

## 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   | 32.45                 | 30.58          | 38.45                | PASS    |
| GSM850  | 190     | 5   | 32.59                 | 30.72          | 38.45                | PASS    |
| GSM850  | 251     | 5   | 32.40                 | 30.53          | 38.45                | PASS    |
| GSM1900 | 512     | 0   | 30.24                 | 21.65          | 33.00                | PASS    |
| GSM1900 | 661     | 0   | 29.91                 | 21.32          | 33.00                | PASS    |
| GSM1900 | 810     | 0   | 29.69                 | 21.10          | 33.00                | PASS    |

| Band     | Channel | PCL | Slot | Conducted Power (dBm) | ERP/EIRP (dBm) | ERP/EIRP Limit (dBm) | Verdict |
|----------|---------|-----|------|-----------------------|----------------|----------------------|---------|
| GPRS850  | 128     | 5   | 1    | 32.47                 | 30.60          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 2    | 31.61                 | 29.74          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 3    | 29.76                 | 27.89          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 4    | 28.57                 | 26.70          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 1    | 32.57                 | 30.70          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 2    | 31.74                 | 29.87          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 3    | 29.91                 | 28.04          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 4    | 28.70                 | 26.83          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 1    | 32.37                 | 30.50          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 2    | 31.52                 | 29.65          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 3    | 29.64                 | 27.77          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 4    | 28.41                 | 26.54          | 38.45                | PASS    |
| GPRS1900 | 512     | 0   | 1    | 30.21                 | 21.62          | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 2    | 29.61                 | 21.02          | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 3    | 28.12                 | 19.53          | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 4    | 27.00                 | 18.41          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 1    | 29.91                 | 21.32          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 2    | 29.29                 | 20.70          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 3    | 27.76                 | 19.17          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 4    | 26.58                 | 17.99          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 1    | 29.68                 | 21.09          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 2    | 29.07                 | 20.48          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 3    | 27.56                 | 18.97          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 4    | 26.40                 | 17.81          | 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   | 2.77       | 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

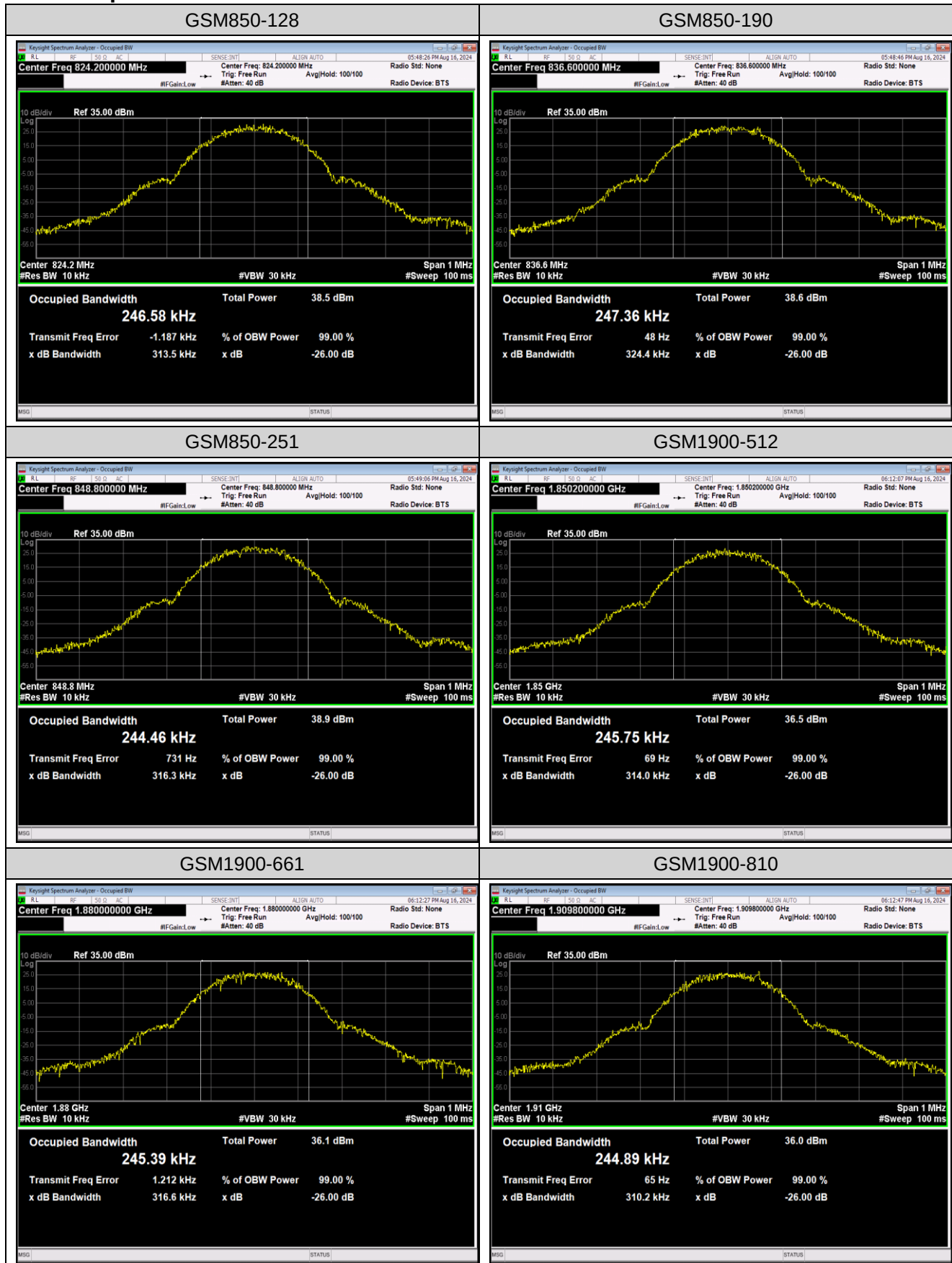


## Appendix C: 26dB Bandwidth and Occupied Bandwidth

### Test Result

| Band    | Channel | PCL | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
|---------|---------|-----|--------------------------|----------------------|-------------|---------|
| GSM850  | 128     | 5   | 0.24658                  | 0.3135               | ---         | PASS    |
| GSM850  | 190     | 5   | 0.24736                  | 0.3244               | ---         | PASS    |
| GSM850  | 251     | 5   | 0.24446                  | 0.3163               | ---         | PASS    |
| GSM1900 | 512     | 0   | 0.24575                  | 0.3140               | ---         | PASS    |
| GSM1900 | 661     | 0   | 0.24539                  | 0.3166               | ---         | PASS    |
| GSM1900 | 810     | 0   | 0.24489                  | 0.3102               | ---         | PASS    |

## Test Graphs

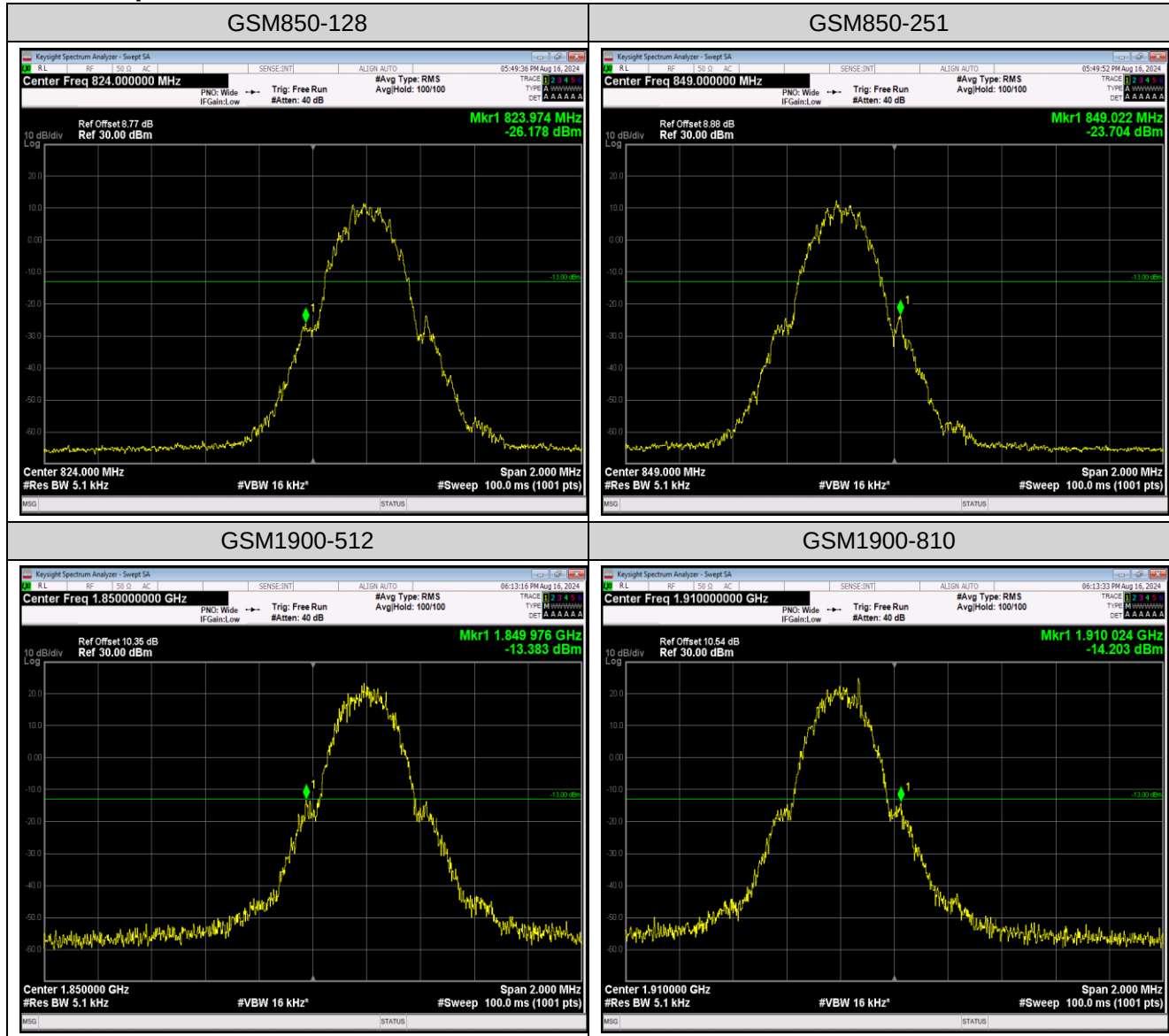


## Appendix D: Band Edge

### Test Result

| Band    | Channel | PCL | Freq (MHz) | Result (dBm) | Limit(dBm) | Verdict |
|---------|---------|-----|------------|--------------|------------|---------|
| GSM850  | 128     | 5   | 823.97     | -26.18       | -13        | PASS    |
| GSM850  | 251     | 5   | 849.02     | -23.70       | -13        | PASS    |
| GSM1900 | 512     | 0   | 1849.98    | -13.38       | -13        | PASS    |
| GSM1900 | 810     | 0   | 1910.02    | -14.20       | -13        | PASS    |

## Test Graphs



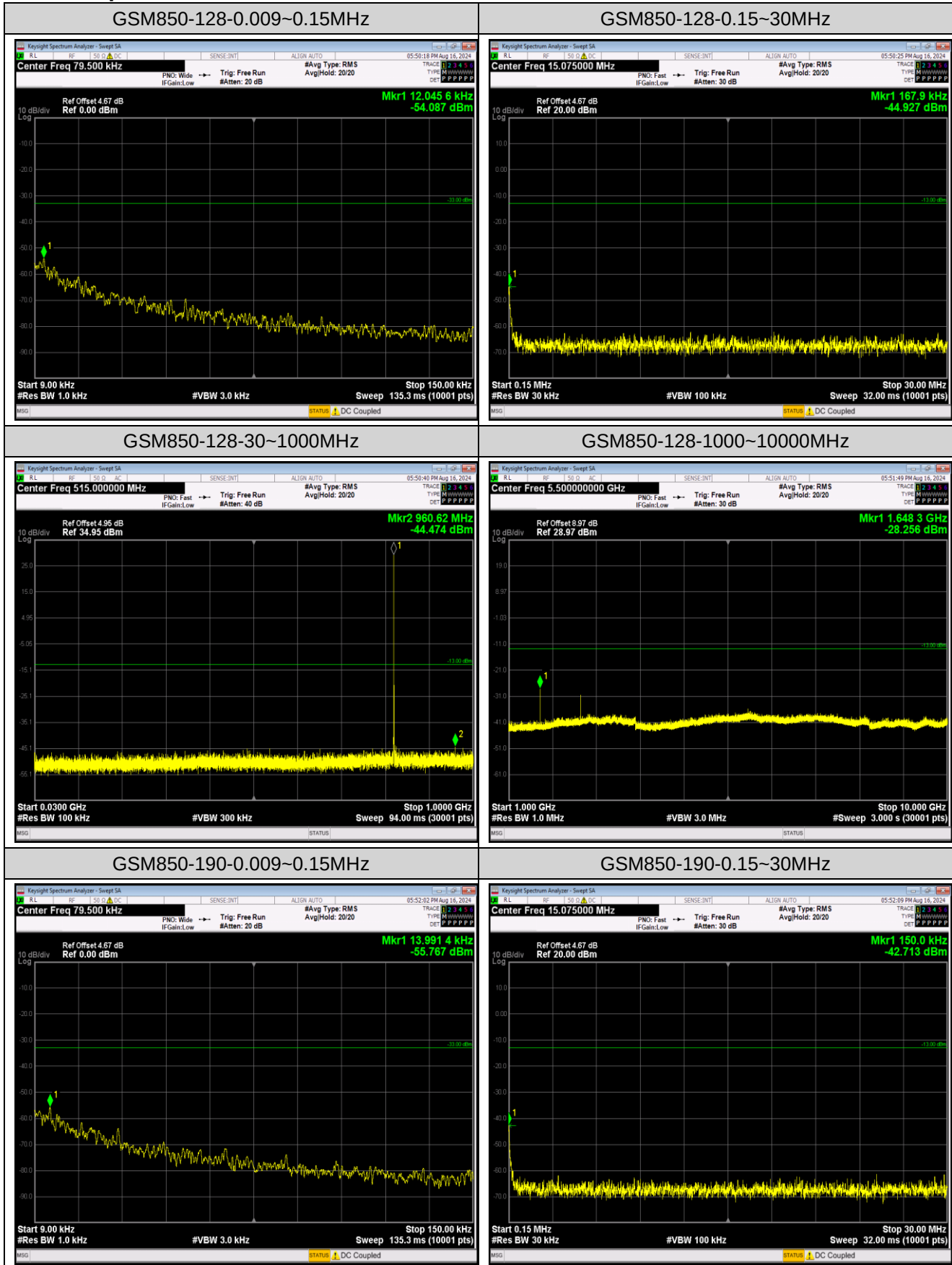
## Appendix E: Conducted Spurious Emission

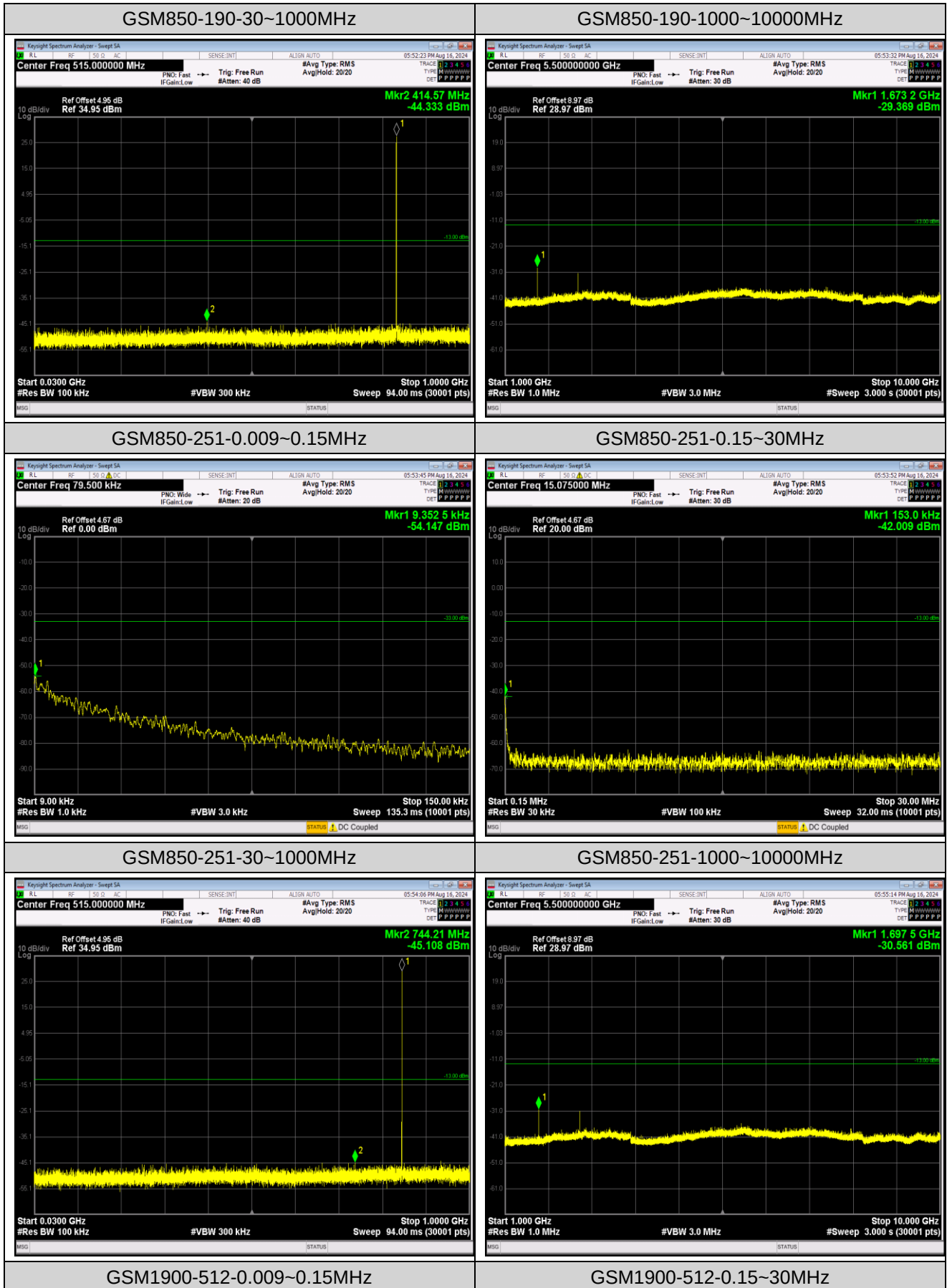
### Test Result

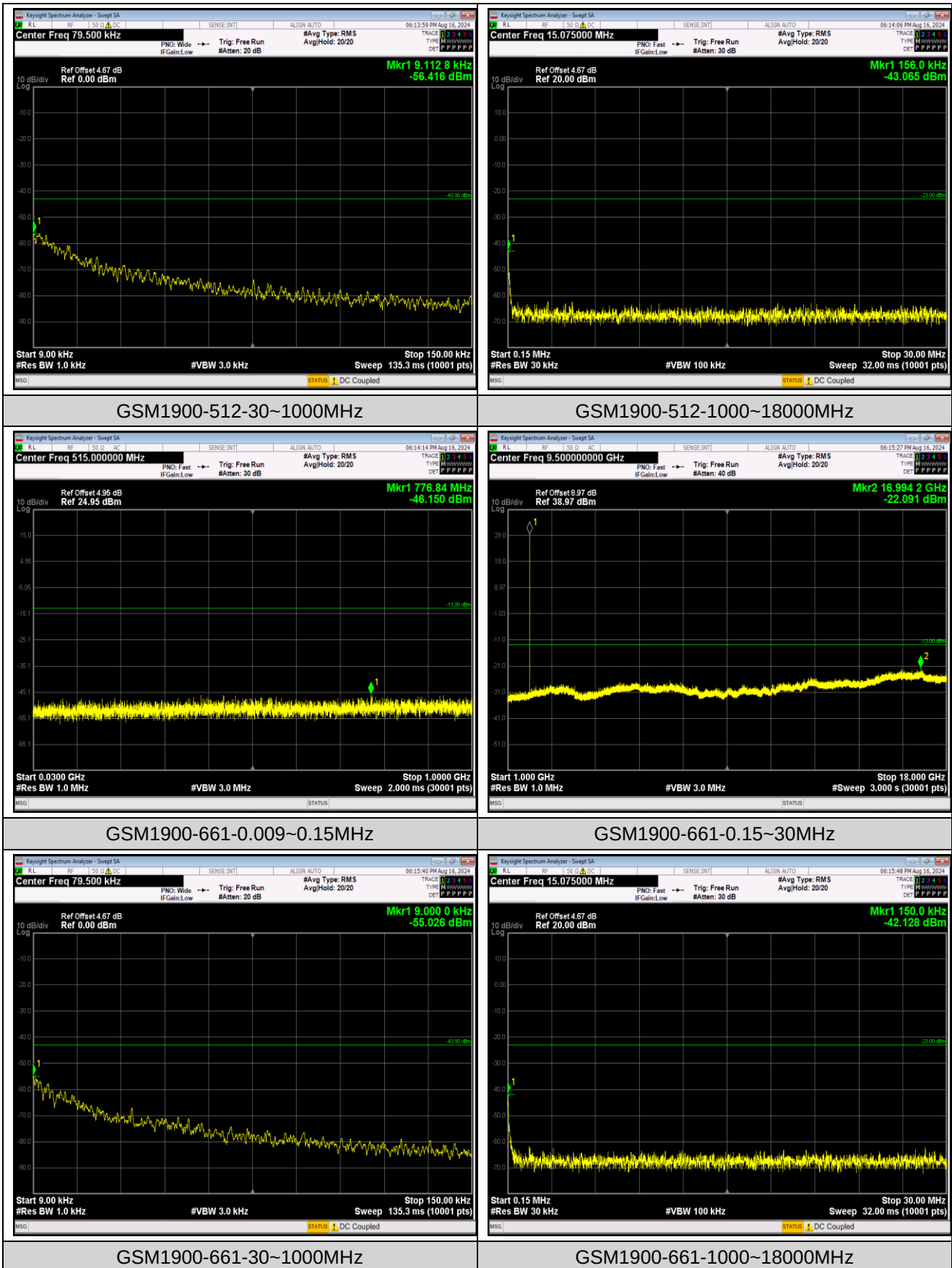
| Band    | Channel | PCL | Frequency Range(MHz) | Max.Freq. (MHz) | Result (dBm) | Limit (dBm) | Verdict |
|---------|---------|-----|----------------------|-----------------|--------------|-------------|---------|
| GSM850  | 128     | 5   | 0.009~0.15MHz        | 0.01            | -54.09       | -33         | PASS    |
| GSM850  | 128     | 5   | 0.15~30MHz           | 0.17            | -44.93       | -13         | PASS    |
| GSM850  | 128     | 5   | 30~1000MHz           | 960.62          | -44.47       | -13         | PASS    |
| GSM850  | 128     | 5   | 1000~10000MHz        | 1648.3          | -28.26       | -13         | PASS    |
| GSM850  | 190     | 5   | 0.009~0.15MHz        | 0.01            | -55.77       | -33         | PASS    |
| GSM850  | 190     | 5   | 0.15~30MHz           | 0.15            | -42.71       | -13         | PASS    |
| GSM850  | 190     | 5   | 30~1000MHz           | 414.57          | -44.33       | -13         | PASS    |
| GSM850  | 190     | 5   | 1000~10000MHz        | 1673.2          | -29.37       | -13         | PASS    |
| GSM850  | 251     | 5   | 0.009~0.15MHz        | 0.01            | -54.15       | -33         | PASS    |
| GSM850  | 251     | 5   | 0.15~30MHz           | 0.15            | -42.01       | -13         | PASS    |
| GSM850  | 251     | 5   | 30~1000MHz           | 744.21          | -45.11       | -13         | PASS    |
| GSM850  | 251     | 5   | 1000~10000MHz        | 1697.5          | -30.56       | -13         | PASS    |
| GSM1900 | 512     | 0   | 0.009~0.15MHz        | 0.01            | -56.42       | -43         | PASS    |
| GSM1900 | 512     | 0   | 0.15~30MHz           | 0.16            | -43.07       | -23         | PASS    |
| GSM1900 | 512     | 0   | 30~1000MHz           | 776.84          | -46.15       | -13         | PASS    |
| GSM1900 | 512     | 0   | 1000~18000MHz        | 16994.17        | -22.09       | -13         | PASS    |
| GSM1900 | 661     | 0   | 0.009~0.15MHz        | 0.01            | -55.03       | -43         | PASS    |
| GSM1900 | 661     | 0   | 0.15~30MHz           | 0.15            | -42.13       | -23         | PASS    |
| GSM1900 | 661     | 0   | 30~1000MHz           | 935.95          | -45.54       | -13         | PASS    |
| GSM1900 | 661     | 0   | 1000~18000MHz        | 16991.9         | -22.08       | -13         | PASS    |
| GSM1900 | 810     | 0   | 0.009~0.15MHz        | 0.01            | -53.65       | -43         | PASS    |
| GSM1900 | 810     | 0   | 0.15~30MHz           | 0.15            | -42.61       | -23         | PASS    |
| GSM1900 | 810     | 0   | 30~1000MHz           | 968.35          | -45.53       | -13         | PASS    |
| GSM1900 | 810     | 0   | 1000~18000MHz        | 16204.23        | -22.59       | -13         | PASS    |

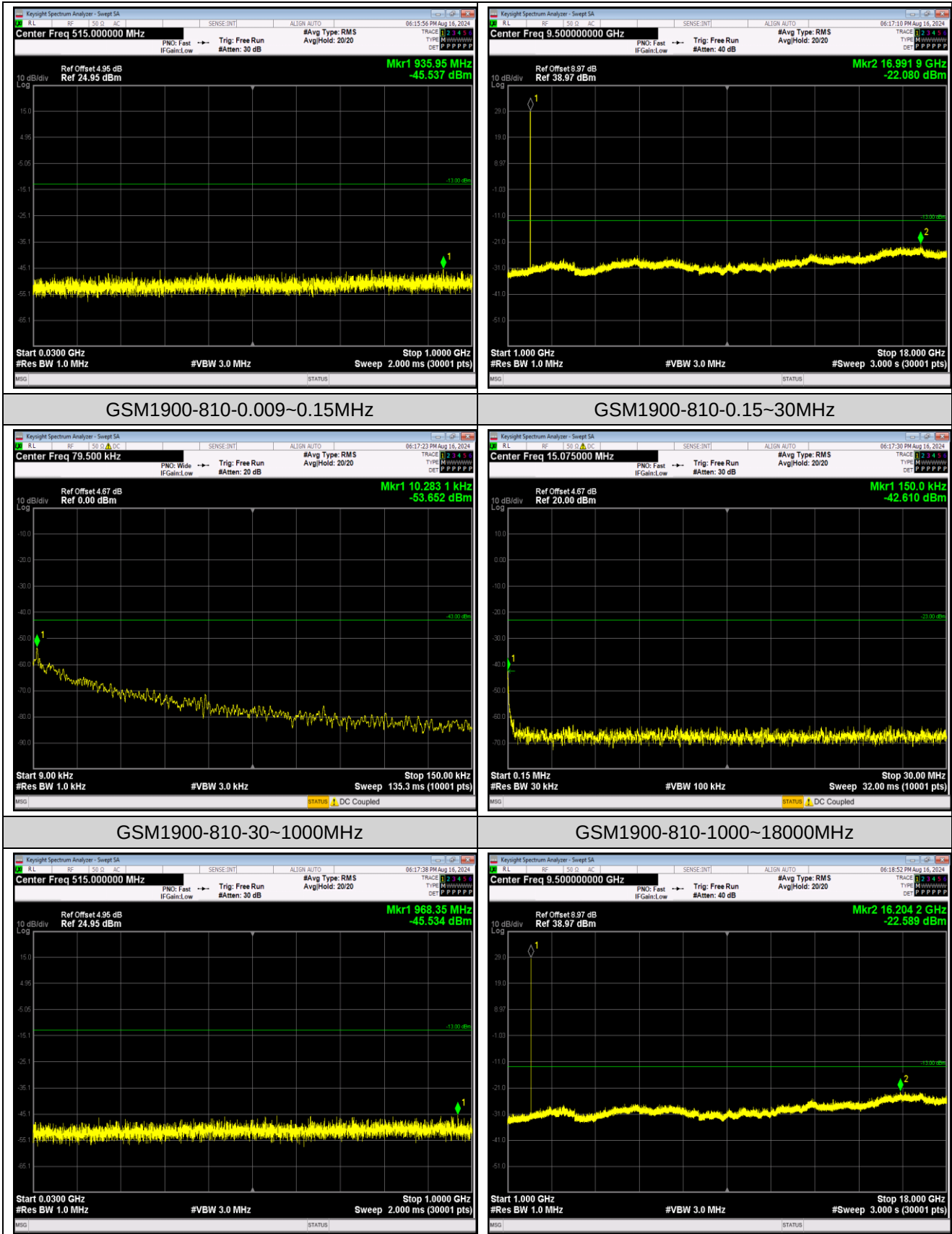
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

## 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      |             |        |
| 3.70                                                                                        | -30                     | 5.49            | 0.006562 | ±2.5        | Pass   |
|                                                                                             | -20                     | 9.72            | 0.011618 |             |        |
|                                                                                             | -10                     | 4.68            | 0.005594 |             |        |
|                                                                                             | 0                       | 4.84            | 0.005785 |             |        |
|                                                                                             | 10                      | 4.68            | 0.005594 |             |        |
|                                                                                             | 20                      | 5.52            | 0.006598 |             |        |
|                                                                                             | 30                      | 9.04            | 0.010806 |             |        |
|                                                                                             | 40                      | 3.75            | 0.004482 |             |        |
|                                                                                             | 50                      | 4.75            | 0.005678 |             |        |
| Voltage                                                                                     |                         |                 |          |             |        |
| Temperature<br>(°C)                                                                         | Power supplied<br>(Vdc) | Frequency error |          | Limit (ppm) | Result |
|                                                                                             |                         | Hz              | ppm      |             |        |
| 25                                                                                          | 3.50                    | 5.62            | 0.006718 | ±2.5        | Pass   |
|                                                                                             | 3.70                    | 5.68            | 0.006789 |             |        |
|                                                                                             | 4.25                    | 4.97            | 0.005941 |             |        |
| 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                     | 25.86           | 0.013755 | Within<br>authorized band<br>for PCS 1900 | Pass   |
|                                                                                             | -20                     | 22.60           | 0.012021 |                                           |        |
|                                                                                             | -10                     | 24.09           | 0.012814 |                                           |        |
|                                                                                             | 0                       | 25.80           | 0.013723 |                                           |        |
|                                                                                             | 10                      | 24.15           | 0.012846 |                                           |        |
|                                                                                             | 20                      | 17.34           | 0.009223 |                                           |        |
|                                                                                             | 30                      | 19.79           | 0.010527 |                                           |        |
|                                                                                             | 40                      | 21.08           | 0.011213 |                                           |        |
|                                                                                             | 50                      | 25.86           | 0.013755 |                                           |        |
| Voltage                                                                                     |                         |                 |          |                                           |        |
| Temperature<br>(℃)                                                                          | Power supplied<br>(Vdc) | Frequency error |          | Limit (ppm)                               | Result |
|                                                                                             |                         | Hz              | ppm      |                                           |        |
| 25                                                                                          | 3.50                    | 22.70           | 0.012074 | Within<br>authorized band<br>for PCS 1900 | Pass   |
|                                                                                             | 3.70                    | 25.86           | 0.013755 |                                           |        |
|                                                                                             | 4.25                    | 25.22           | 0.013415 |                                           |        |
| 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

