

## 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   | 33.64                 | 26.64          | 38.45                | PASS    |
| GSM850  | 190     | 5   | 33.52                 | 26.52          | 38.45                | PASS    |
| GSM850  | 251     | 5   | 33.15                 | 26.15          | 38.45                | PASS    |
| GSM1900 | 512     | 0   | 30.30                 | 28             | 33.00                | PASS    |
| GSM1900 | 661     | 0   | 30.50                 | 28.2           | 33.00                | PASS    |
| GSM1900 | 810     | 0   | 30.40                 | 28.1           | 33.00                | PASS    |

| Band     | Channel | PCL | Slot | Conducted Power (dBm) | ERP/EIRP (dBm) | ERP/EIRP Limit (dBm) | Verdict |
|----------|---------|-----|------|-----------------------|----------------|----------------------|---------|
| GPRS850  | 128     | 5   | 1    | 33.63                 | 26.63          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 2    | 31.36                 | 24.36          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 3    | 29.12                 | 22.12          | 38.45                | PASS    |
| GPRS850  | 128     | 5   | 4    | 26.88                 | 19.88          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 1    | 33.49                 | 26.49          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 2    | 31.28                 | 24.28          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 3    | 29.32                 | 22.32          | 38.45                | PASS    |
| GPRS850  | 190     | 5   | 4    | 27.19                 | 20.19          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 1    | 33.14                 | 26.14          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 2    | 30.92                 | 23.92          | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 3    | 29.1                  | 22.1           | 38.45                | PASS    |
| GPRS850  | 251     | 5   | 4    | 26.96                 | 19.96          | 38.45                | PASS    |
| GPRS1900 | 512     | 0   | 1    | 30.29                 | 27.99          | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 2    | 27.84                 | 25.54          | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 3    | 26.15                 | 23.85          | 33.00                | PASS    |
| GPRS1900 | 512     | 0   | 4    | 24.08                 | 21.78          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 1    | 30.49                 | 28.19          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 2    | 28.10                 | 25.8           | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 3    | 26.43                 | 24.13          | 33.00                | PASS    |
| GPRS1900 | 661     | 0   | 4    | 24.35                 | 22.05          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 1    | 30.39                 | 28.09          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 2    | 27.97                 | 25.67          | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 3    | 26.30                 | 24             | 33.00                | PASS    |
| GPRS1900 | 810     | 0   | 4    | 24.18                 | 21.88          | 33.00                | PASS    |

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

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

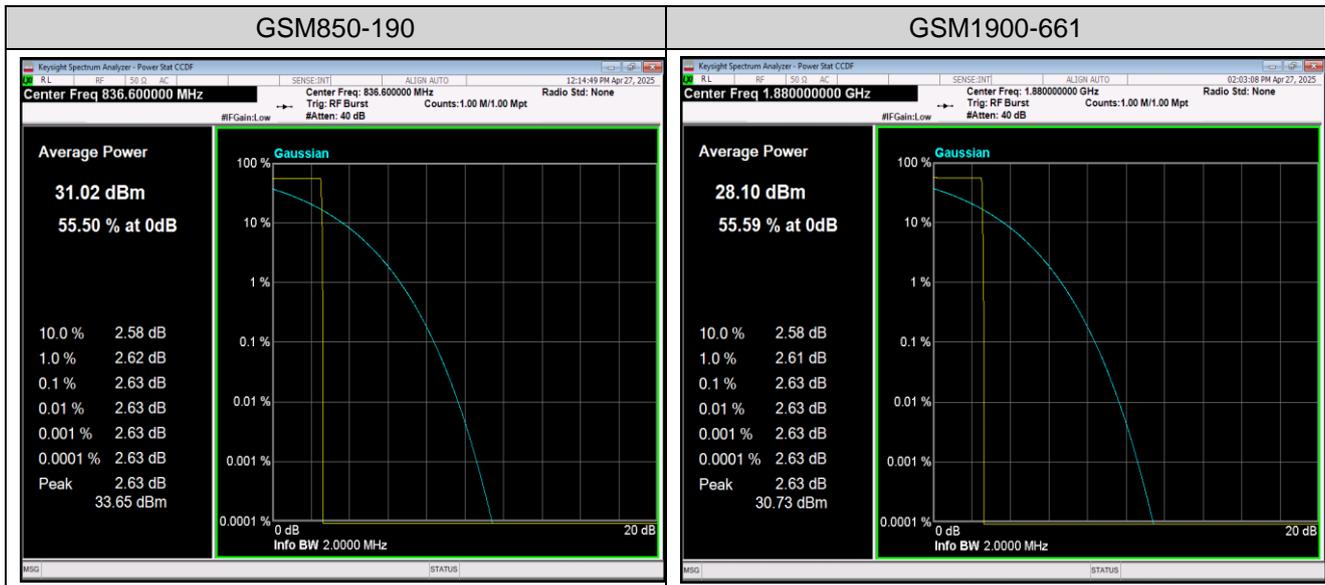
## Appendix B: Peak-to-Average Ratio(CCDF)

### Test Result

| Band    | Channel | PCL | Result(dB) | Limit(dB) | Verdict |
|---------|---------|-----|------------|-----------|---------|
| GSM850  | 190     | 5   | 2.63       | 13        | PASS    |
| GSM1900 | 661     | 0   | 2.63       | 13        | PASS    |

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

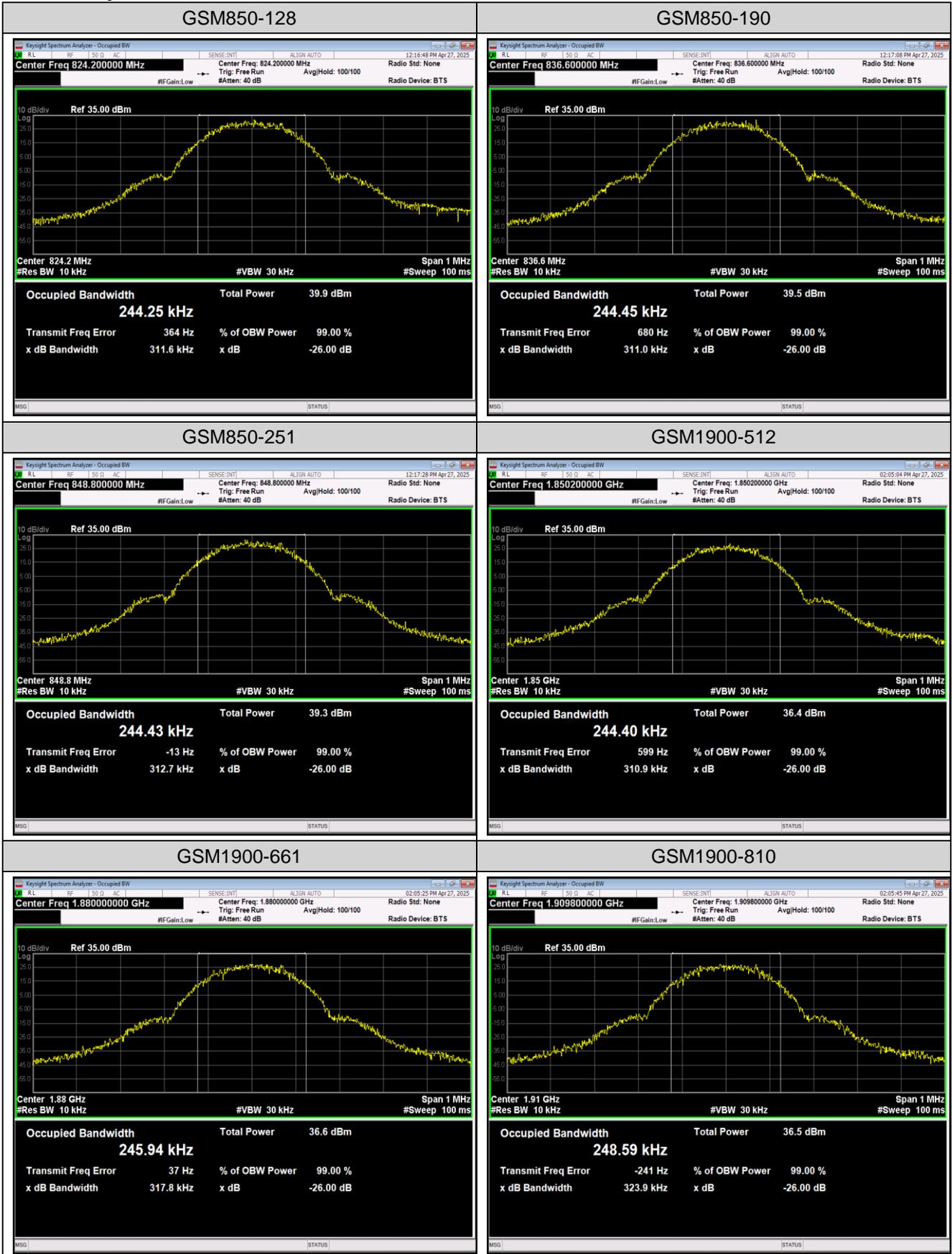
### Test Graphs



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

| Band    | Channel | PCL | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
|---------|---------|-----|--------------------------|----------------------|-------------|---------|
| GSM850  | 128     | 5   | 0.24425                  | 0.3116               | ---         | PASS    |
| GSM850  | 190     | 5   | 0.24445                  | 0.3110               | ---         | PASS    |
| GSM850  | 251     | 5   | 0.24443                  | 0.3127               | ---         | PASS    |
| GSM1900 | 512     | 0   | 0.24440                  | 0.3109               | ---         | PASS    |
| GSM1900 | 661     | 0   | 0.24594                  | 0.3178               | ---         | PASS    |
| GSM1900 | 810     | 0   | 0.24859                  | 0.3239               | ---         | PASS    |

## Test Graphs

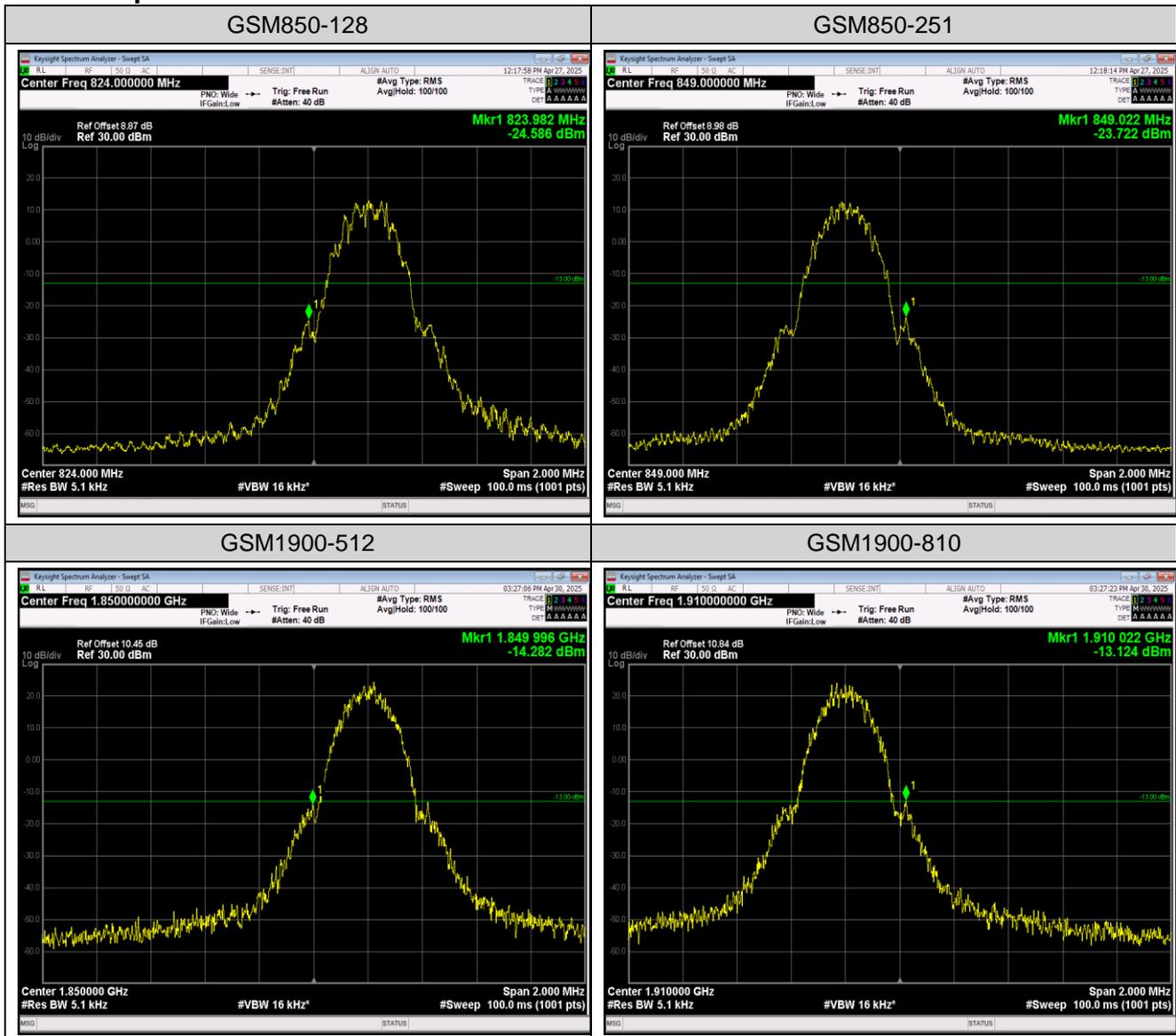


## Appendix D: Band Edge

### Test Result

| Band    | Channel | PCL | Freq (MHz) | Result (dBm) | Limit(dBm) | Verdict |
|---------|---------|-----|------------|--------------|------------|---------|
| GSM850  | 128     | 5   | 823.98     | -24.59       | -13        | PASS    |
| GSM850  | 251     | 5   | 849.02     | -23.72       | -13        | PASS    |
| GSM1900 | 512     | 0   | 1850.00    | -14.28       | -13        | PASS    |
| GSM1900 | 810     | 0   | 1910.02    | -13.12       | -13        | PASS    |

### Test Graphs



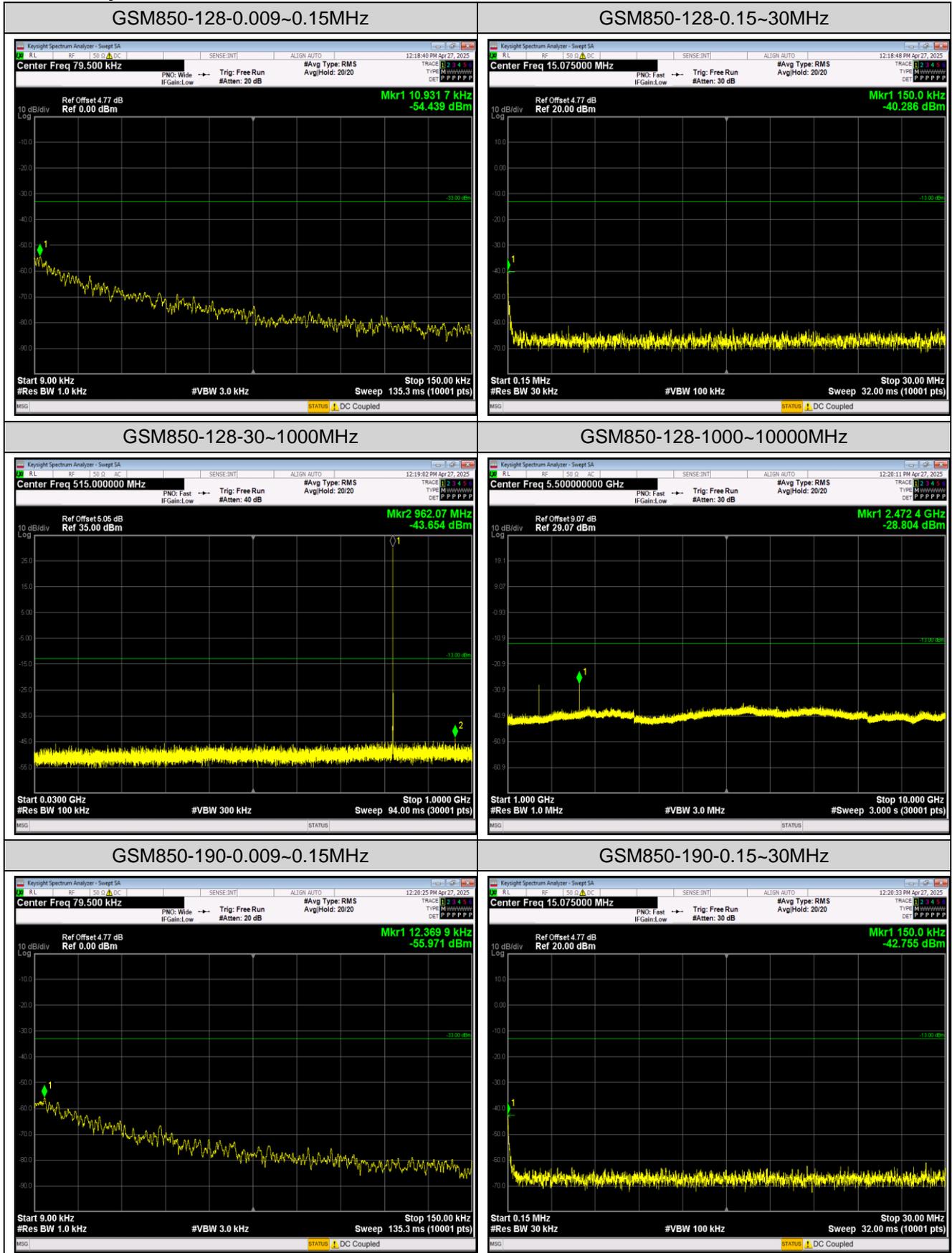
## Appendix E: Conducted Spurious Emission

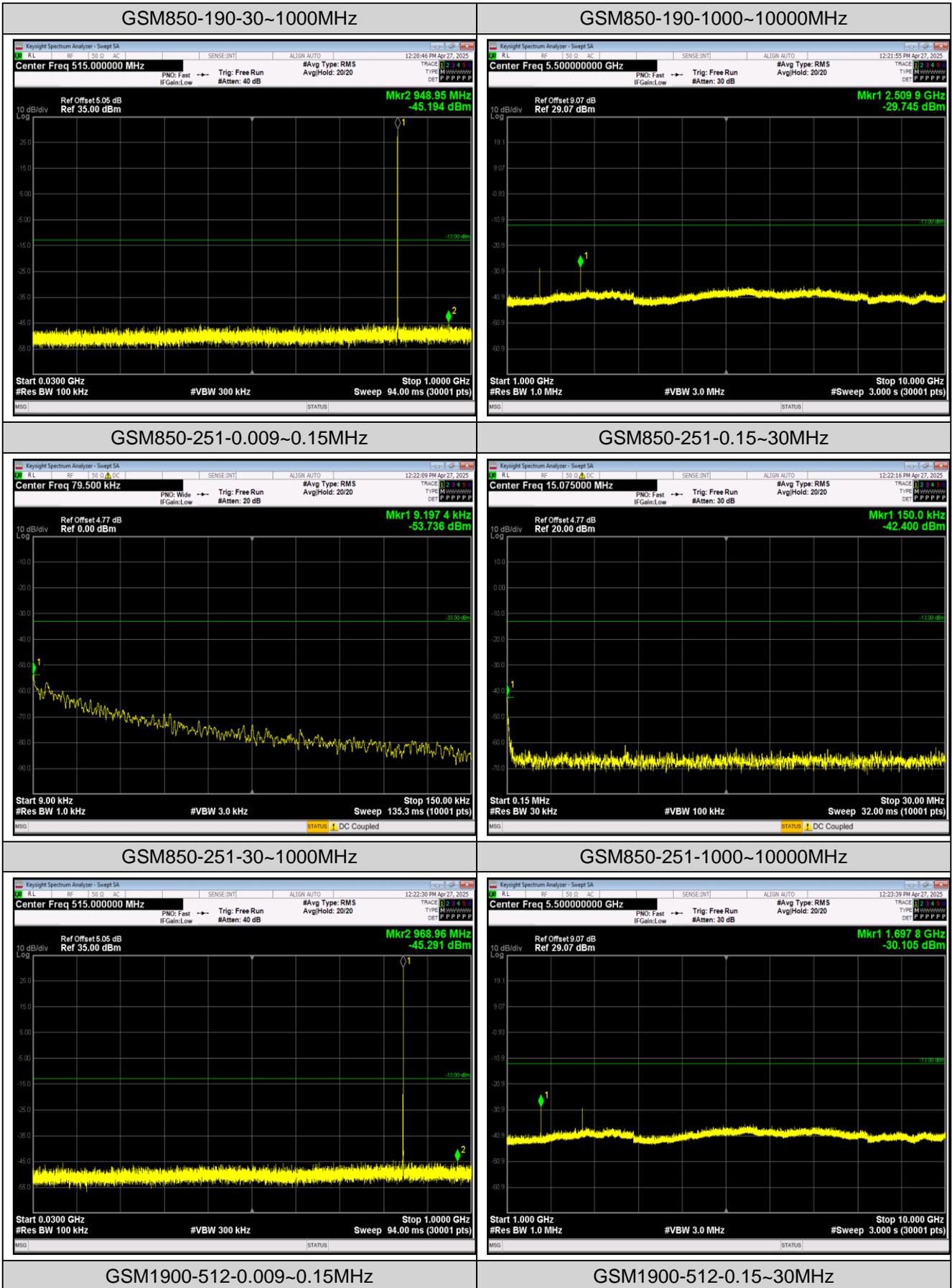
### Test Result

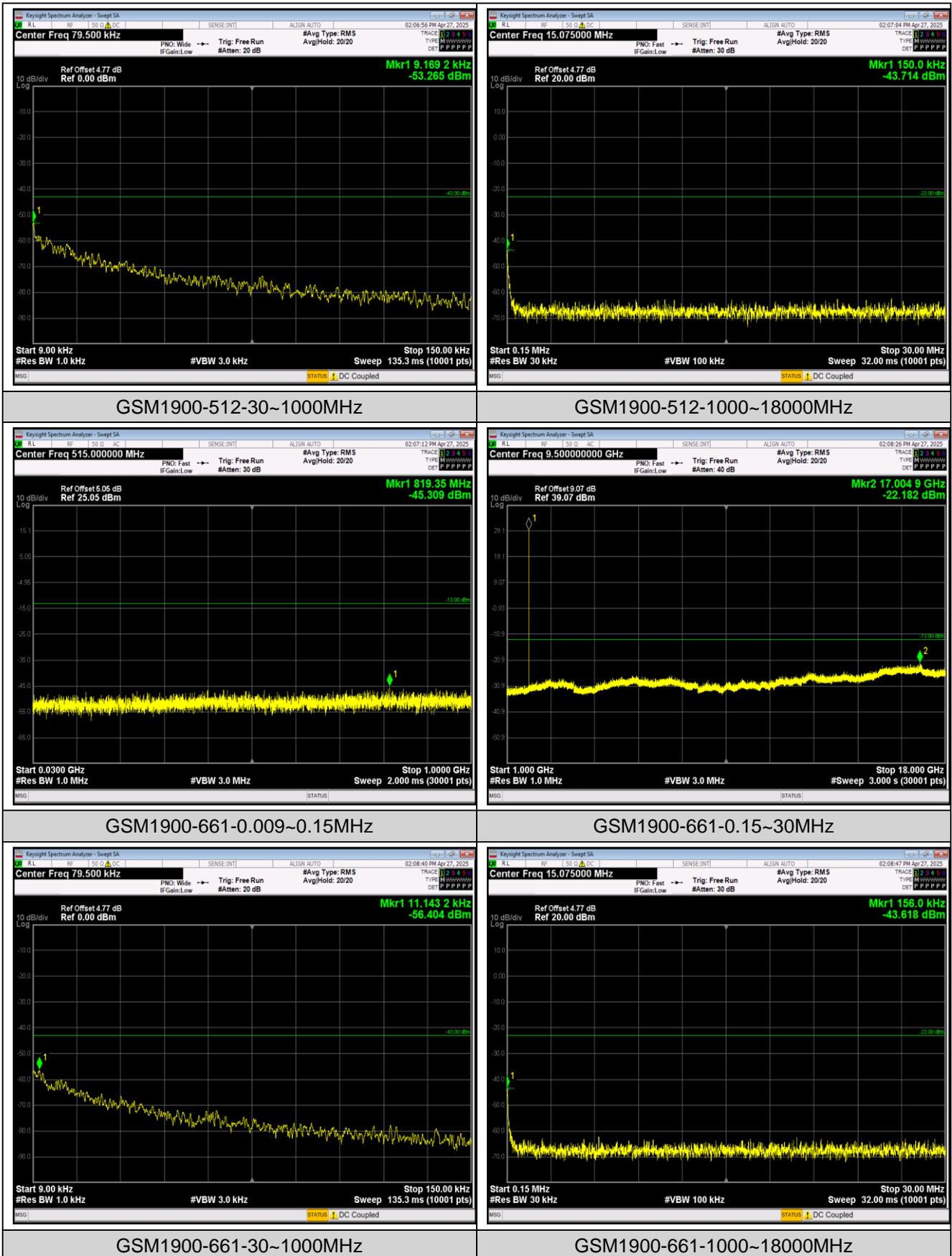
| Band    | Channel | PCL | Frequency Range(MHz) | Max.Freq. (MHz) | Result (dBm) | Limit (dBm) | Verdict |
|---------|---------|-----|----------------------|-----------------|--------------|-------------|---------|
| GSM850  | 128     | 5   | 0.009~0.15MHz        | 0.01            | -54.44       | -33         | PASS    |
| GSM850  | 128     | 5   | 0.15~30MHz           | 0.15            | -40.29       | -13         | PASS    |
| GSM850  | 128     | 5   | 30~1000MHz           | 962.07          | -43.65       | -13         | PASS    |
| GSM850  | 128     | 5   | 1000~10000MHz        | 2472.4          | -28.8        | -13         | PASS    |
| GSM850  | 190     | 5   | 0.009~0.15MHz        | 0.01            | -55.97       | -33         | PASS    |
| GSM850  | 190     | 5   | 0.15~30MHz           | 0.15            | -42.76       | -13         | PASS    |
| GSM850  | 190     | 5   | 30~1000MHz           | 948.95          | -45.19       | -13         | PASS    |
| GSM850  | 190     | 5   | 1000~10000MHz        | 2509.9          | -29.75       | -13         | PASS    |
| GSM850  | 251     | 5   | 0.009~0.15MHz        | 0.01            | -53.74       | -33         | PASS    |
| GSM850  | 251     | 5   | 0.15~30MHz           | 0.15            | -42.4        | -13         | PASS    |
| GSM850  | 251     | 5   | 30~1000MHz           | 968.96          | -45.29       | -13         | PASS    |
| GSM850  | 251     | 5   | 1000~10000MHz        | 1697.8          | -30.11       | -13         | PASS    |
| GSM1900 | 512     | 0   | 0.009~0.15MHz        | 0.01            | -53.27       | -43         | PASS    |
| GSM1900 | 512     | 0   | 0.15~30MHz           | 0.15            | -43.71       | -23         | PASS    |
| GSM1900 | 512     | 0   | 30~1000MHz           | 819.35          | -45.31       | -13         | PASS    |
| GSM1900 | 512     | 0   | 1000~18000MHz        | 17004.93        | -22.18       | -13         | PASS    |
| GSM1900 | 661     | 0   | 0.009~0.15MHz        | 0.01            | -56.4        | -43         | PASS    |
| GSM1900 | 661     | 0   | 0.15~30MHz           | 0.16            | -43.62       | -23         | PASS    |
| GSM1900 | 661     | 0   | 30~1000MHz           | 961.75          | -45.65       | -13         | PASS    |
| GSM1900 | 661     | 0   | 1000~18000MHz        | 16020.63        | -22.1        | -13         | PASS    |
| GSM1900 | 810     | 0   | 0.009~0.15MHz        | 0.01            | -54.37       | -43         | PASS    |
| GSM1900 | 810     | 0   | 0.15~30MHz           | 0.17            | -41.13       | -23         | PASS    |
| GSM1900 | 810     | 0   | 30~1000MHz           | 929.58          | -46.14       | -13         | PASS    |
| GSM1900 | 810     | 0   | 1000~18000MHz        | 16830.4         | -22.47       | -13         | PASS    |

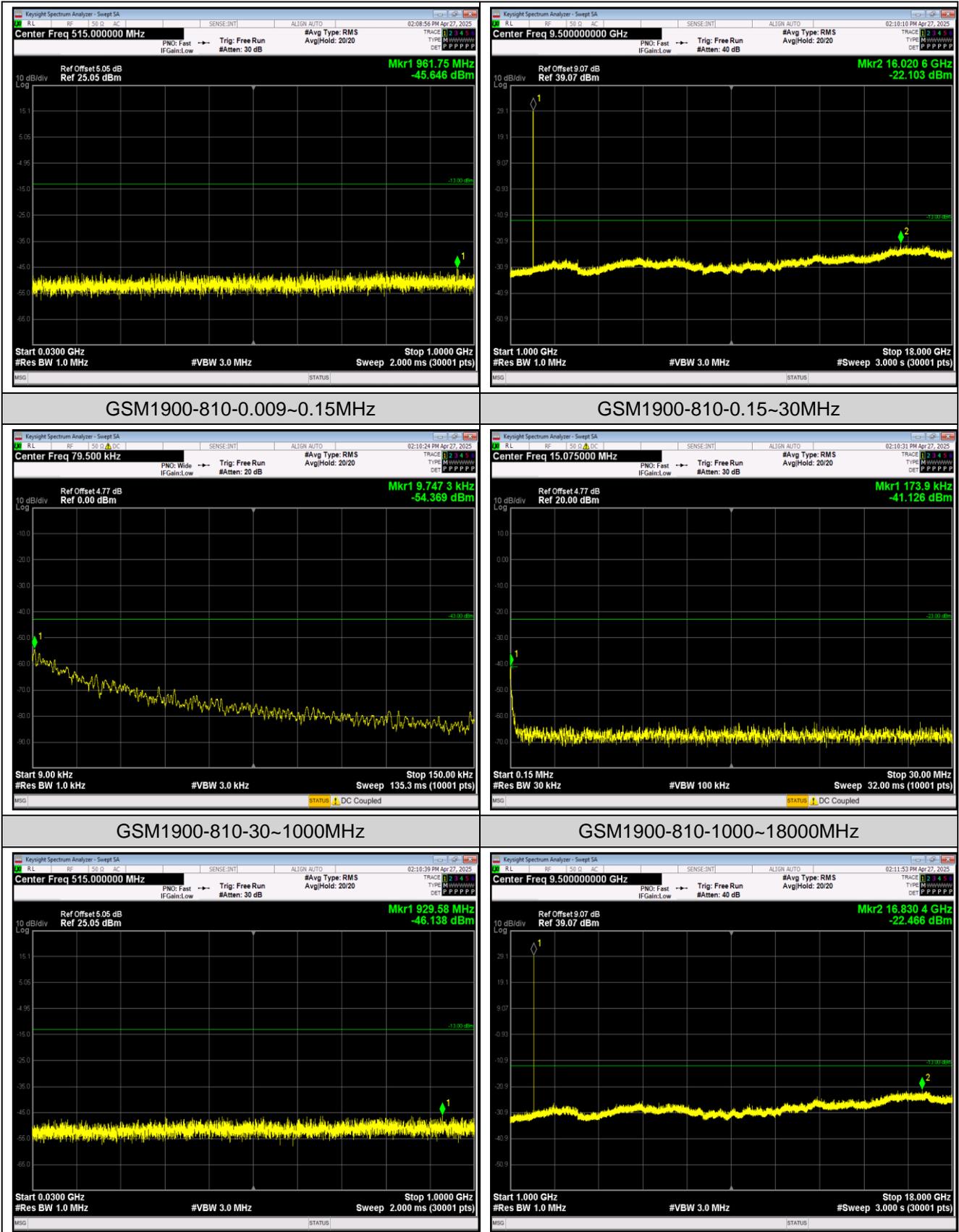
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

## Test Graphs









## Appendix F: Frequency Stability

### Test Result

| Reference Frequency: GSM850 Middle channel=190 Frequency=836.6MHz                           |                      |                 |          |             |        |
|---|----------------------|-----------------|----------|-------------|--------|
| Temperature   |                      |                 |          |             |        |
| Power supplied (Vdc)  | Temperature (°C)     | Frequency error |          | Limit (ppm) | Result |
|   |                      | Hz              | ppm      |             |        |
| 3.85  | -30                  | 10.75           | 0.012850 | ±2.5        | Pass   |
|   | -20                  | 13.92           | 0.016639 |             |        |
|   | -10                  | 16.85           | 0.020141 |             |        |
|   | 0                    | 7.62            | 0.009108 |             |        |
|   | 10                   | 10.69           | 0.012778 |             |        |
|   | 20                   | 2.68            | 0.003203 |             |        |
|   | 30                   | 2.58            | 0.003084 |             |        |
|   | 40                   | 4.65            | 0.005558 |             |        |
|   | 50                   | 4.55            | 0.005439 |             |        |
| Voltage   |                      |                 |          |             |        |
| Temperature (°C)  | Power supplied (Vdc) | Frequency error |          | Limit (ppm) | Result |
|   |                      | Hz              | ppm      |             |        |
| 25  | 3.45                 | 10.43           | 0.012467 | ±2.5        | Pass   |
|   | 3.85                 | 6.46            | 0.007722 |             |        |
|   | 4.45                 | 8.52            | 0.010184 |             |        |
| 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       |                                     |        |
| 3.85   | -30                  | 1.58            | 0.000840  | Within authorized band for PCS 1900 | Pass   |
|  | -20                  | 10.30           | 0.005479  |                                     |        |
|  | -10                  | 3.20            | 0.001702  |                                     |        |
|  | 0                    | 1.78            | 0.000947  |                                     |        |
|  | 10                   | 10.27           | 0.005463  |                                     |        |
|  | 20                   | 12.30           | 0.006543  |                                     |        |
|  | 30                   | -1.61           | -0.000856 |                                     |        |
|  | 40                   | -5.55           | -0.002952 |                                     |        |
|  | 50                   | 14.01           | 0.007452  |                                     |        |
| Voltage  |                      |                 |           |                                     |        |
| Temperature (°C)   | Power supplied (Vdc) | Frequency error |           | Limit (ppm)                         | Result |
|  |                      | Hz              | ppm       |                                     |        |
| 25   | 3.45                 | 3.71            | 0.001973  | Within authorized band for PCS 1900 | Pass   |
|  | 3.85                 | 19.24           | 0.010234  |                                     |        |
|  | 4.45                 | -2.07           | -0.001101 |                                     |        |
| <i>Remark: All channel had been tested, but only the worst case data displayed in this report.</i> |                      |                 |           |                                     |        |

## 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

