

## 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   | 33.00                 | 25.85          | 38.45                | PASS    |
| GSM850  | 190     | 5   | 33.20                 | 26.05          | 38.45                | PASS    |
| GSM850  | 251     | 5   | 33.26                 | 26.11          | 38.45                | PASS    |
| GSM1900 | 512     | 0   | 30.55                 | 28.55          | 33.00                | PASS    |
| GSM1900 | 661     | 0   | 30.86                 | 28.86          | 33.00                | PASS    |
| GSM1900 | 810     | 0   | 30.81                 | 28.81          | 33.00                | PASS    |

| Band     | Channel | PCL | Slot | Conducted Power (dBm) | ERP/EIRP (dBm) | ERP/EIRP Limit (dBm) | Verdict |
|----------|---------|-----|------|-----------------------|----------------|----------------------|---------|
| GPRS850  | 128     | 5   | 1    | 33.16                 | 26.01          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 2    | 32.54                 | 25.39          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 3    | 30.39                 | 23.24          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 4    | 30.31                 | 23.16          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 1    | 33.34                 | 26.19          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 2    | 32.75                 | 25.6           | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 3    | 30.76                 | 23.61          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 4    | 30.47                 | 23.32          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 1    | 33.41                 | 26.26          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 2    | 32.81                 | 25.66          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 3    | 31.27                 | 24.12          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 4    | 30.47                 | 23.32          | 38.45                | PASS    |
| GPRS1900 | 512     | 0   | 1    | 28.53                 | 28.53          | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 2    | 27.67                 | 27.67          | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 3    | 25.3                  | 25.3           | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 4    | 23.91                 | 23.91          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 1    | 28.83                 | 28.83          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 2    | 27.98                 | 27.98          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 3    | 25.61                 | 25.61          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 4    | 24.19                 | 24.19          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 1    | 28.79                 | 28.79          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 2    | 27.94                 | 27.94          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 3    | 25.57                 | 25.57          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 4    | 24.14                 | 24.14          | 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   | 2.62       | 13        | PASS    |
| GSM1900 | 661     | 0   | 2.65       | 13        | PASS    |

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

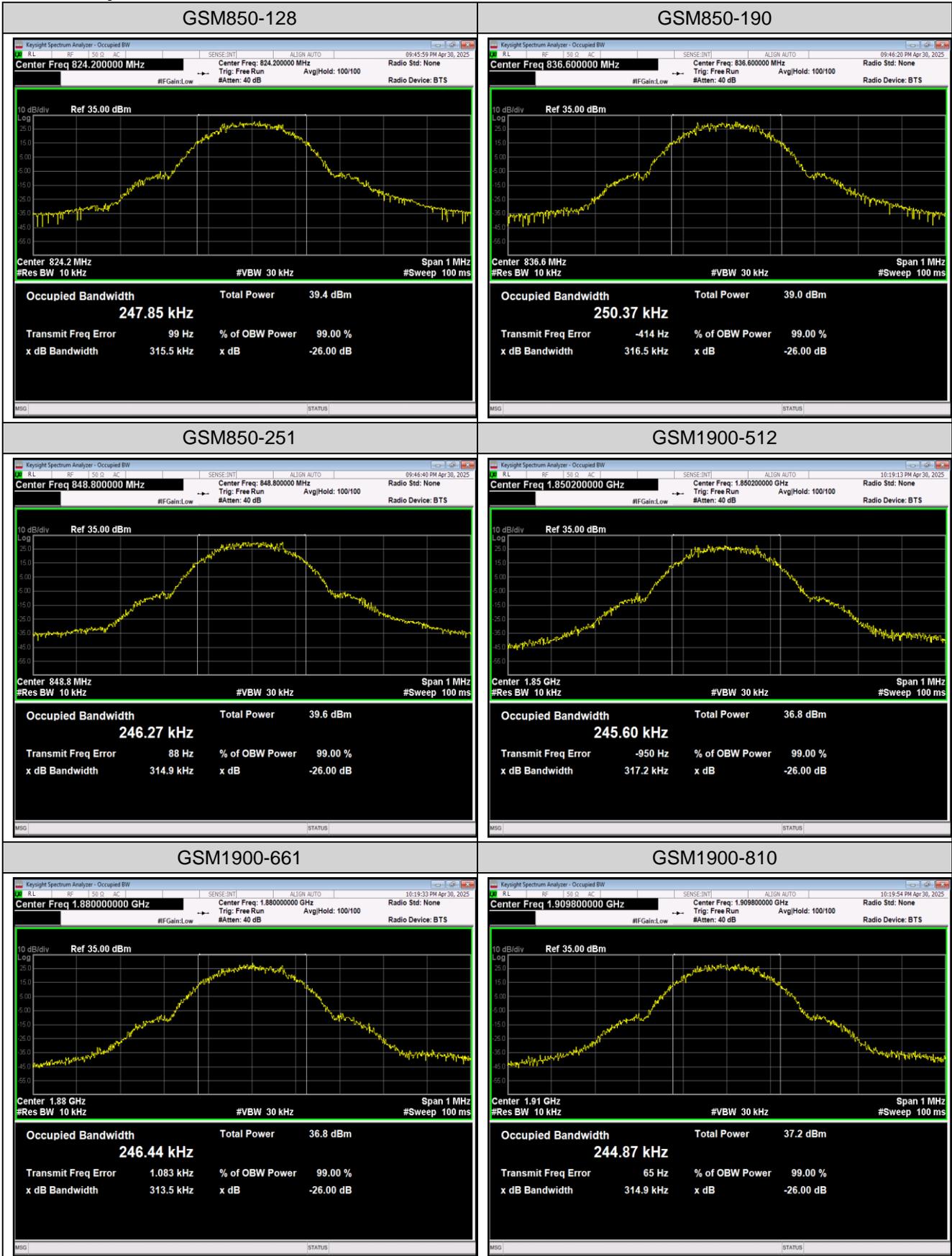
### Test Graphs



**Appendix C: 26dB Bandwidth and Occupied Bandwidth****Test Result**

| Band    | Channel | PCL | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
|---------|---------|-----|--------------------------|----------------------|-------------|---------|
| GSM850  | 128     | 5   | 0.24785                  | 0.3155               | ---         | PASS    |
| GSM850  | 190     | 5   | 0.25037                  | 0.3165               | ---         | PASS    |
| GSM850  | 251     | 5   | 0.24627                  | 0.3149               | ---         | PASS    |
| GSM1900 | 512     | 0   | 0.24560                  | 0.3172               | ---         | PASS    |
| GSM1900 | 661     | 0   | 0.24644                  | 0.3135               | ---         | PASS    |
| GSM1900 | 810     | 0   | 0.24487                  | 0.3149               | ---         | PASS    |

## Test Graphs

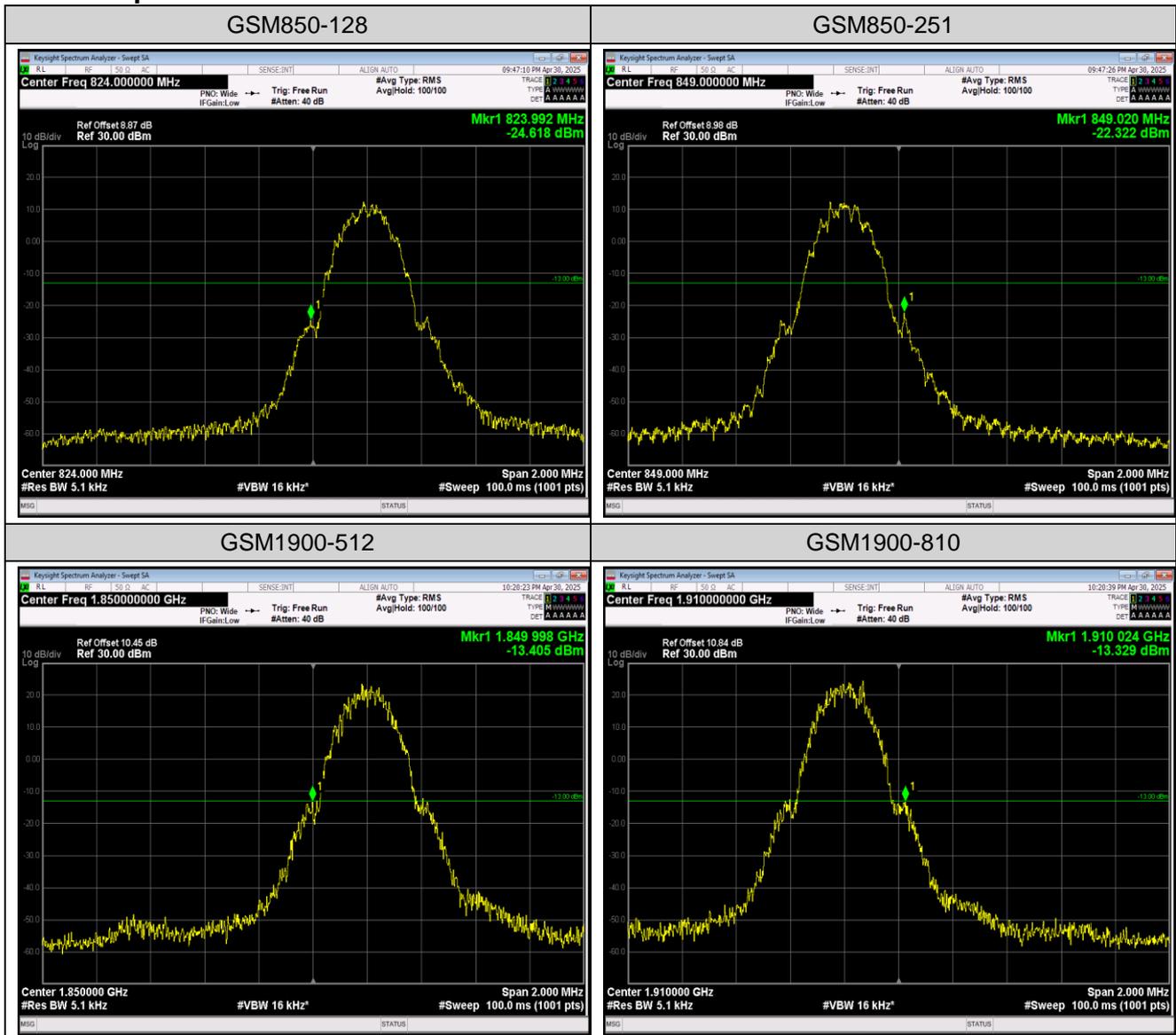


## Appendix D: Band Edge

### Test Result

| Band    | Channel | PCL | Freq (MHz) | Result (dBm) | Limit(dBm) | Verdict |
|---------|---------|-----|------------|--------------|------------|---------|
| GSM850  | 128     | 5   | 823.99     | -24.62       | -13        | PASS    |
| GSM850  | 251     | 5   | 849.02     | -22.32       | -13        | PASS    |
| GSM1900 | 512     | 0   | 1850.00    | -13.41       | -13        | PASS    |
| GSM1900 | 810     | 0   | 1910.02    | -13.33       | -13        | PASS    |

### Test Graphs



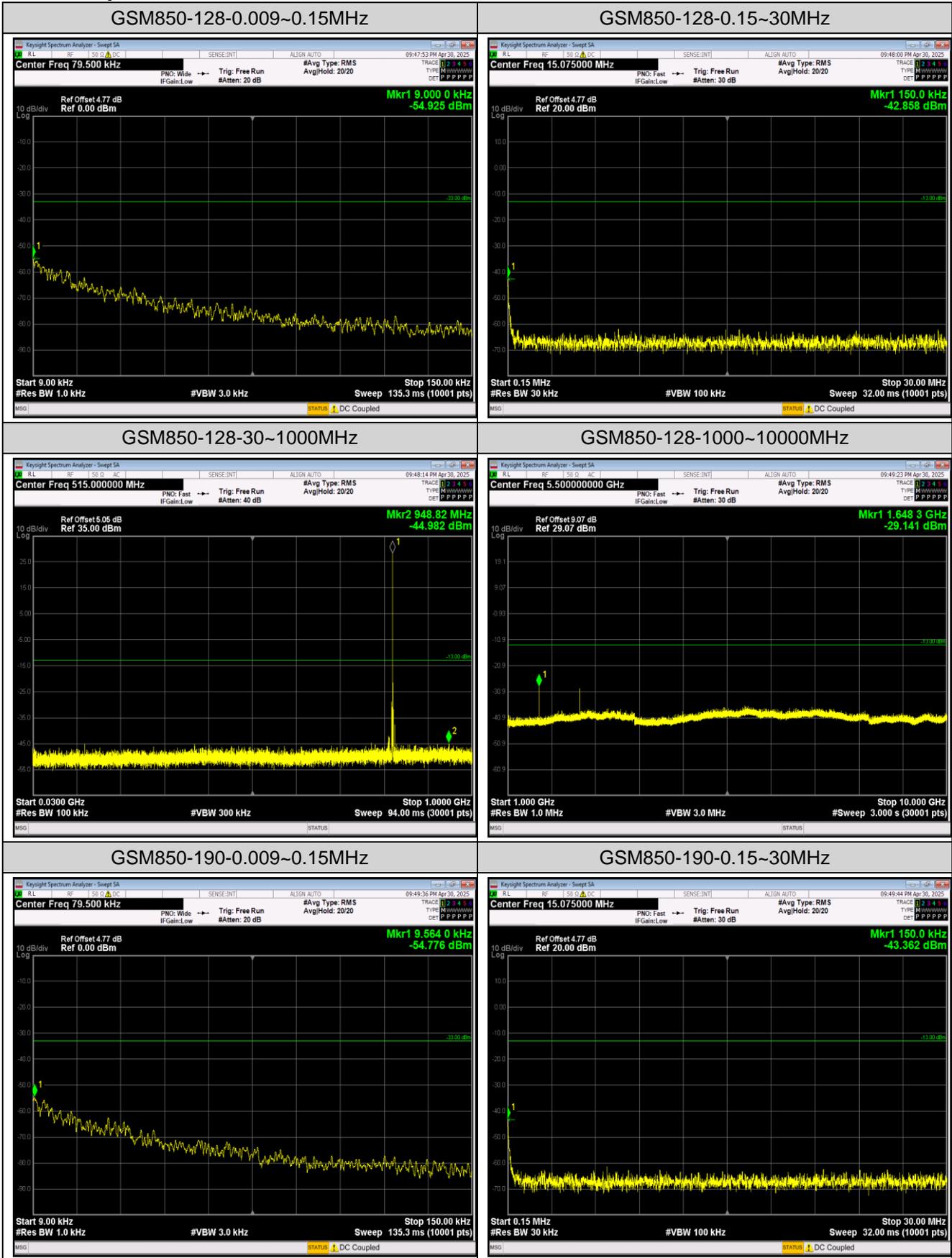
## Appendix E: Conducted Spurious Emission

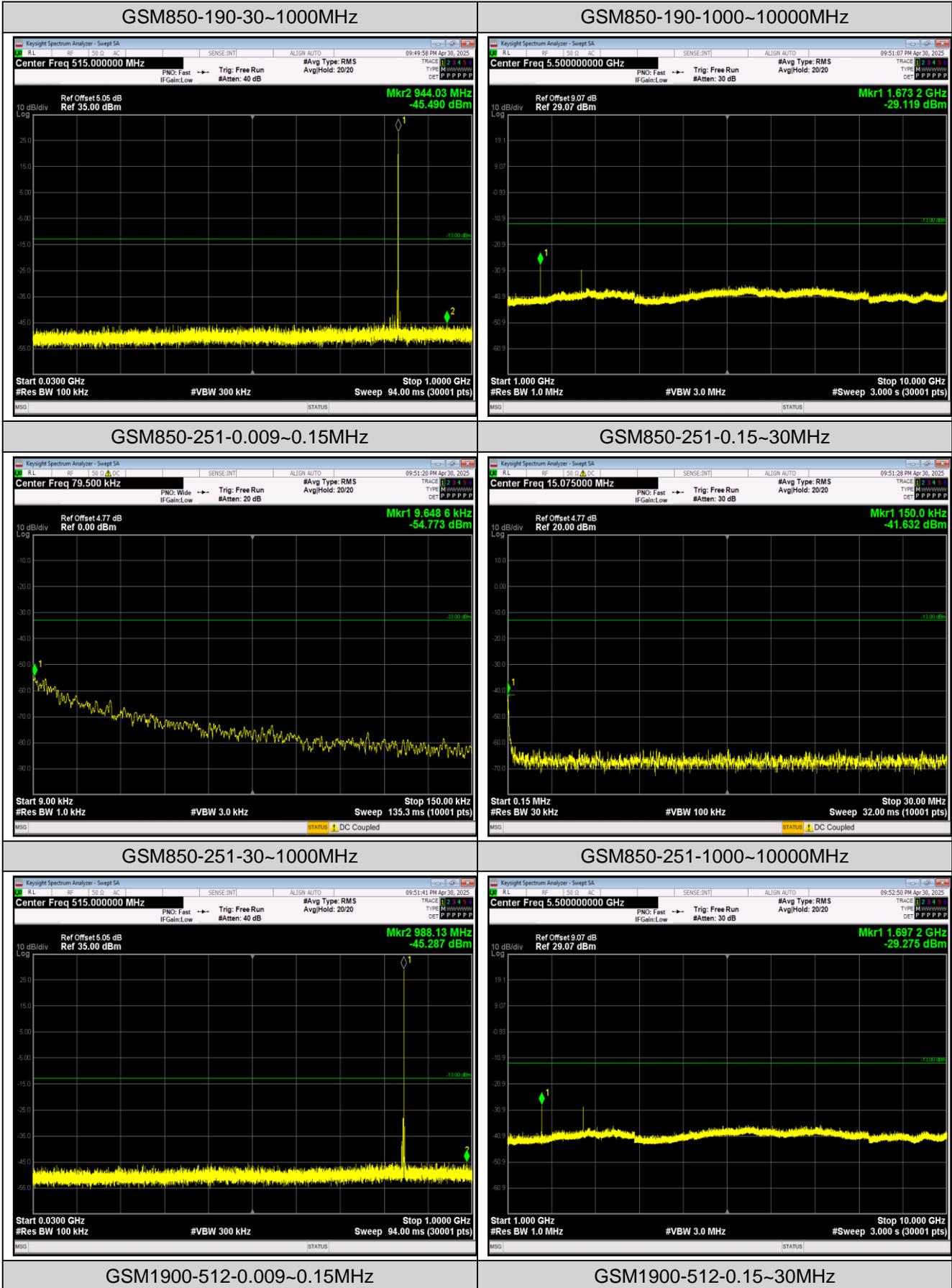
### Test Result

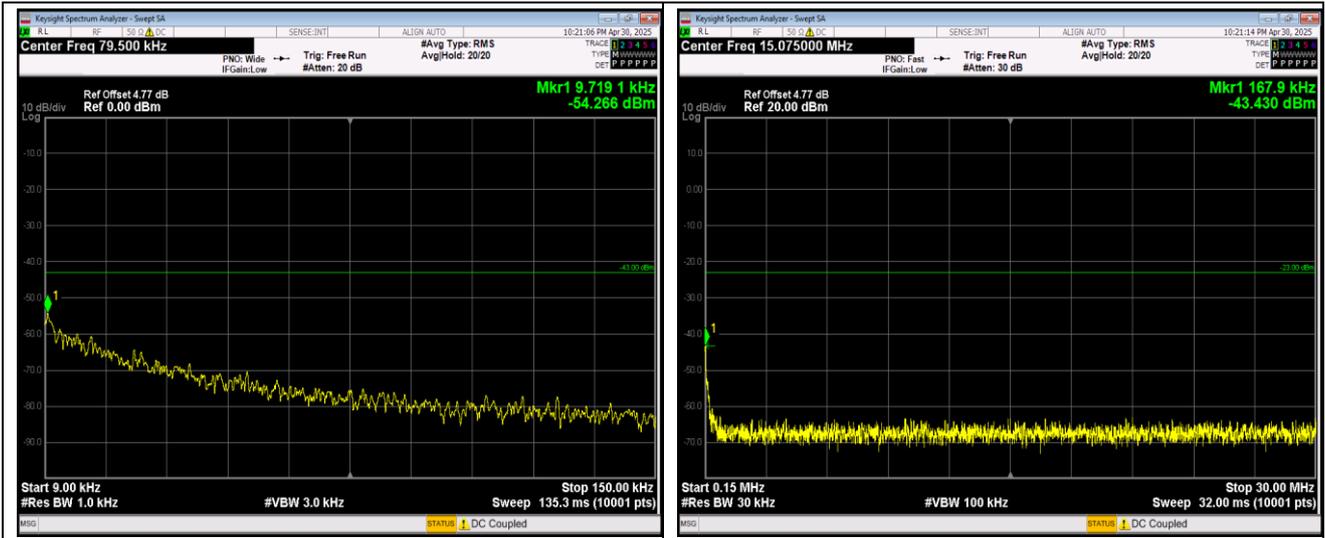
| Band    | Channel | PCL | Frequency Range(MHz) | Max.Freq. (MHz) | Result (dBm) | Limit (dBm) | Verdict |
|---------|---------|-----|----------------------|-----------------|--------------|-------------|---------|
| GSM850  | 128     | 5   | 0.009~0.15MHz        | 0.01            | -54.93       | -33         | PASS    |
| GSM850  | 128     | 5   | 0.15~30MHz           | 0.15            | -42.86       | -13         | PASS    |
| GSM850  | 128     | 5   | 30~1000MHz           | 948.82          | -44.98       | -13         | PASS    |
| GSM850  | 128     | 5   | 1000~10000MHz        | 1648.3          | -29.14       | -13         | PASS    |
| GSM850  | 190     | 5   | 0.009~0.15MHz        | 0.01            | -54.78       | -33         | PASS    |
| GSM850  | 190     | 5   | 0.15~30MHz           | 0.15            | -43.36       | -13         | PASS    |
| GSM850  | 190     | 5   | 30~1000MHz           | 944.03          | -45.49       | -13         | PASS    |
| GSM850  | 190     | 5   | 1000~10000MHz        | 1673.2          | -29.12       | -13         | PASS    |
| GSM850  | 251     | 5   | 0.009~0.15MHz        | 0.01            | -54.77       | -33         | PASS    |
| GSM850  | 251     | 5   | 0.15~30MHz           | 0.15            | -41.63       | -13         | PASS    |
| GSM850  | 251     | 5   | 30~1000MHz           | 988.13          | -45.29       | -13         | PASS    |
| GSM850  | 251     | 5   | 1000~10000MHz        | 1697.2          | -29.28       | -13         | PASS    |
| GSM1900 | 512     | 0   | 0.009~0.15MHz        | 0.01            | -54.27       | -43         | PASS    |
| GSM1900 | 512     | 0   | 0.15~30MHz           | 0.17            | -43.43       | -23         | PASS    |
| GSM1900 | 512     | 0   | 30~1000MHz           | 704.47          | -45.61       | -13         | PASS    |
| GSM1900 | 512     | 0   | 1000~18000MHz        | 17026.47        | -21.78       | -13         | PASS    |
| GSM1900 | 661     | 0   | 0.009~0.15MHz        | 0.01            | -55.99       | -43         | PASS    |
| GSM1900 | 661     | 0   | 0.15~30MHz           | 0.16            | -43.12       | -23         | PASS    |
| GSM1900 | 661     | 0   | 30~1000MHz           | 789.54          | -45.12       | -13         | PASS    |
| GSM1900 | 661     | 0   | 1000~18000MHz        | 16190.63        | -22.4        | -13         | PASS    |
| GSM1900 | 810     | 0   | 0.009~0.15MHz        | 0.01            | -54.94       | -43         | PASS    |
| GSM1900 | 810     | 0   | 0.15~30MHz           | 0.15            | -41.09       | -23         | PASS    |
| GSM1900 | 810     | 0   | 30~1000MHz           | 675.79          | -45.17       | -13         | PASS    |
| GSM1900 | 810     | 0   | 1000~18000MHz        | 17058.2         | -21.79       | -13         | PASS    |

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

## Test Graphs

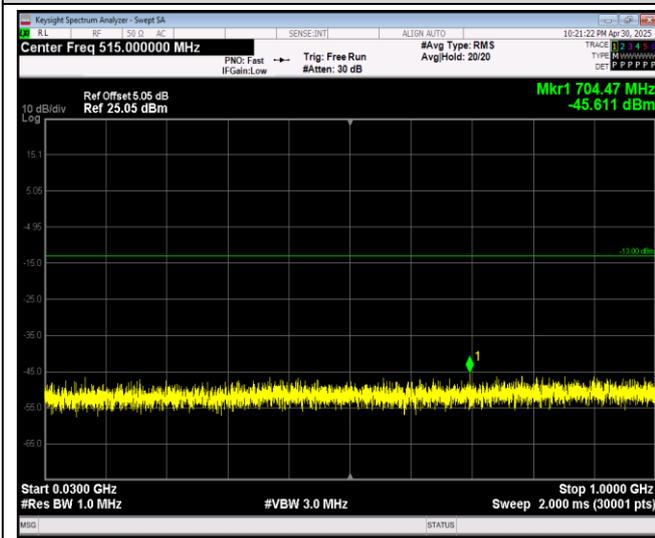




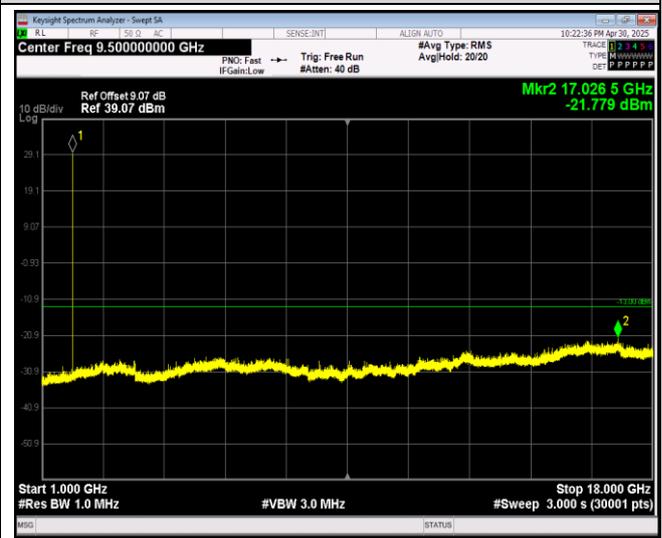


GSM1900-512-30~1000MHz

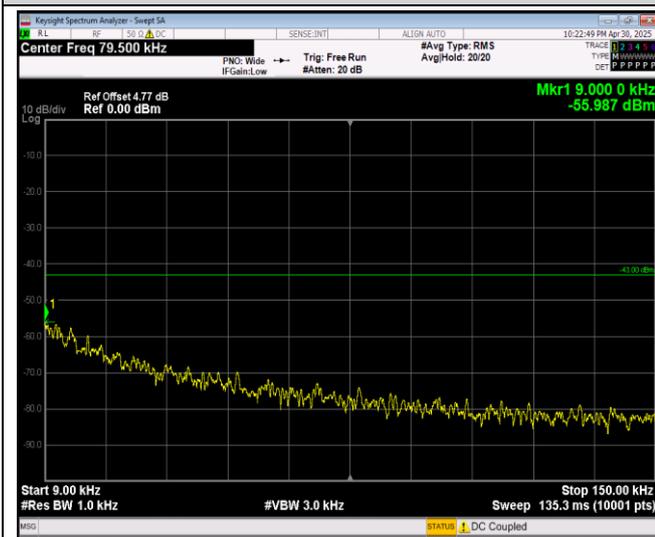
GSM1900-512-1000~18000MHz



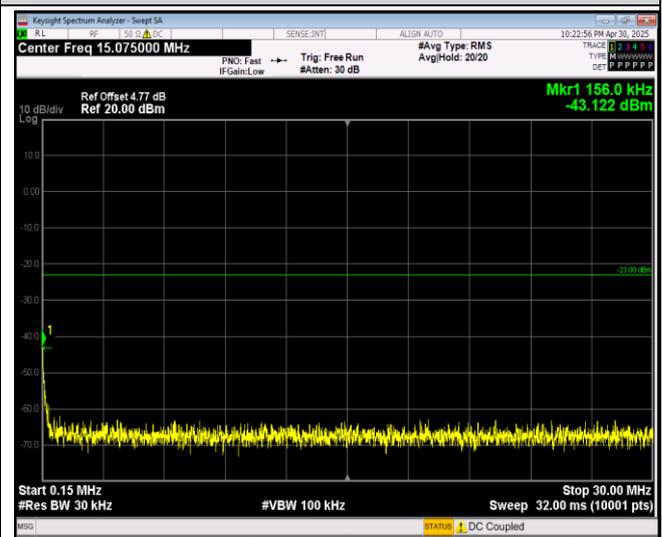
GSM1900-661-0.009~0.15MHz



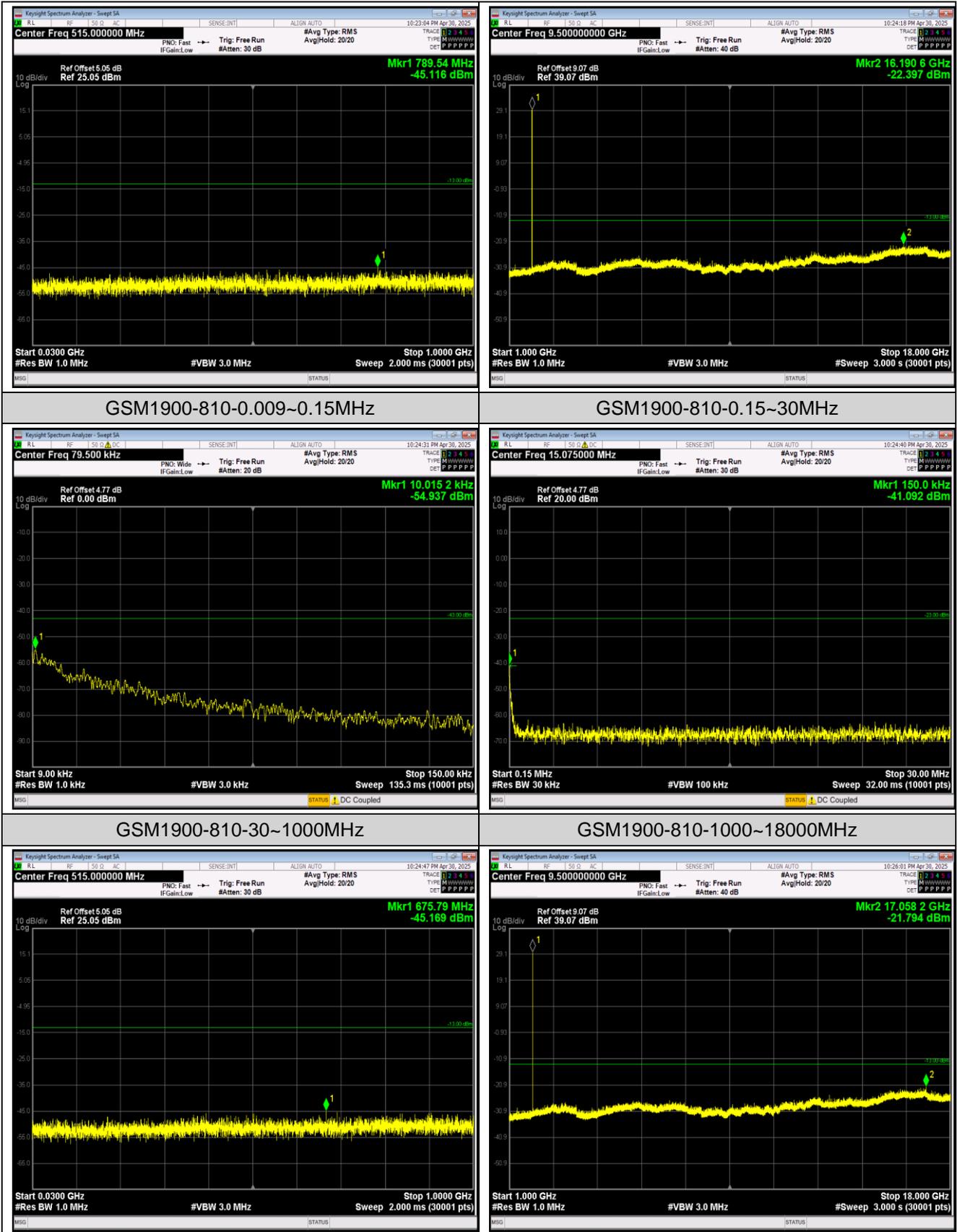
GSM1900-661-0.15~30MHz



GSM1900-661-30~1000MHz



GSM1900-661-1000~18000MHz



## Appendix F: Frequency Stability

### Test Result

| Reference Frequency: GSM850 Middle channel=190 Frequency=836.6MHz                           |                      |                 |          |             |        |
|---|----------------------|-----------------|----------|-------------|--------|
| Temperature   |                      |                 |          |             |        |
| Power supplied (Vdc)  | Temperature (°C)     | Frequency error |          | Limit (ppm) | Result |
|   |                      | Hz              | ppm      |             |        |
| 3.92  | -30                  | 8.65            | 0.010339 | ±2.5        | Pass   |
|   | -20                  | 11.66           | 0.013937 |             |        |
|   | -10                  | 8.91            | 0.010650 |             |        |
|   | 0                    | 12.91           | 0.015432 |             |        |
|   | 10                   | 9.75            | 0.011654 |             |        |
|   | 20                   | 6.39            | 0.007638 |             |        |
|   | 30                   | 10.14           | 0.012120 |             |        |
|   | 40                   | 5.49            | 0.006562 |             |        |
|   | 50                   | 12.01           | 0.014356 |             |        |
| Voltage   |                      |                 |          |             |        |
| Temperature (°C)  | Power supplied (Vdc) | Frequency error |          | Limit (ppm) | Result |
|   |                      | Hz              | ppm      |             |        |
| 25  | 3.45                 | 6.42            | 0.007674 | ±2.5        | Pass   |
|   | 3.92                 | 11.95           | 0.014284 |             |        |
|   | 4.53                 | 2.94            | 0.003514 |             |        |
| 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 (Vdc)  | Temperature (°C)     | Frequency error |          | Limit (ppm)                         | Result |
|   |                      | Hz              | ppm      |                                     |        |
| 3.92  | -30                  | 22.92           | 0.012191 | Within authorized band for PCS 1900 | Pass   |
|   | -20                  | 10.04           | 0.005340 |                                     |        |
|   | -10                  | 29.86           | 0.015883 |                                     |        |
|   | 0                    | 29.48           | 0.015681 |                                     |        |
|   | 10                   | 12.85           | 0.006835 |                                     |        |
|   | 20                   | 13.14           | 0.006989 |                                     |        |
|   | 30                   | 28.25           | 0.015027 |                                     |        |
|   | 40                   | 30.54           | 0.016245 |                                     |        |
|   | 50                   | 24.57           | 0.013069 |                                     |        |
| Voltage   |                      |                 |          |                                     |        |
| Temperature (°C)  | Power supplied (Vdc) | Frequency error |          | Limit (ppm)                         | Result |
|   |                      | Hz              | ppm      |                                     |        |
| 25  | 3.45                 | 28.77           | 0.015303 | Within authorized band for PCS 1900 | Pass   |
|   | 3.92                 | 18.27           | 0.009718 |                                     |        |
|   | 4.53                 | 21.66           | 0.011521 |                                     |        |
| 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

