10.33           | 0.005495 |                                           |        |
|                                                                                             | 20                      | 17.27           | 0.009186 |                                           |        |
|                                                                                             | 30                      | 14.46           | 0.007691 |                                           |        |
|                                                                                             | 40                      | 16.11           | 0.008569 |                                           |        |
|                                                                                             | 50                      | 20.73           | 0.011027 |                                           |        |
| Voltage                                                                                     |                         |                 |          |                                           |        |
| Temperature<br>(°C)                                                                         | Power supplied<br>(Vdc) | Frequency error |          | Limit (ppm)                               | Result |
|                                                                                             |                         | Hz              | ppm      |                                           |        |
| 25                                                                                          | 3.60                    | 12.49           | 0.006644 | Within<br>authorized band<br>for PCS 1900 | Pass   |
|                                                                                             | 3.85                    | 7.85            | 0.004176 |                                           |        |
|                                                                                             | 4.40                    | 14.66           | 0.007798 |                                           |        |
| 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

