

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 | 33.59 | 22.04 | 38.45 | PASS |
| GSM850 | 190 | 5 | 33.50 | 21.95 | 38.45 | PASS |
| GSM850 | 251 | 5 | 33.53 | 21.98 | 38.45 | PASS |
| GSM1900 | 512 | 0 | 30.36 | 28.06 | 33.00 | PASS |
| GSM1900 | 661 | 0 | 30.28 | 27.98 | 33.00 | PASS |
| GSM1900 | 810 | 0 | 30.22 | 27.92 | 33.00 | PASS |

| Band | Channel | PCL | Slot | Conducted Power (dBm) | ERP/EIRP (dBm) | ERP/EIRP Limit (dBm) | Verdict |
|----------|---------|-----|------|-----------------------|----------------|----------------------|---------|
| GPRS850 | 128 | 5 | 1 | 33.54 | 21.99 | 38.45 | PASS |
| GPRS850 | 128 | 5 | 2 | 32.03 | 20.48 | 38.45 | PASS |
| GPRS850 | 128 | 5 | 3 | 29.99 | 18.44 | 38.45 | PASS |
| GPRS850 | 128 | 5 | 4 | 27.93 | 16.38 | 38.45 | PASS |
| GPRS850 | 190 | 5 | 1 | 33.45 | 21.9 | 38.45 | PASS |
| GPRS850 | 190 | 5 | 2 | 31.99 | 20.44 | 38.45 | PASS |
| GPRS850 | 190 | 5 | 3 | 29.89 | 18.34 | 38.45 | PASS |
| GPRS850 | 190 | 5 | 4 | 27.80 | 16.25 | 38.45 | PASS |
| GPRS850 | 251 | 5 | 1 | 33.45 | 21.9 | 38.45 | PASS |
| GPRS850 | 251 | 5 | 2 | 32.07 | 20.52 | 38.45 | PASS |
| GPRS850 | 251 | 5 | 3 | 29.95 | 18.4 | 38.45 | PASS |
| GPRS850 | 251 | 5 | 4 | 27.88 | 16.33 | 38.45 | PASS |
| GPRS1900 | 512 | 0 | 1 | 30.43 | 28.13 | 33.00 | PASS |
| GPRS1900 | 512 | 0 | 2 | 27.97 | 25.67 | 33.00 | PASS |
| GPRS1900 | 512 | 0 | 3 | 26.36 | 24.06 | 33.00 | PASS |
| GPRS1900 | 512 | 0 | 4 | 24.27 | 21.97 | 33.00 | PASS |
| GPRS1900 | 661 | 0 | 1 | 30.30 | 28 | 33.00 | PASS |
| GPRS1900 | 661 | 0 | 2 | 27.92 | 25.62 | 33.00 | PASS |
| GPRS1900 | 661 | 0 | 3 | 26.31 | 24.01 | 33.00 | PASS |
| GPRS1900 | 661 | 0 | 4 | 24.16 | 21.86 | 33.00 | PASS |
| GPRS1900 | 810 | 0 | 1 | 30.24 | 27.94 | 33.00 | PASS |
| GPRS1900 | 810 | 0 | 2 | 27.71 | 25.41 | 33.00 | PASS |
| GPRS1900 | 810 | 0 | 3 | 26.07 | 23.77 | 33.00 | PASS |
| GPRS1900 | 810 | 0 | 4 | 23.96 | 21.66 | 33.00 | PASS |

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

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

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

Test Result

| Band | Channel | PCL | Result(dB) | Limit(dB) | Verdict |
|---------|---------|-----|------------|-----------|---------|
| GSM850 | 190 | 5 | 2.99 | 13 | PASS |
| GSM1900 | 661 | 0 | 2.64 | 13 | PASS |

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

Test Graphs

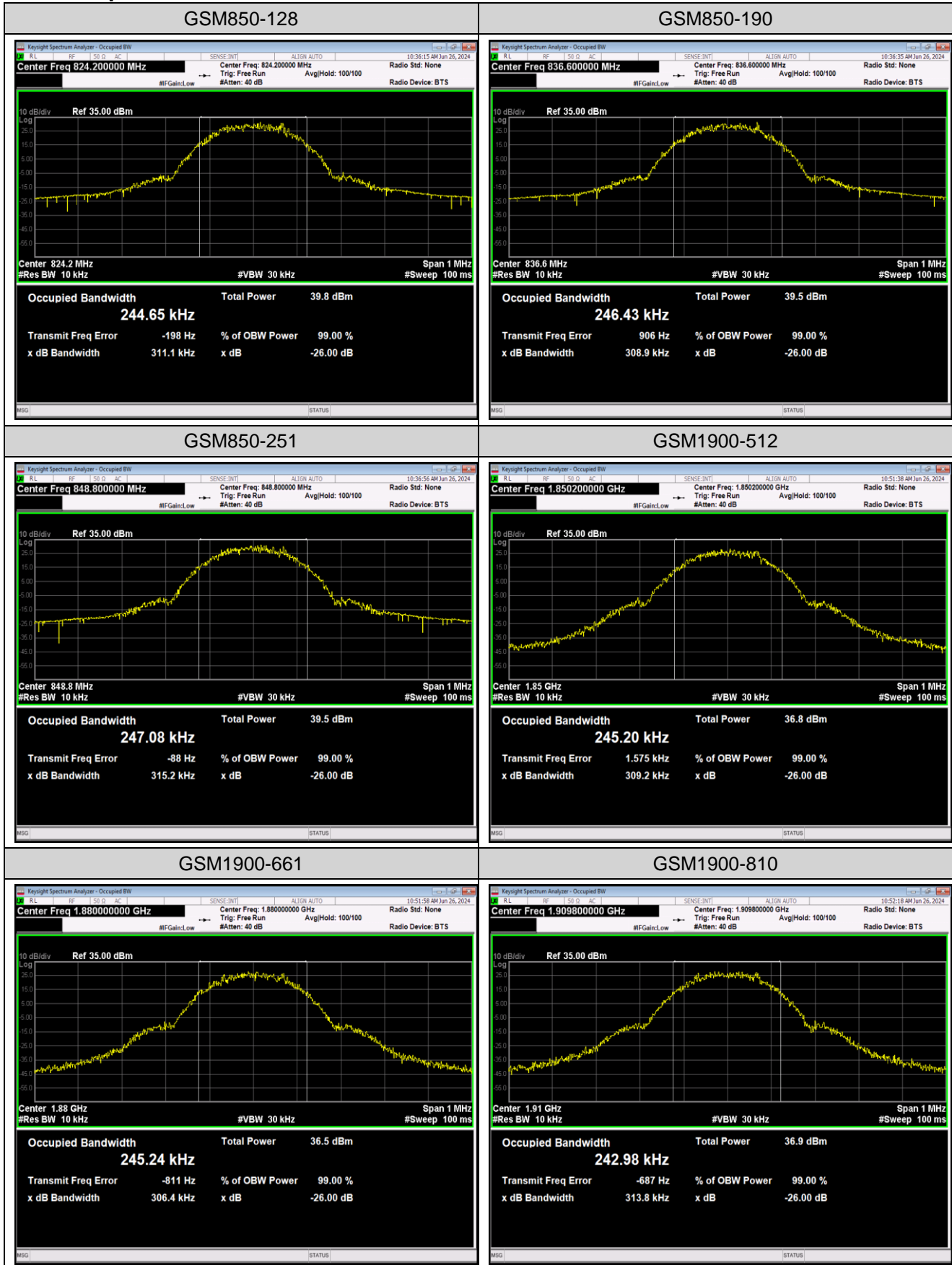


Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

| Band | Channel | PCL | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
|---------|---------|-----|--------------------------|----------------------|-------------|---------|
| GSM850 | 128 | 5 | 0.24465 | 0.3111 | --- | PASS |
| GSM850 | 190 | 5 | 0.24643 | 0.3089 | --- | PASS |
| GSM850 | 251 | 5 | 0.24708 | 0.3152 | --- | PASS |
| GSM1900 | 512 | 0 | 0.24520 | 0.3092 | --- | PASS |
| GSM1900 | 661 | 0 | 0.24524 | 0.3064 | --- | PASS |
| GSM1900 | 810 | 0 | 0.24298 | 0.3138 | --- | PASS |

Test Graphs

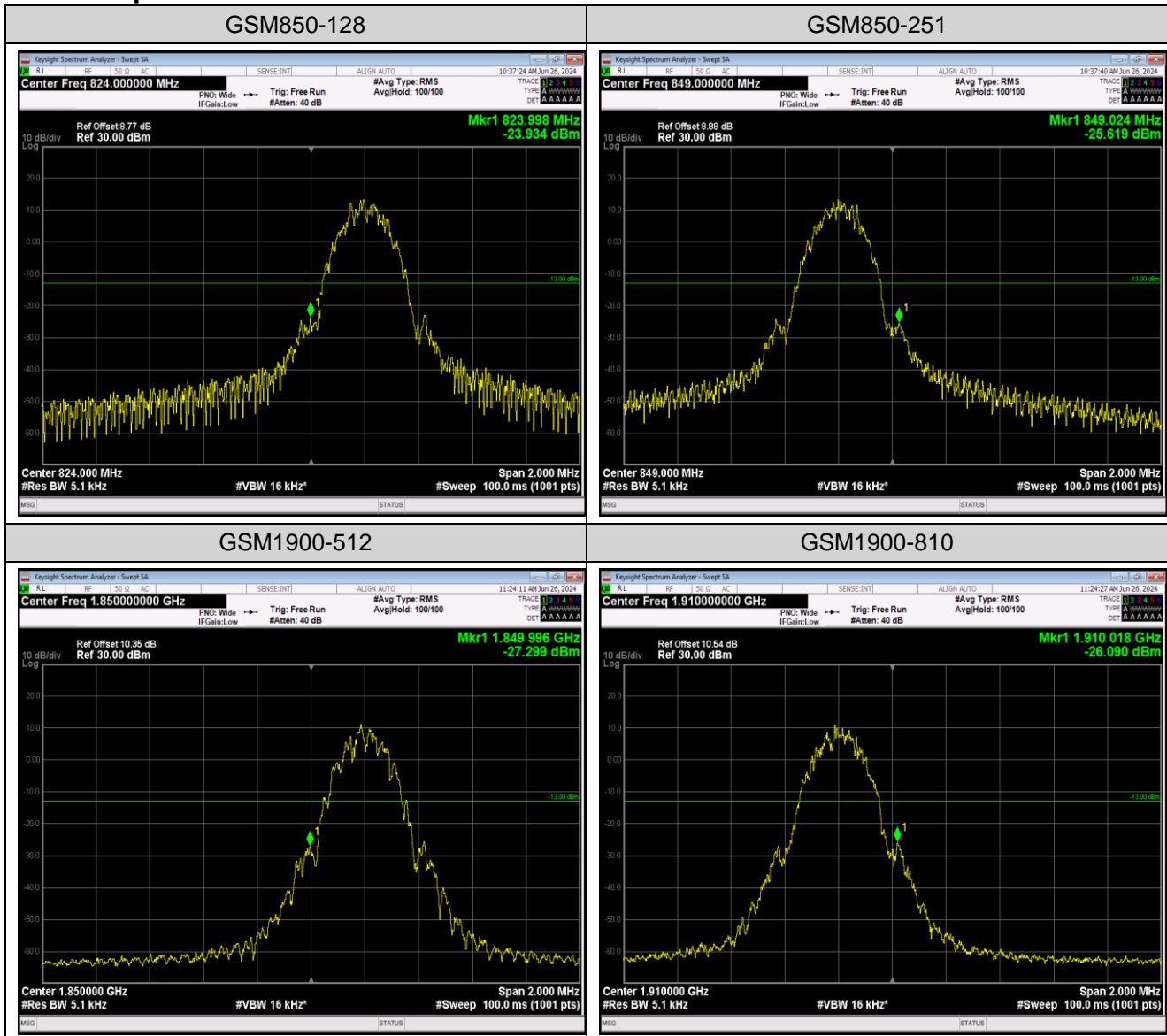


Appendix D: Band Edge

Test Result

| Band | Channel | PCL | Freq (MHz) | Result (dBm) | Limit(dBm) | Verdict |
|---------|---------|-----|------------|--------------|------------|---------|
| GSM850 | 128 | 5 | 824.00 | -23.93 | -13 | PASS |
| GSM850 | 251 | 5 | 849.02 | -25.62 | -13 | PASS |
| GSM1900 | 512 | 0 | 1850.00 | -27.30 | -13 | PASS |
| GSM1900 | 810 | 0 | 1910.02 | -26.09 | -13 | PASS |

Test Graphs



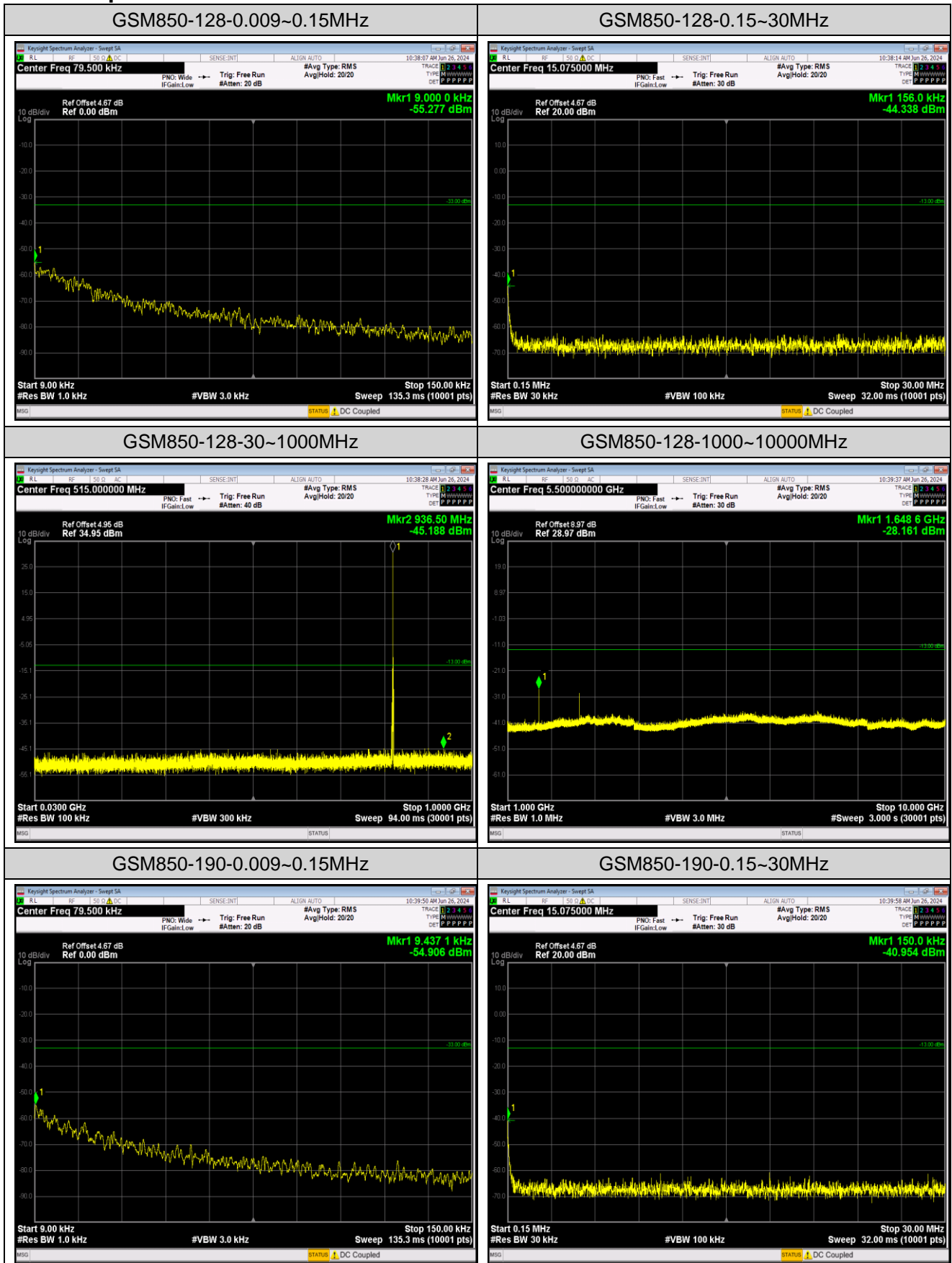
Appendix E: Conducted Spurious Emission

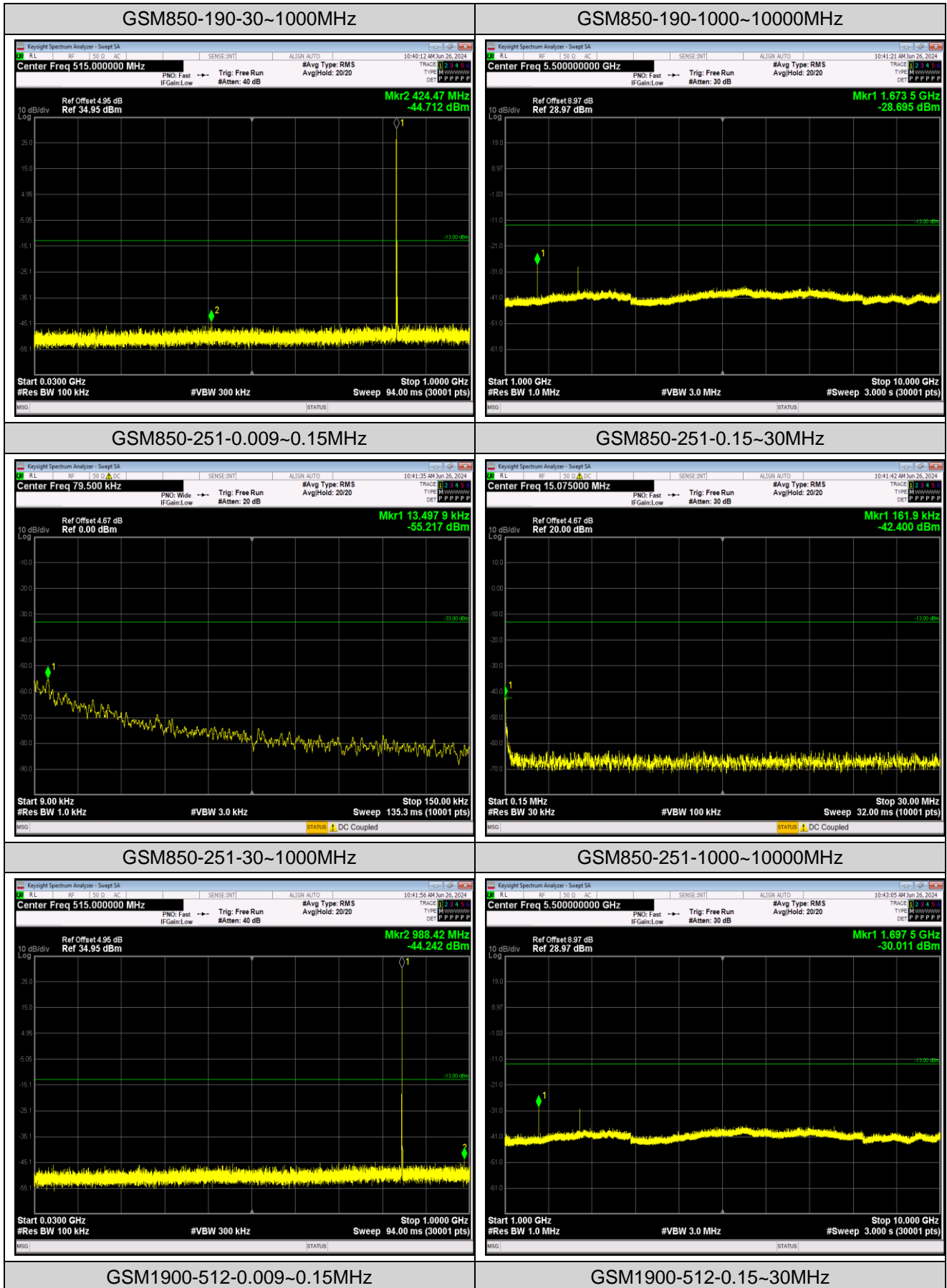
Test Result

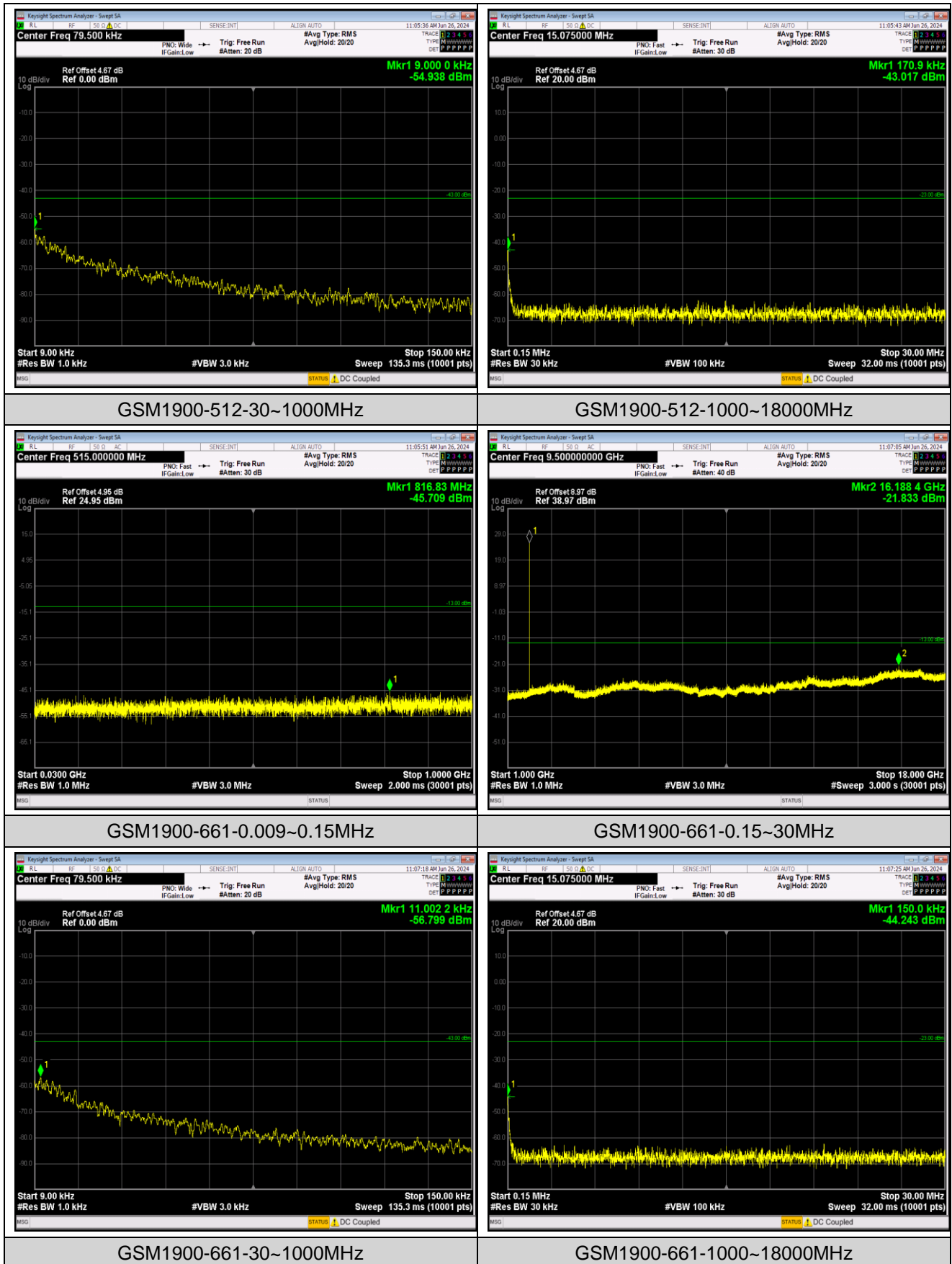
| Band | Channel | PCL | Frequency Range(MHz) | Max.Freq. (MHz) | Result (dBm) | Limit (dBm) | Verdict |
|---------|---------|-----|----------------------|-----------------|--------------|-------------|---------|
| GSM850 | 128 | 5 | 0.009~0.15MHz | 0.01 | -55.28 | -33 | PASS |
| GSM850 | 128 | 5 | 0.15~30MHz | 0.16 | -44.34 | -13 | PASS |
| GSM850 | 128 | 5 | 30~1000MHz | 936.5 | -45.19 | -13 | PASS |
| GSM850 | 128 | 5 | 1000~10000MHz | 1648.6 | -28.16 | -13 | PASS |
| GSM850 | 190 | 5 | 0.009~0.15MHz | 0.01 | -54.91 | -33 | PASS |
| GSM850 | 190 | 5 | 0.15~30MHz | 0.15 | -40.95 | -13 | PASS |
| GSM850 | 190 | 5 | 30~1000MHz | 424.47 | -44.71 | -13 | PASS |
| GSM850 | 190 | 5 | 1000~10000MHz | 1673.5 | -28.7 | -13 | PASS |
| GSM850 | 251 | 5 | 0.009~0.15MHz | 0.01 | -55.22 | -33 | PASS |
| GSM850 | 251 | 5 | 0.15~30MHz | 0.16 | -42.4 | -13 | PASS |
| GSM850 | 251 | 5 | 30~1000MHz | 988.42 | -44.24 | -13 | PASS |
| GSM850 | 251 | 5 | 1000~10000MHz | 1697.5 | -30.01 | -13 | PASS |
| GSM1900 | 512 | 0 | 0.009~0.15MHz | 0.01 | -54.94 | -43 | PASS |
| GSM1900 | 512 | 0 | 0.15~30MHz | 0.17 | -43.02 | -23 | PASS |
| GSM1900 | 512 | 0 | 30~1000MHz | 816.83 | -45.71 | -13 | PASS |
| GSM1900 | 512 | 0 | 1000~18000MHz | 16188.37 | -21.83 | -13 | PASS |
| GSM1900 | 661 | 0 | 0.009~0.15MHz | 0.01 | -56.8 | -43 | PASS |
| GSM1900 | 661 | 0 | 0.15~30MHz | 0.15 | -44.24 | -23 | PASS |
| GSM1900 | 661 | 0 | 30~1000MHz | 781.17 | -45.97 | -13 | PASS |
| GSM1900 | 661 | 0 | 1000~18000MHz | 17091.07 | -21.96 | -13 | PASS |
| GSM1900 | 810 | 0 | 0.009~0.15MHz | 0.01 | -55.16 | -43 | PASS |
| GSM1900 | 810 | 0 | 0.15~30MHz | 0.15 | -44.75 | -23 | PASS |
| GSM1900 | 810 | 0 | 30~1000MHz | 894.5 | -43.99 | -13 | PASS |
| GSM1900 | 810 | 0 | 1000~18000MHz | 17053.1 | -22.49 | -13 | PASS |

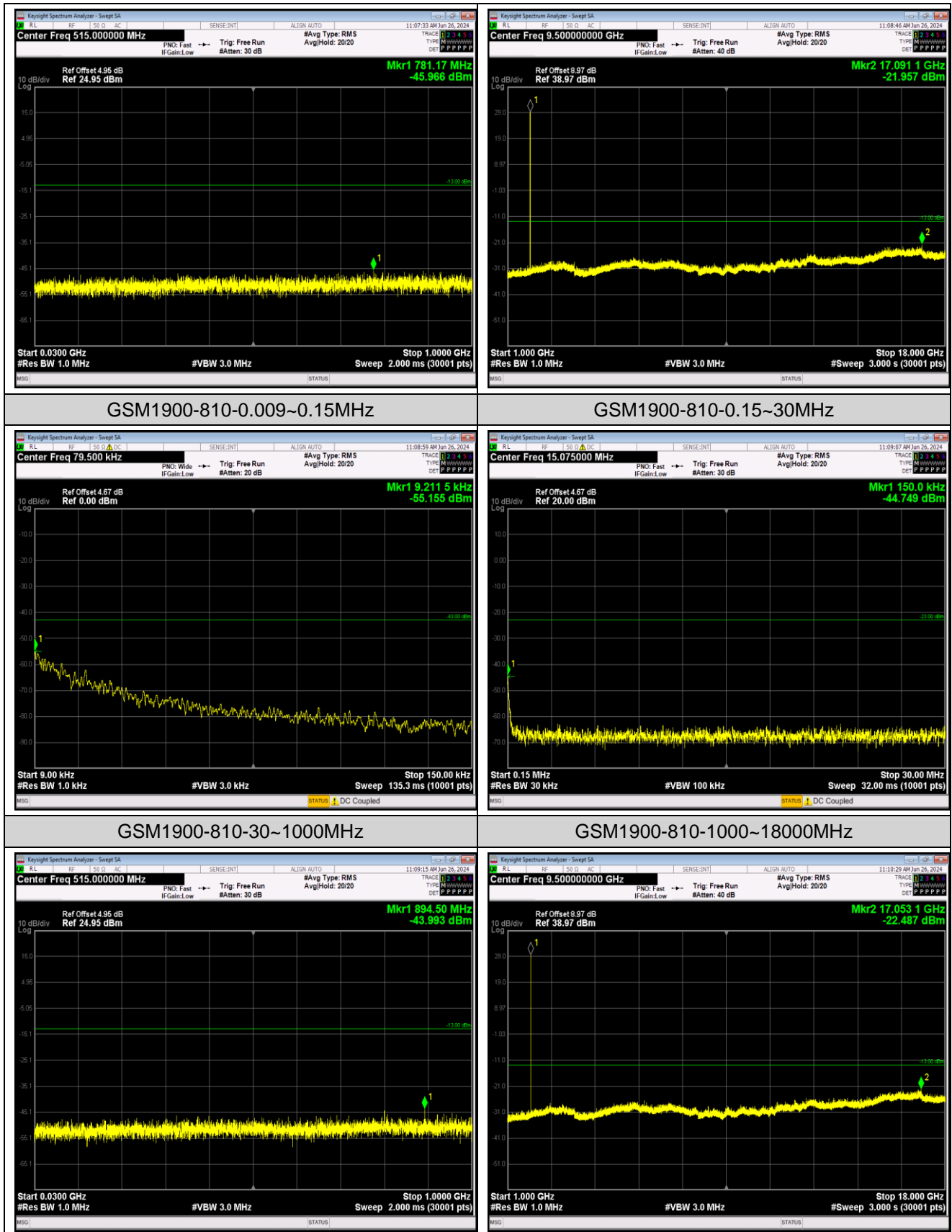
Remark: All channel and all modulation had been tested, but only the worst case data displayed in this report.

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 | -5.78 | -0.006909 | ±2.5 | Pass |
| | -20 | -8.98 | -0.010734 | | |
| | -10 | -3.10 | -0.003705 | | |
| | 0 | -7.88 | -0.009419 | | |
| | 10 | 6.30 | 0.007530 | | |
| | 20 | 1.84 | 0.002199 | | |
| | 30 | -0.55 | -0.000657 | | |
| | 40 | 1.94 | 0.002319 | | |
| | 50 | 2.13 | 0.002546 | | |
| Voltage | | | | | |
| Temperature (°C) | Power supplied (Vdc) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 25 | 3.45 | -5.42 | -0.006479 | ±2.5 | Pass |
| | 3.85 | -6.59 | -0.007877 | | |
| | 4.40 | -7.17 | -0.008570 | | |
| 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 | 6.17 | 0.003282 | Within authorized band for PCS 1900 | Pass |
| | -20 | 11.72 | 0.006234 | | |
| | -10 | 6.59 | 0.003505 | | |
| | 0 | -5.29 | -0.002814 | | |
| | 10 | 0.32 | 0.000170 | | |
| | 20 | -0.90 | -0.000479 | | |
| | 30 | -3.58 | -0.001904 | | |
| | 40 | -1.29 | -0.000686 | | |
| | 50 | -1.13 | -0.000601 | | |
| Voltage | | | | | |
| Temperature (°C) | Power supplied (Vdc) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 25 | 3.45 | 13.43 | 0.007144 | Within authorized band for PCS 1900 | Pass |
| | 3.85 | 13.33 | 0.007090 | | |
| | 4.40 | -3.68 | -0.001957 | | |
| 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

