

## **Appendix for GSM850 & 1900**

Product Name: Smart Phone

Model No: X65

## Appendix A: Average Power Output Data

### Test Result

| Band    | Channel | Power(dBm) | Verdict |
|---------|---------|------------|---------|
| GSM850  | 128     | 31.96      | PASS    |
| GSM850  | 190     | 31.77      | PASS    |
| GSM850  | 251     | 31.86      | PASS    |
| GSM1900 | 512     | 28.55      | PASS    |
| GSM1900 | 661     | 28.41      | PASS    |
| GSM1900 | 810     | 28.64      | PASS    |

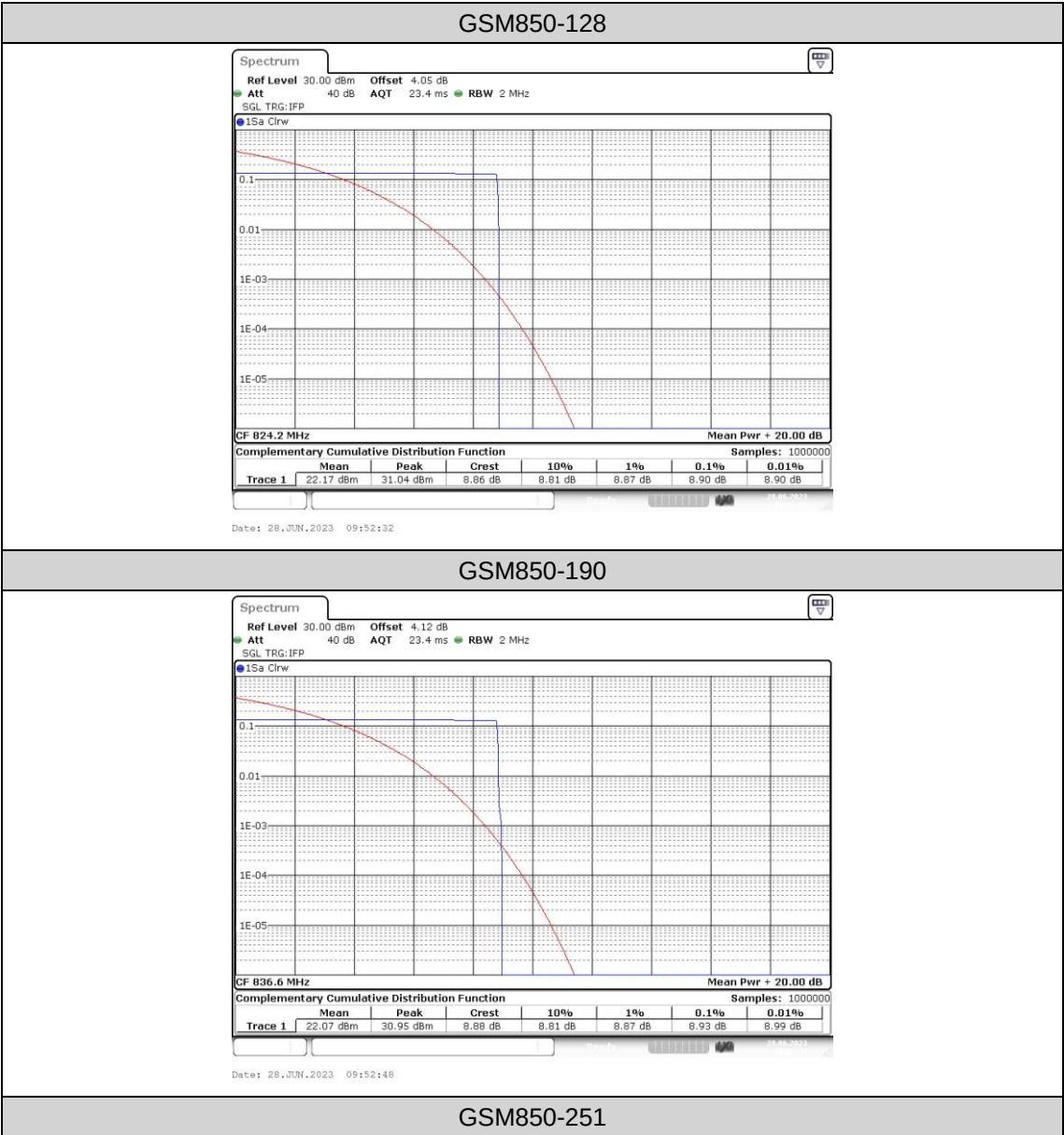
| Band     | Channel | Slot | Power(dBm) | Verdict |
|----------|---------|------|------------|---------|
| GPRS850  | 128     | 1    | 31.97      | PASS    |
| GPRS850  | 128     | 2    | 31.31      | PASS    |
| GPRS850  | 128     | 3    | 29.69      | PASS    |
| GPRS850  | 128     | 4    | 28.54      | PASS    |
| GPRS850  | 190     | 1    | 31.71      | PASS    |
| GPRS850  | 190     | 2    | 31.02      | PASS    |
| GPRS850  | 190     | 3    | 29.35      | PASS    |
| GPRS850  | 190     | 4    | 28.18      | PASS    |
| GPRS850  | 251     | 1    | 31.79      | PASS    |
| GPRS850  | 251     | 2    | 31.08      | PASS    |
| GPRS850  | 251     | 3    | 29.43      | PASS    |
| GPRS850  | 251     | 4    | 28.21      | PASS    |
| GPRS1900 | 512     | 1    | 28.34      | PASS    |
| GPRS1900 | 512     | 2    | 27.53      | PASS    |
| GPRS1900 | 512     | 3    | 25.80      | PASS    |
| GPRS1900 | 512     | 4    | 24.69      | PASS    |
| GPRS1900 | 661     | 1    | 28.22      | PASS    |
| GPRS1900 | 661     | 2    | 27.41      | PASS    |
| GPRS1900 | 661     | 3    | 25.67      | PASS    |
| GPRS1900 | 661     | 4    | 24.62      | PASS    |
| GPRS1900 | 810     | 1    | 28.61      | PASS    |
| GPRS1900 | 810     | 2    | 26.78      | PASS    |
| GPRS1900 | 810     | 3    | 24.99      | PASS    |
| GPRS1900 | 810     | 4    | 23.79      | PASS    |

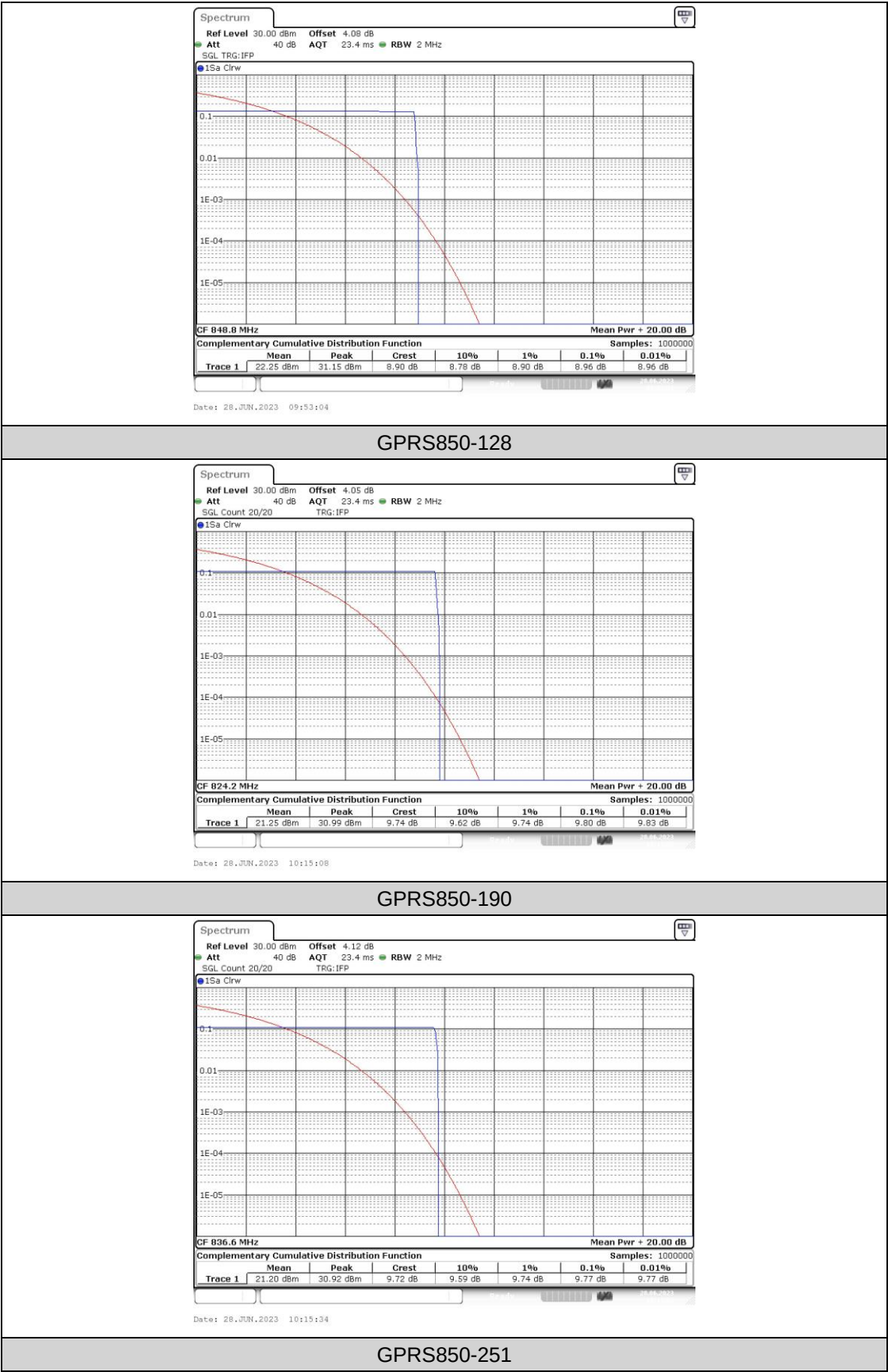
## Appendix B: Peak-to-Average Ratio(CCDF)

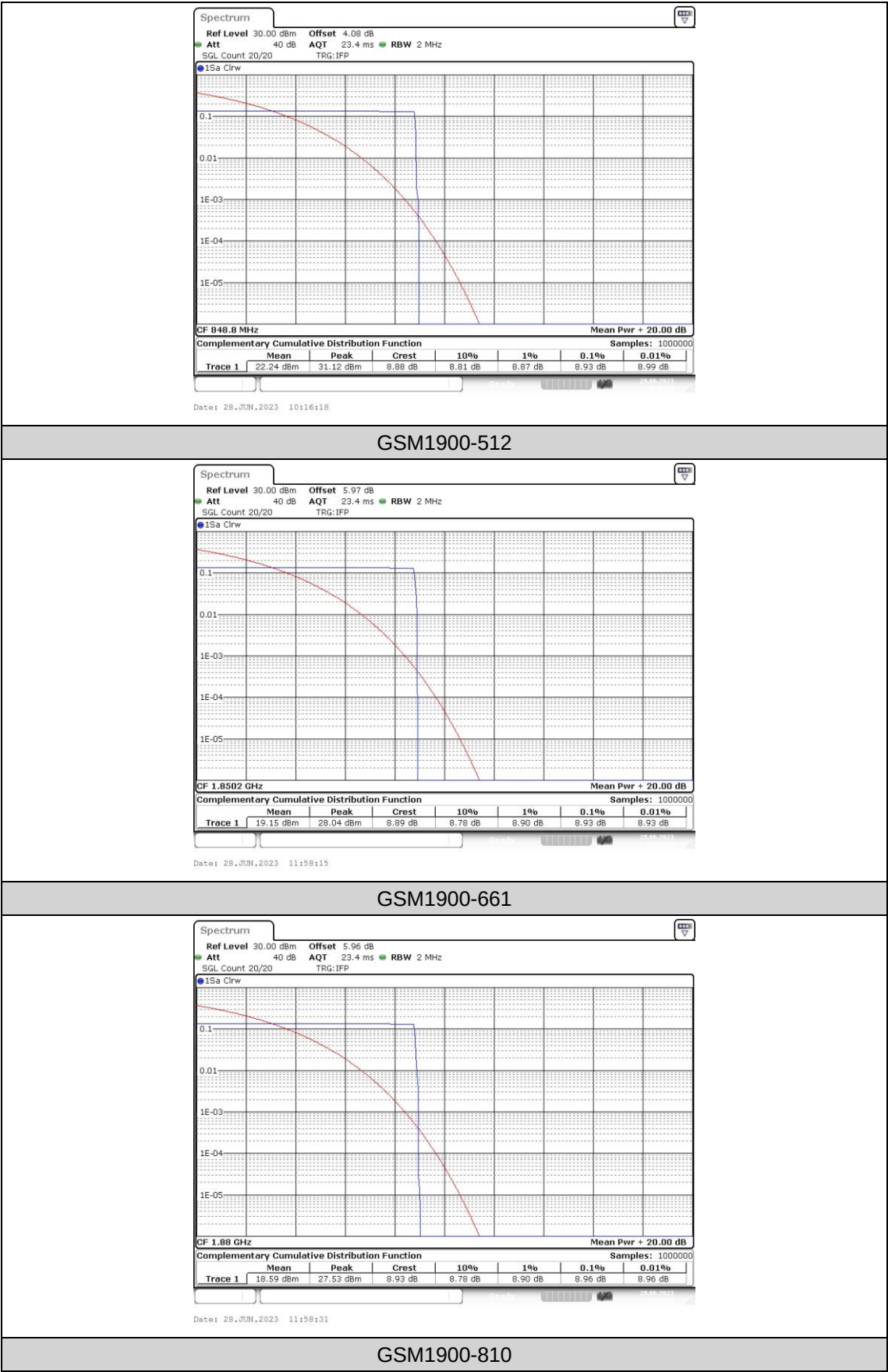
### Test Result

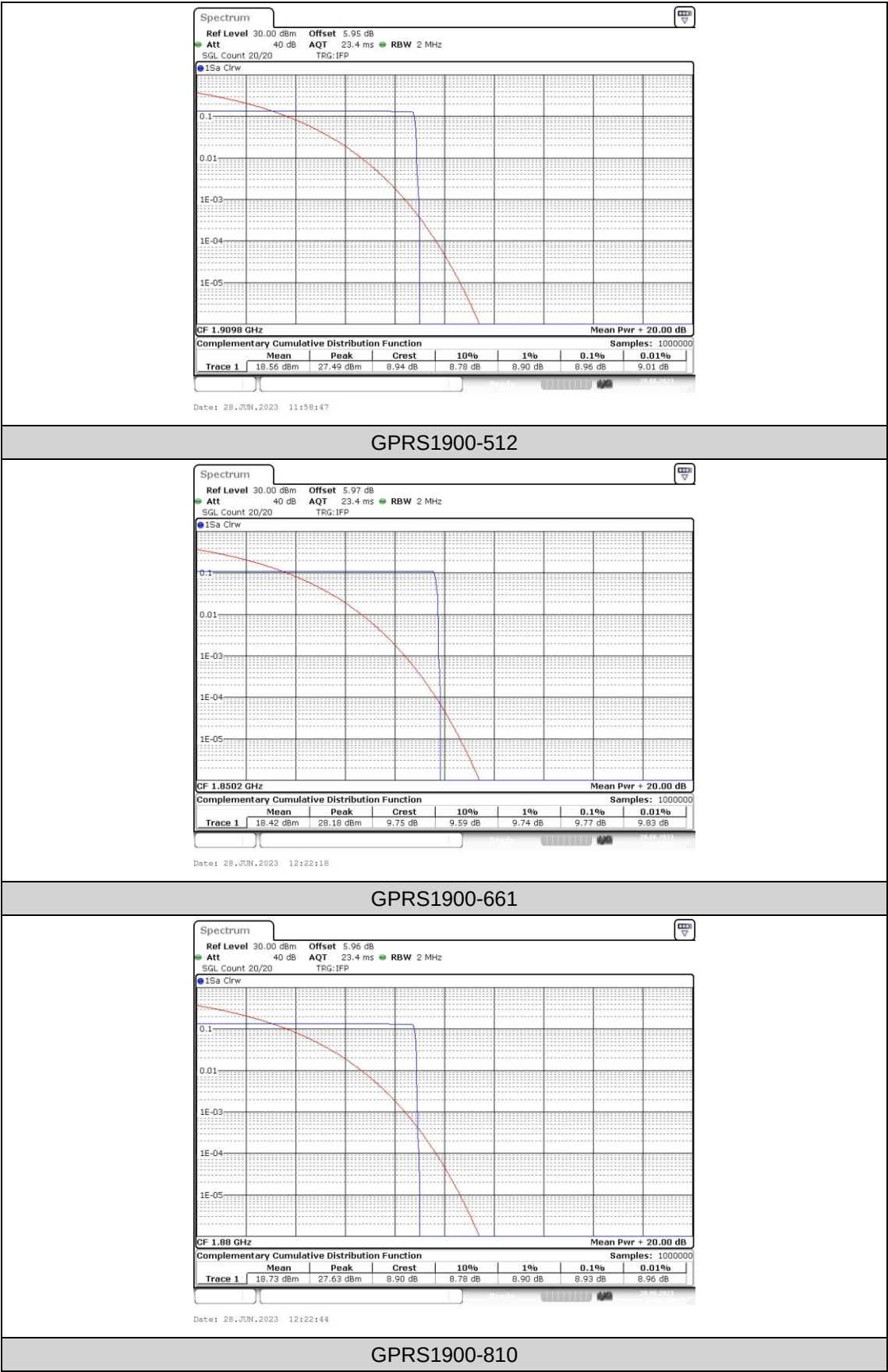
| Band     | Channel | Result(dB) | Limit(dB) | Verdict |
|----------|---------|------------|-----------|---------|
| GSM850   | 128     | 8.90       | 13        | PASS    |
| GSM850   | 190     | 8.93       | 13        | PASS    |
| GSM850   | 251     | 8.96       | 13        | PASS    |
| GPRS850  | 128     | 9.80       | 13        | PASS    |
| GPRS850  | 190     | 9.77       | 13        | PASS    |
| GPRS850  | 251     | 8.93       | 13        | PASS    |
| GSM1900  | 512     | 8.93       | 13        | PASS    |
| GSM1900  | 661     | 8.96       | 13        | PASS    |
| GSM1900  | 810     | 8.96       | 13        | PASS    |
| GPRS1900 | 512     | 9.77       | 13        | PASS    |
| GPRS1900 | 661     | 8.93       | 13        | PASS    |
| GPRS1900 | 810     | 9.80       | 13        | PASS    |

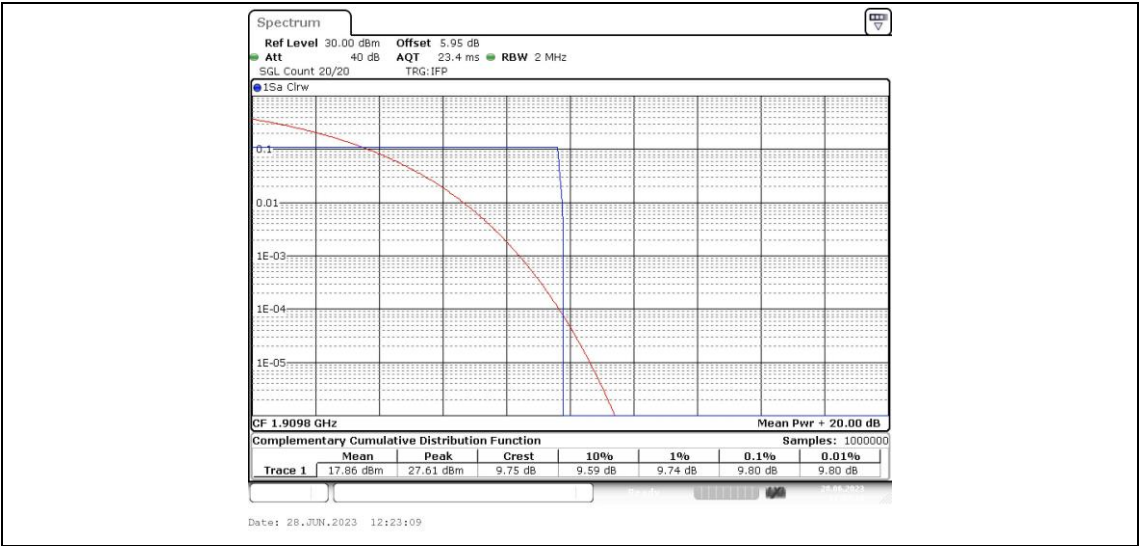
Test Graphs









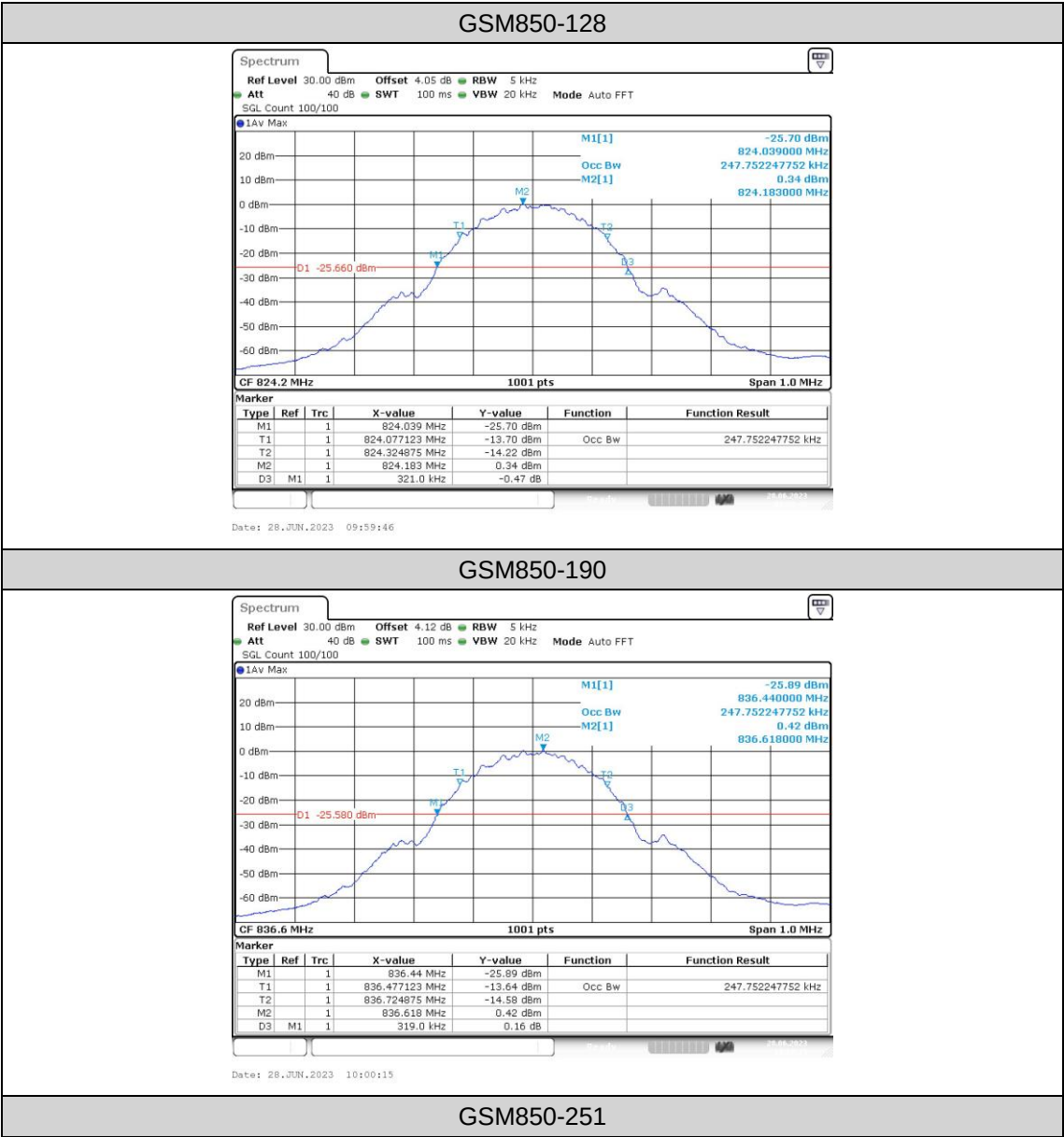


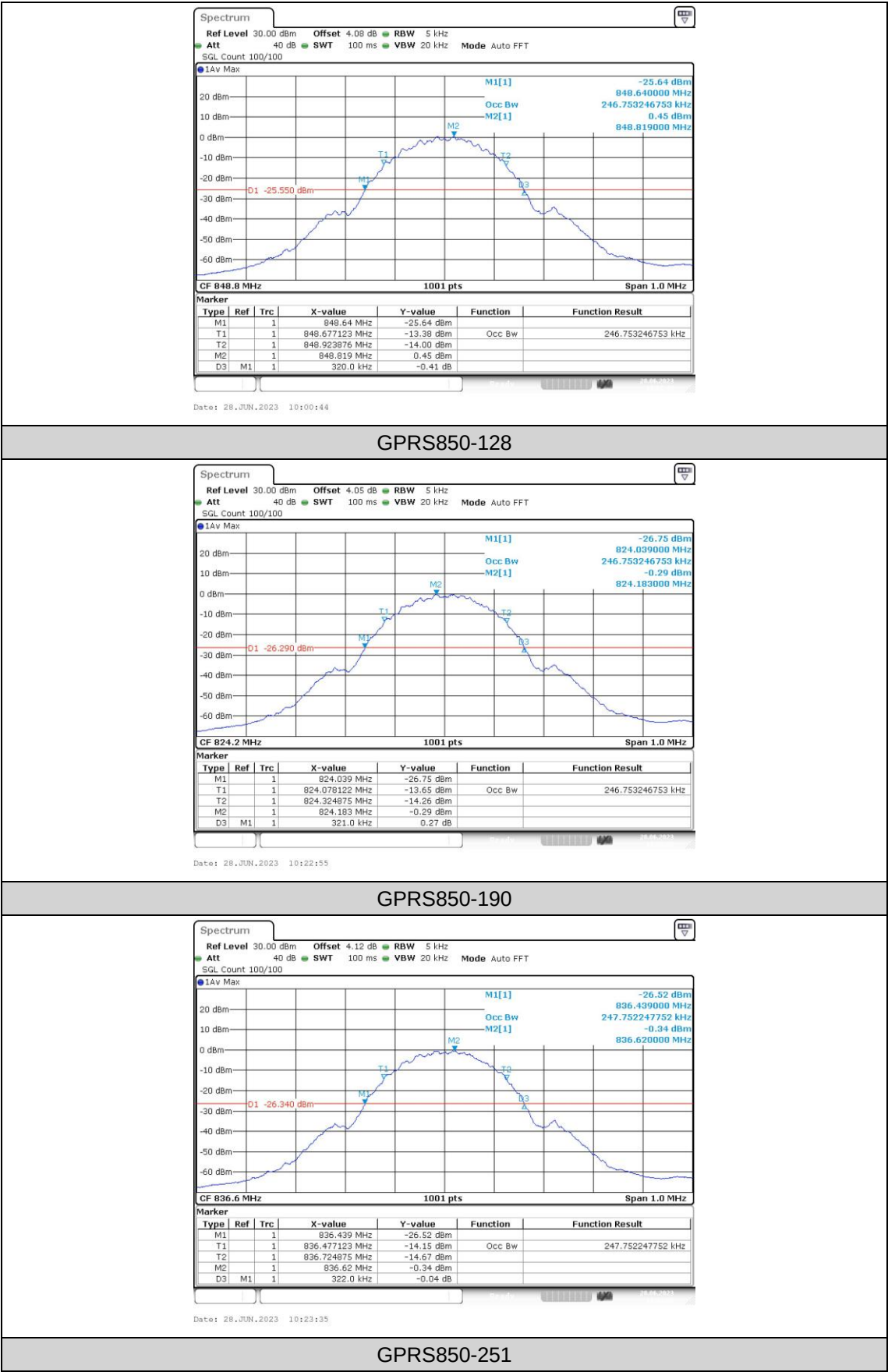
## Appendix C: 26dB Bandwidth and Occupied Bandwidth

### Test Result

| Band     | Channel | Occupied<br>Bandwidth (MHz) | 26dB Bandwidth<br>(MHz) | Limit<br>(MHz) | Verdict |
|----------|---------|-----------------------------|-------------------------|----------------|---------|
| GSM850   | 128     | 0.248                       | 0.32                    | ---            | PASS    |
| GSM850   | 190     | 0.248                       | 0.32                    | ---            | PASS    |
| GSM850   | 251     | 0.247                       | 0.32                    | ---            | PASS    |
| GPRS850  | 128     | 0.247                       | 0.32                    | ---            | PASS    |
| GPRS850  | 190     | 0.248                       | 0.32                    | ---            | PASS    |
| GPRS850  | 251     | 0.246                       | 0.32                    | ---            | PASS    |
| GSM1900  | 512     | 0.244                       | 0.31                    | ---            | PASS    |
| GSM1900  | 661     | 0.245                       | 0.31                    | ---            | PASS    |
| GSM1900  | 810     | 0.244                       | 0.31                    | ---            | PASS    |
| GPRS1900 | 512     | 0.242                       | 0.32                    | ---            | PASS    |
| GPRS1900 | 661     | 0.245                       | 0.32                    | ---            | PASS    |
| GPRS1900 | 810     | 0.244                       | 0.32                    | ---            | PASS    |

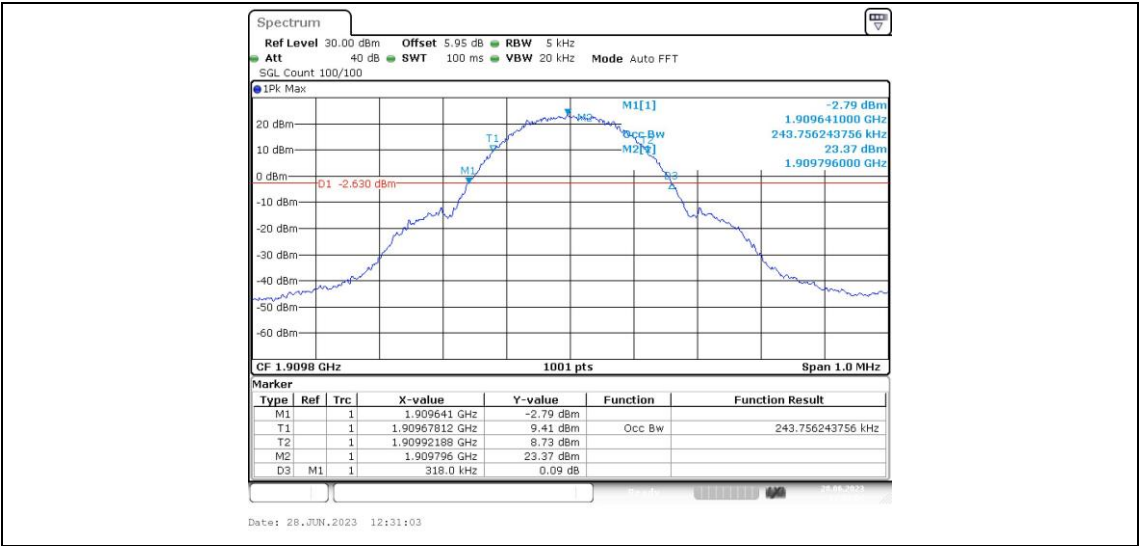
Test Graphs









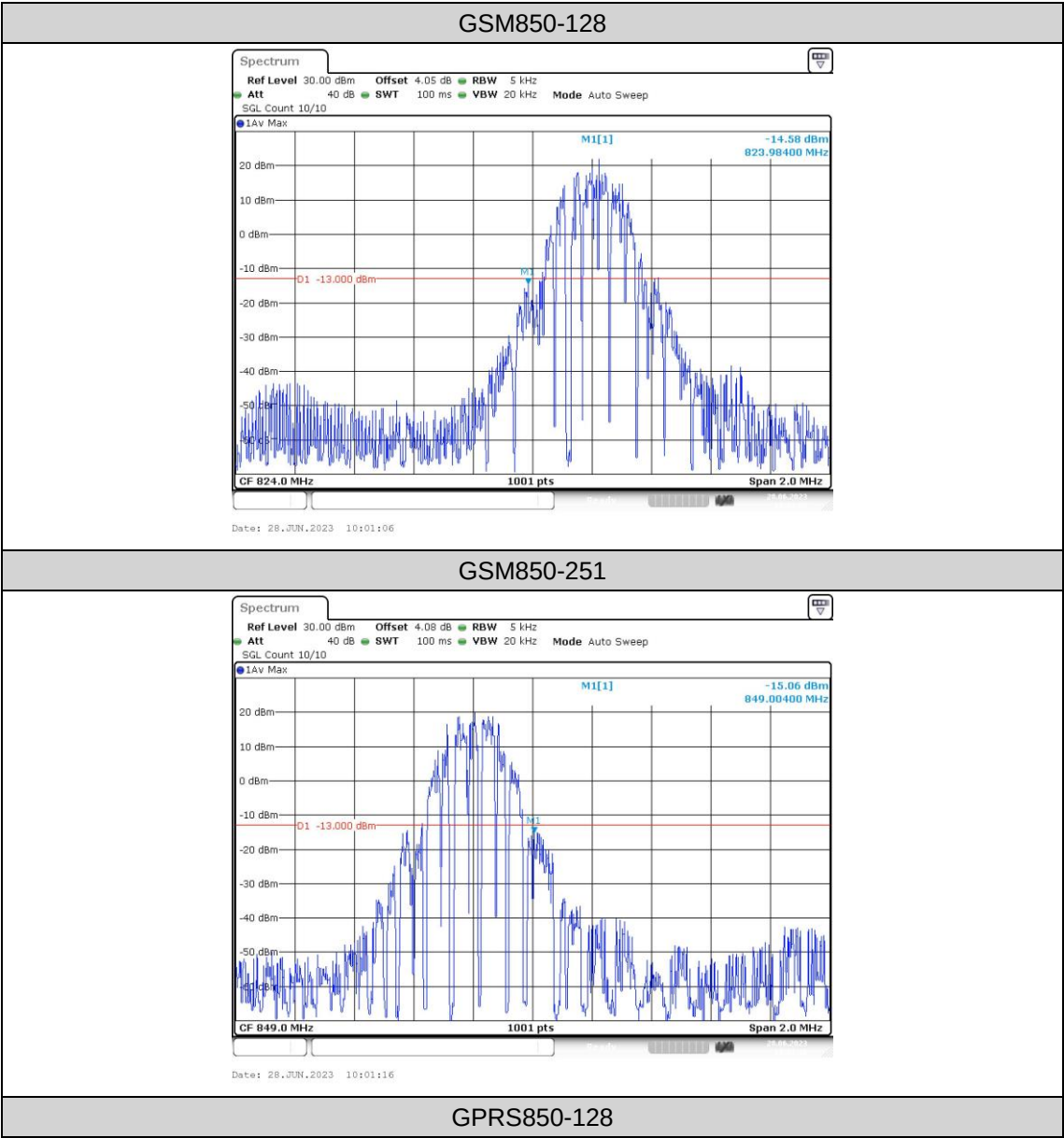


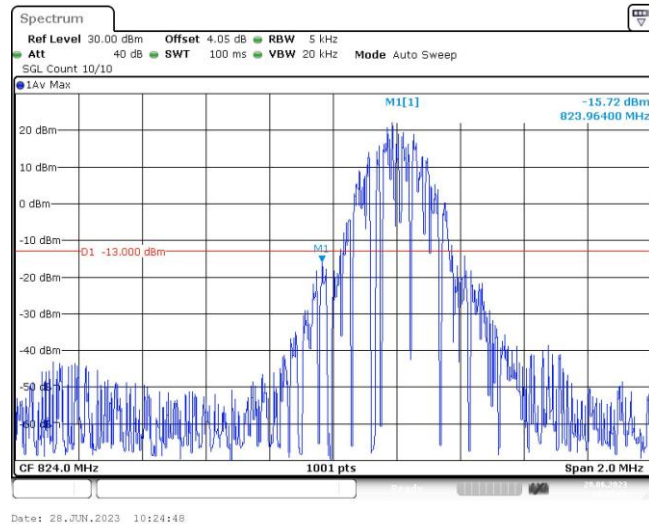
## Appendix D: Band Edge

### Test Result

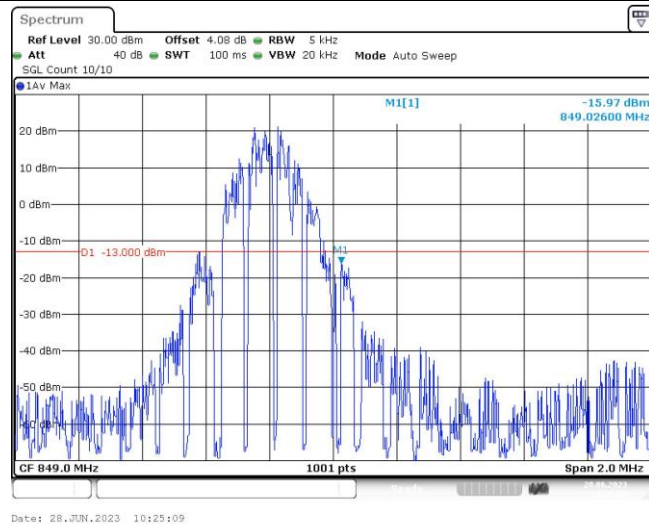
| Band     | Channel | Freq (MHz) | Result (dBm) | Limit(dBm) | Verdict |
|----------|---------|------------|--------------|------------|---------|
| GSM850   | 128     | 823.98     | -14.58       | -13        | PASS    |
| GSM850   | 251     | 849.00     | -15.06       | -13        | PASS    |
| GPRS850  | 128     | 823.96     | -15.72       | -13        | PASS    |
| GPRS850  | 251     | 849.03     | -15.97       | -13        | PASS    |
| GSM1900  | 512     | 1849.99    | -20.45       | -13        | PASS    |
| GSM1900  | 810     | 1910.02    | -21.94       | -13        | PASS    |
| GPRS1900 | 512     | 1849.98    | -20.59       | -13        | PASS    |
| GPRS1900 | 810     | 1910.02    | -21.56       | -13        | PASS    |

Test Graphs

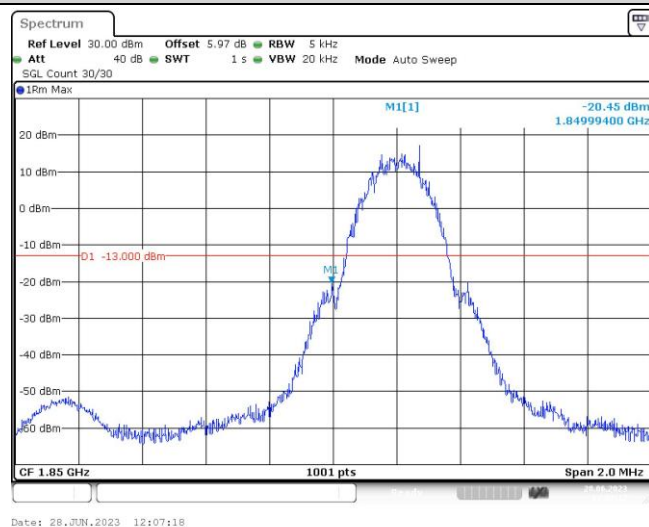




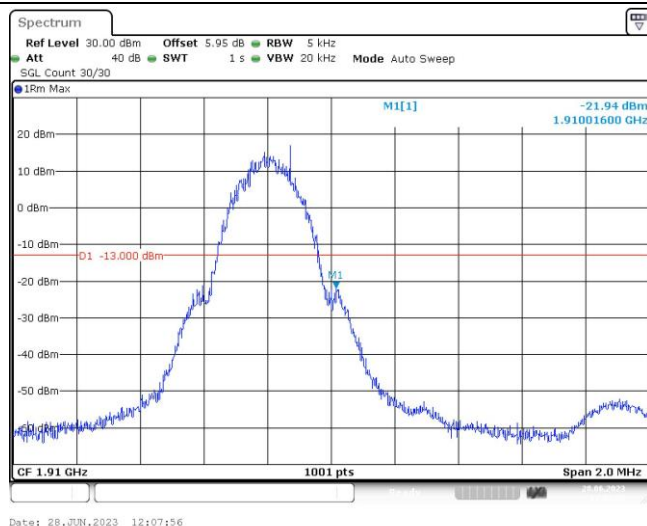
## GPRS850-251



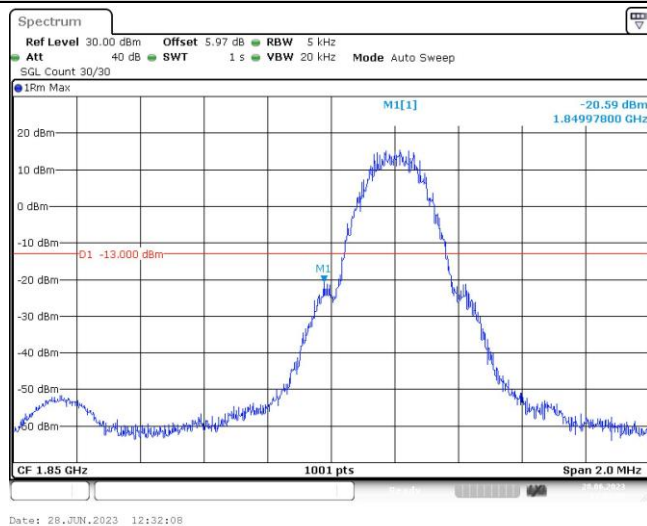
## GSM1900-512



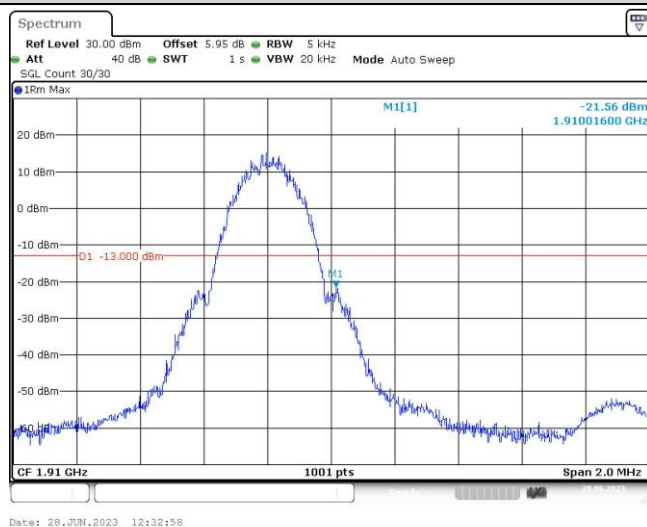
## GSM1900-810



## GPRS1900-512



## GPRS1900-810



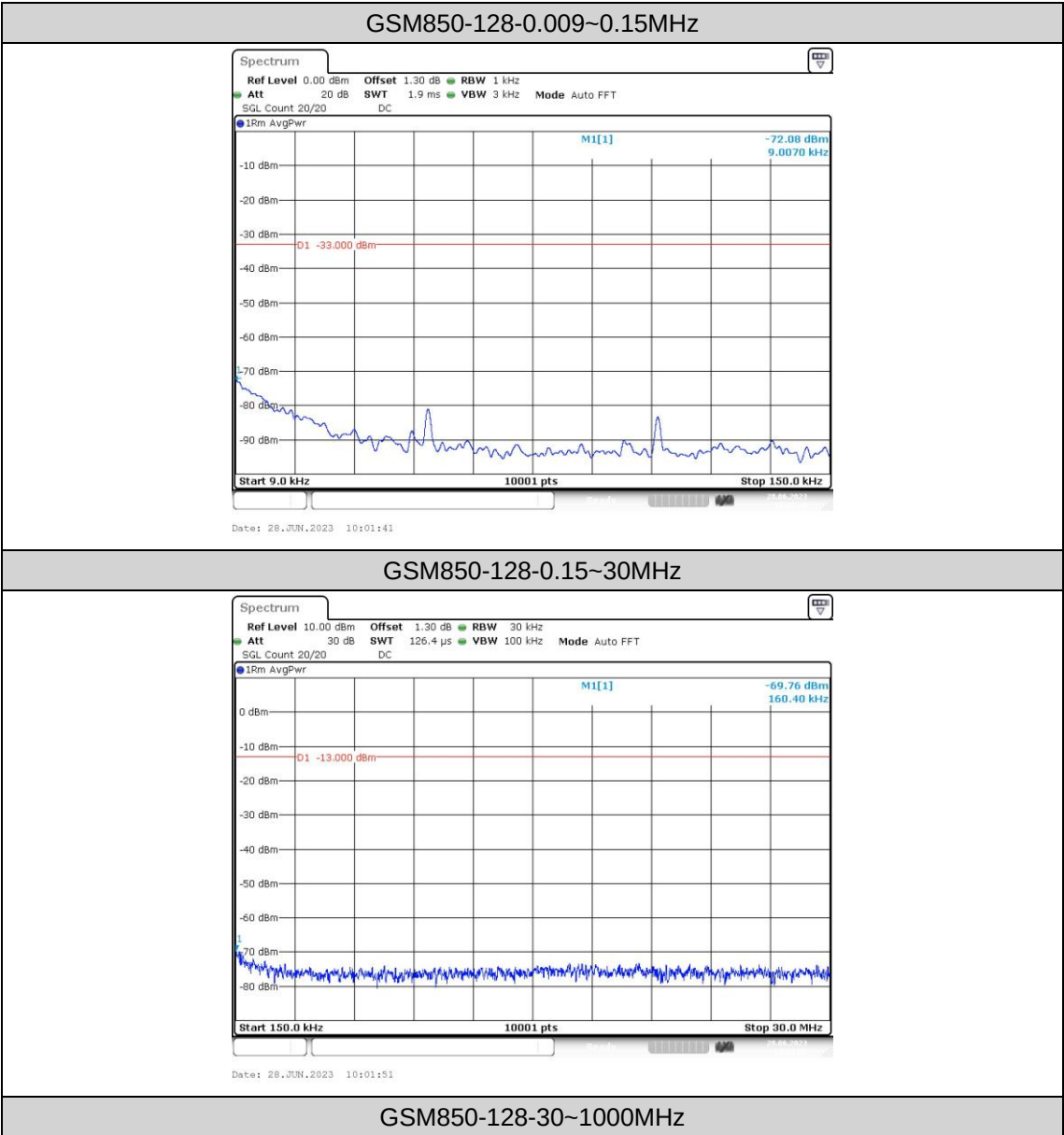
## Appendix E: Conducted Spurious Emission

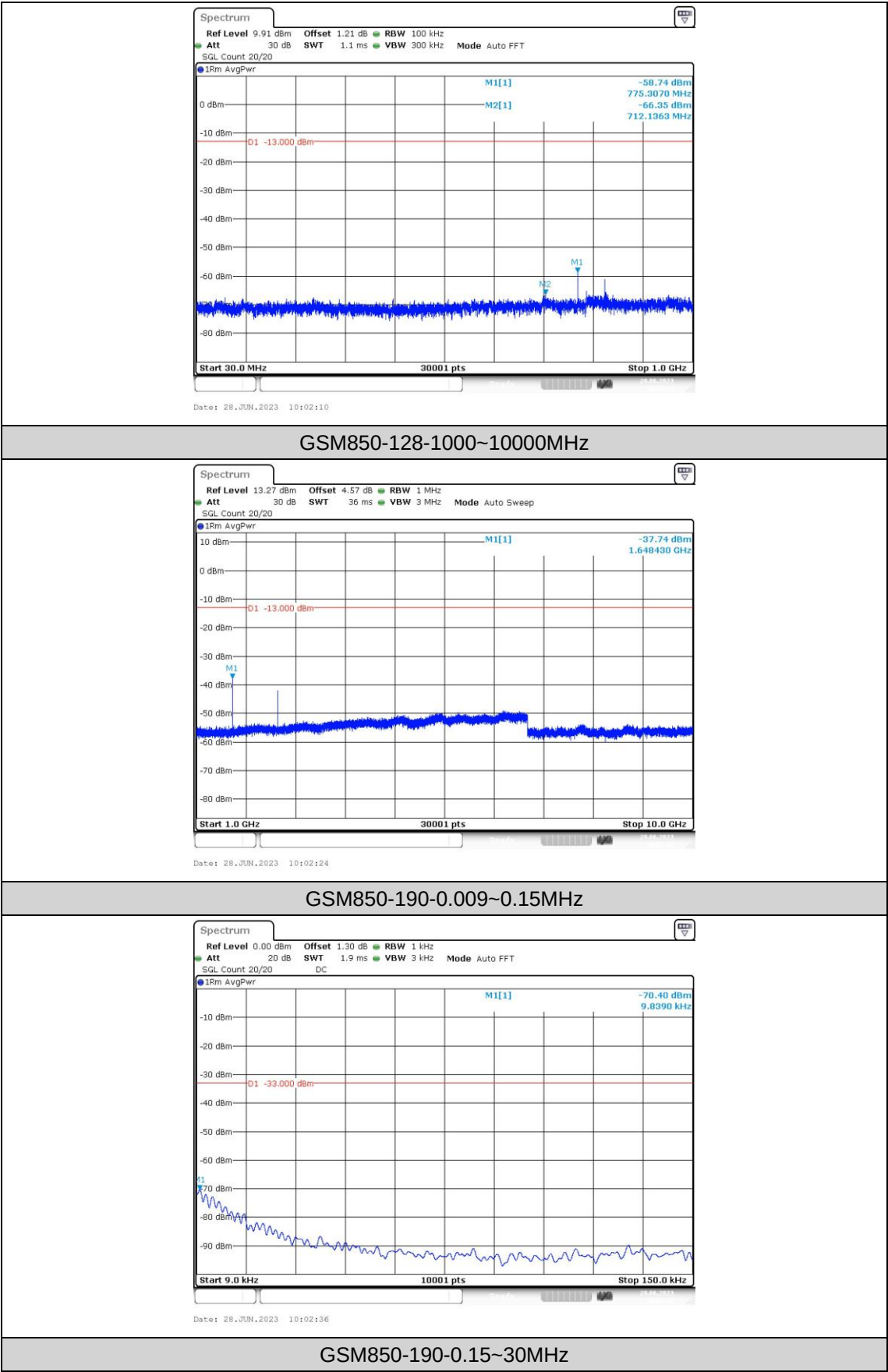
### Test Result

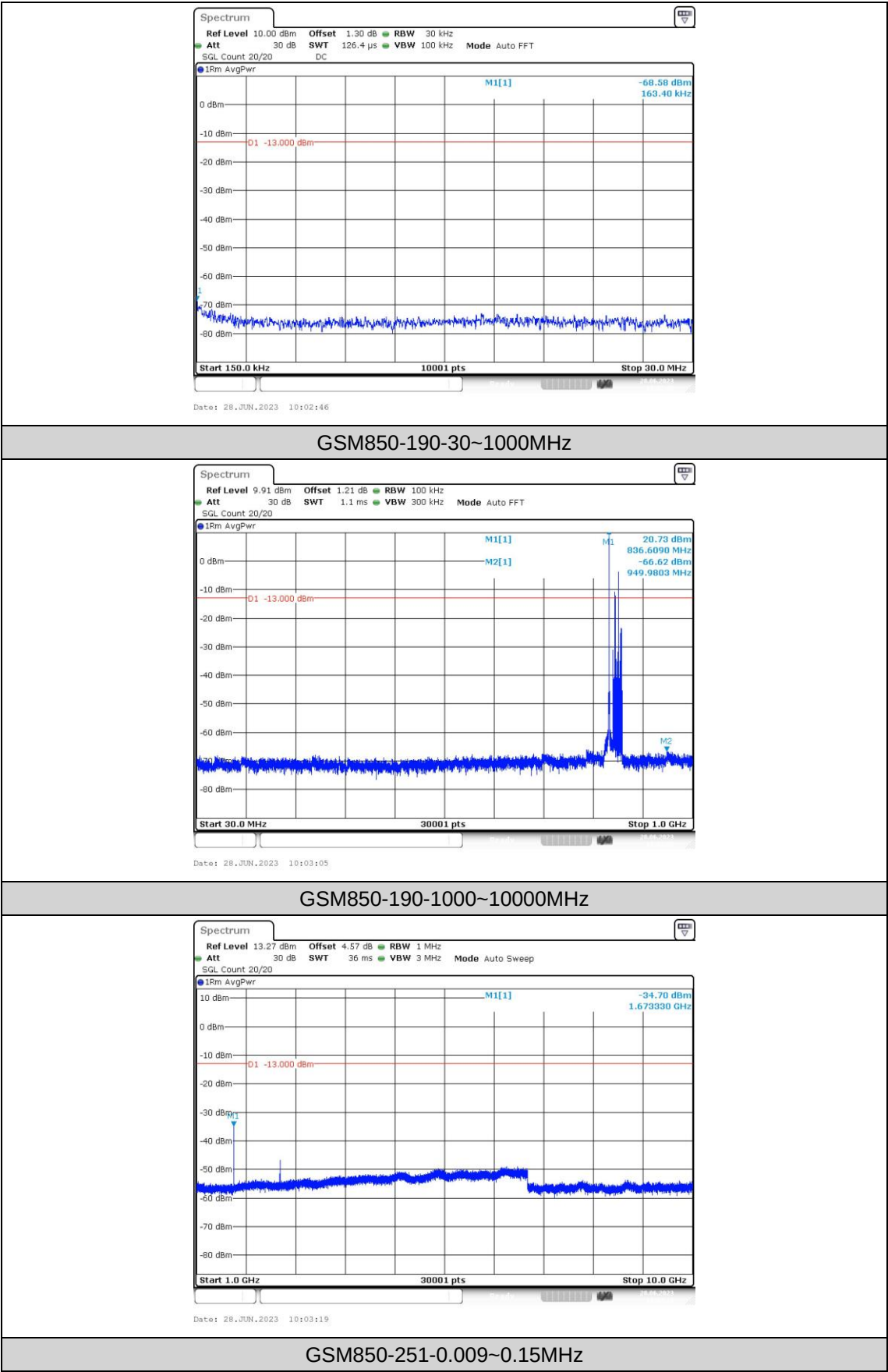
| Band    | Channel | Frequency Range(MHz) | Max.Freq. (MHz) | Result (dBm) | Limit (dBm) | Verdict |
|---------|---------|----------------------|-----------------|--------------|-------------|---------|
| GSM850  | 128     | 0.009~0.15MHz        | 0.01            | -72.08       | -33         | PASS    |
| GSM850  | 128     | 0.15~30MHz           | 0.16            | -69.76       | -13         | PASS    |
| GSM850  | 128     | 30~1000MHz           | 712.14          | -66.35       | -13         | PASS    |
| GSM850  | 128     | 1000~10000MHz        | 1648.43         | -37.74       | -13         | PASS    |
| GSM850  | 190     | 0.009~0.15MHz        | 0.01            | -70.4        | -33         | PASS    |
| GSM850  | 190     | 0.15~30MHz           | 0.16            | -68.58       | -13         | PASS    |
| GSM850  | 190     | 30~1000MHz           | 949.98          | -66.62       | -13         | PASS    |
| GSM850  | 190     | 1000~10000MHz        | 1673.33         | -34.7        | -13         | PASS    |
| GSM850  | 251     | 0.009~0.15MHz        | 0.01            | -68.51       | -33         | PASS    |
| GSM850  | 251     | 0.15~30MHz           | 0.24            | -70.73       | -13         | PASS    |
| GSM850  | 251     | 30~1000MHz           | 952.76          | -66.65       | -13         | PASS    |
| GSM850  | 251     | 1000~10000MHz        | 2546.6          | -43.43       | -13         | PASS    |
| GPRS850 | 128     | 0.009~0.15MHz        | 0.01            | -76.7        | -33         | PASS    |
| GPRS850 | 128     | 0.15~30MHz           | 0.15            | -68.54       | -13         | PASS    |
| GPRS850 | 128     | 30~1000MHz           | 954.51          | -66.11       | -13         | PASS    |
| GPRS850 | 128     | 1000~10000MHz        | 1648.43         | -37.48       | -13         | PASS    |
| GPRS850 | 190     | 0.009~0.15MHz        | 0.01            | -68.53       | -33         | PASS    |
| GPRS850 | 190     | 0.15~30MHz           | 0.15            | -68.63       | -13         | PASS    |
| GPRS850 | 190     | 30~1000MHz           | 952.57          | -66.36       | -13         | PASS    |
| GPRS850 | 190     | 1000~10000MHz        | 1673.33         | -41.35       | -13         | PASS    |
| GPRS850 | 251     | 0.009~0.15MHz        | 0.01            | -66.44       | -33         | PASS    |
| GPRS850 | 251     | 0.15~30MHz           | 0.2             | -70.4        | -13         | PASS    |
| GPRS850 | 251     | 30~1000MHz           | 948.95          | -66.56       | -13         | PASS    |
| GPRS850 | 251     | 1000~10000MHz        | 1697.93         | -38.36       | -13         | PASS    |
| GSM1900 | 512     | 0.009~0.15MHz        | 0.01            | -56.94       | -43         | PASS    |
| GSM1900 | 512     | 0.15~30MHz           | 0.23            | -69.06       | -23         | PASS    |
| GSM1900 | 512     | 30~1000MHz           | 867.81          | -56.89       | -13         | PASS    |
| GSM1900 | 512     | 1000~18000MHz        | 3700.17         | -39.17       | -13         | PASS    |
| GSM1900 | 661     | 0.009~0.15MHz        | 0.01            | -56.32       | -43         | PASS    |
| GSM1900 | 661     | 0.15~30MHz           | 0.18            | -69.58       | -23         | PASS    |
| GSM1900 | 661     | 30~1000MHz           | 777.83          | -56.59       | -13         | PASS    |
| GSM1900 | 661     | 1000~18000MHz        | 3759.67         | -43.93       | -13         | PASS    |
| GSM1900 | 810     | 0.009~0.15MHz        | 0.01            | -56.7        | -43         | PASS    |
| GSM1900 | 810     | 0.15~30MHz           | 0.15            | -68.48       | -23         | PASS    |
| GSM1900 | 810     | 30~1000MHz           | 960.25          | -57.03       | -13         | PASS    |

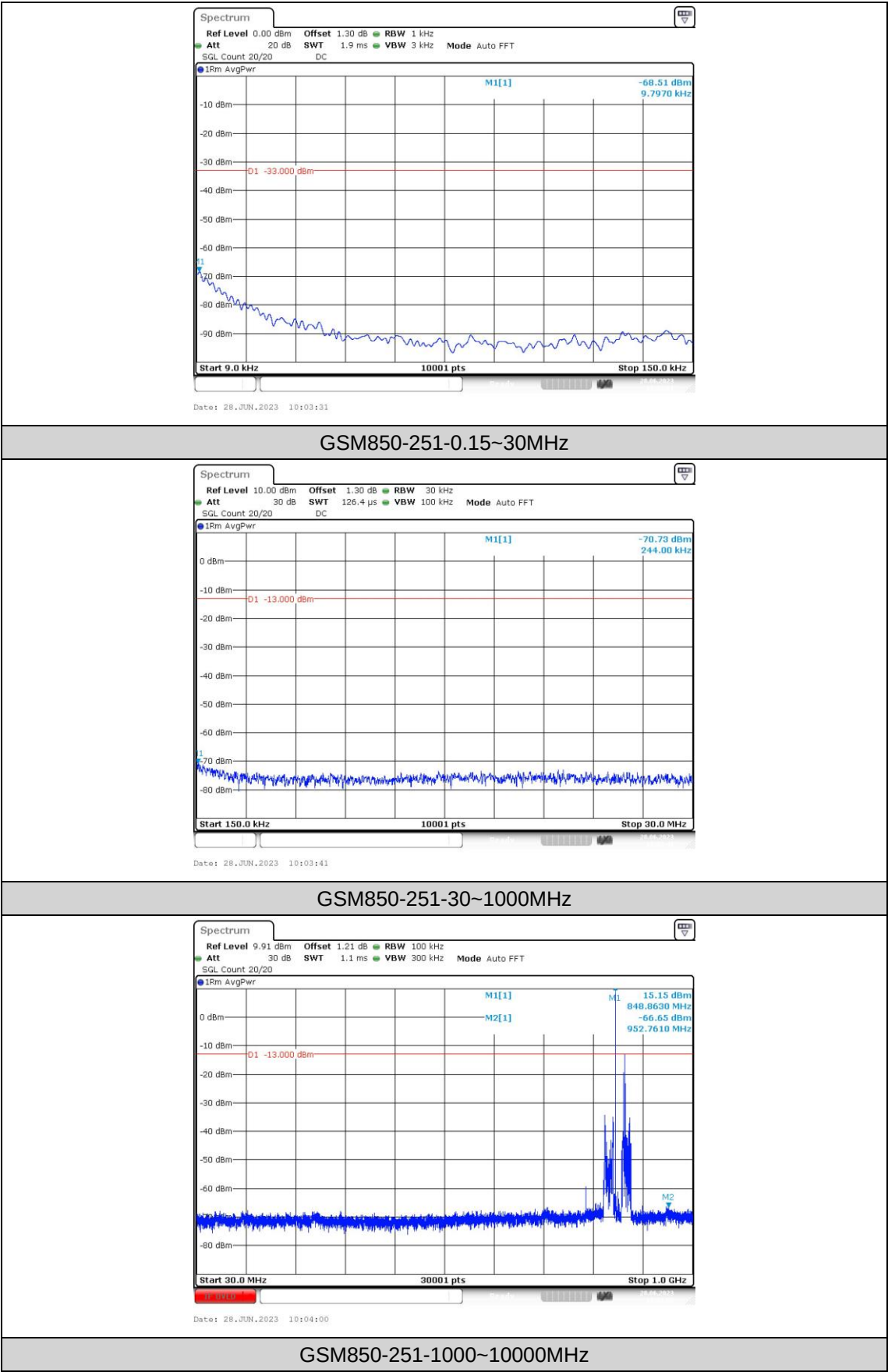
|          |     |               |         |        |     |      |
|----------|-----|---------------|---------|--------|-----|------|
| GSM1900  | 810 | 1000~18000MHz | 6667.8  | -49.52 | -13 | PASS |
| GPRS1900 | 512 | 0.009~0.15MHz | 0.01    | -56    | -43 | PASS |
| GPRS1900 | 512 | 0.15~30MHz    | 0.15    | -69.28 | -23 | PASS |
| GPRS1900 | 512 | 30~1000MHz    | 896.36  | -56.15 | -13 | PASS |
| GPRS1900 | 512 | 1000~18000MHz | 3700.17 | -44.68 | -13 | PASS |
| GPRS1900 | 661 | 0.009~0.15MHz | 0.01    | -59.85 | -43 | PASS |
| GPRS1900 | 661 | 0.15~30MHz    | 0.15    | -69.12 | -23 | PASS |
| GPRS1900 | 661 | 30~1000MHz    | 895.49  | -56.87 | -13 | PASS |
| GPRS1900 | 661 | 1000~18000MHz | 3759.67 | -43.09 | -13 | PASS |
| GPRS1900 | 810 | 0.009~0.15MHz | 0.01    | -57.58 | -43 | PASS |
| GPRS1900 | 810 | 0.15~30MHz    | 0.3     | -70.43 | -23 | PASS |
| GPRS1900 | 810 | 30~1000MHz    | 829.98  | -57.06 | -13 | PASS |
| GPRS1900 | 810 | 1000~18000MHz | 3819.73 | -40.58 | -13 | PASS |

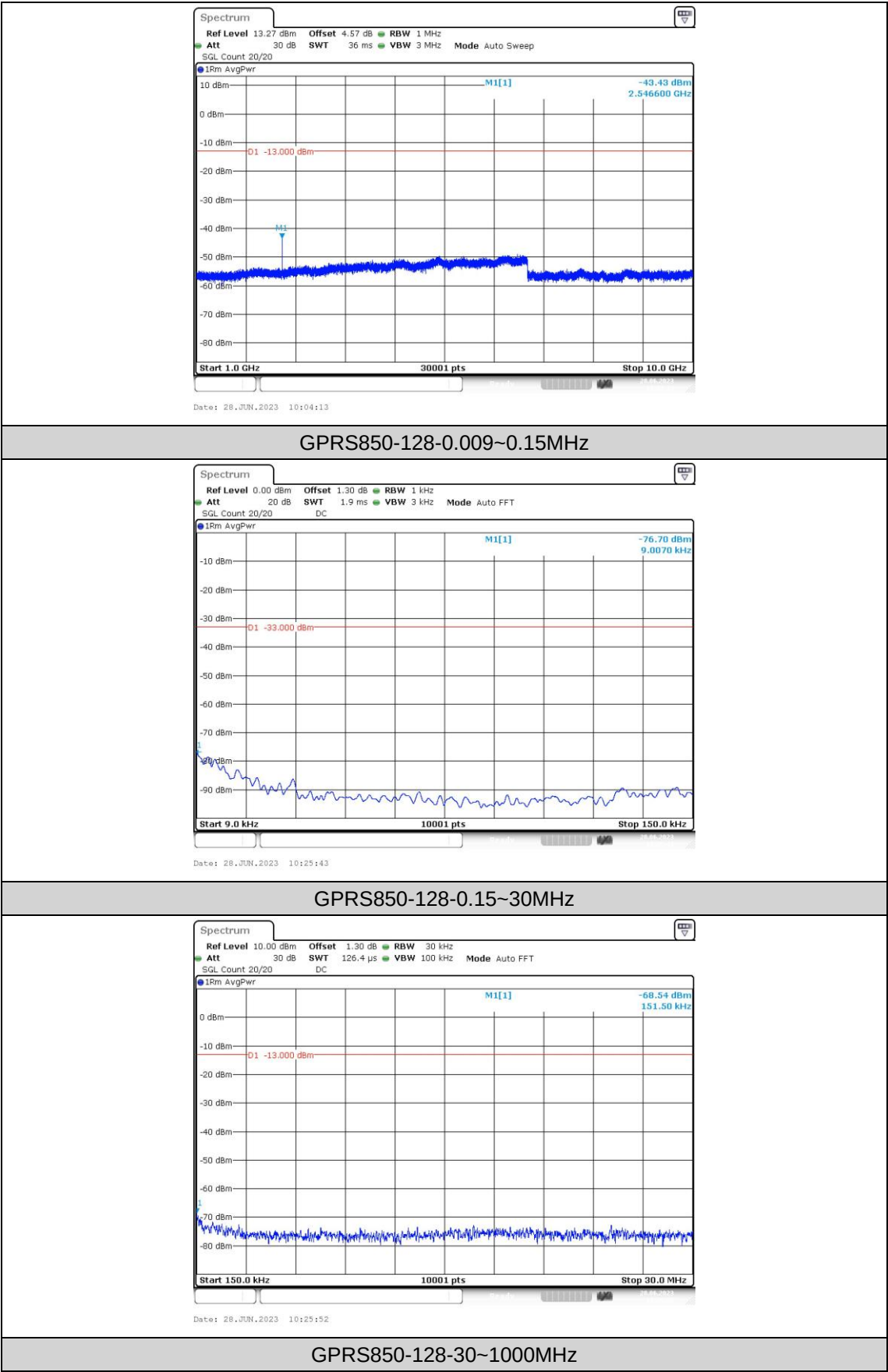
Test Graphs

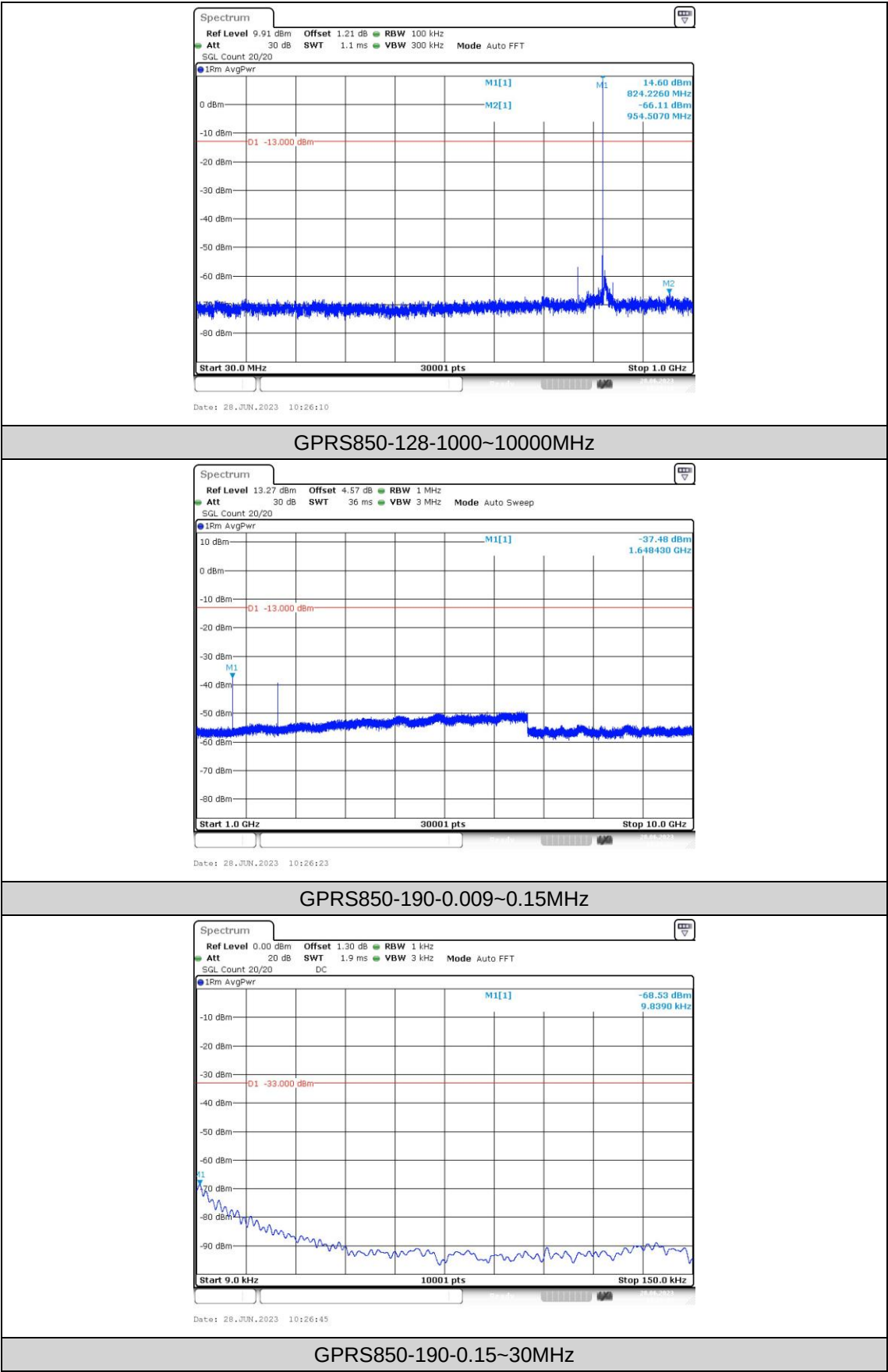


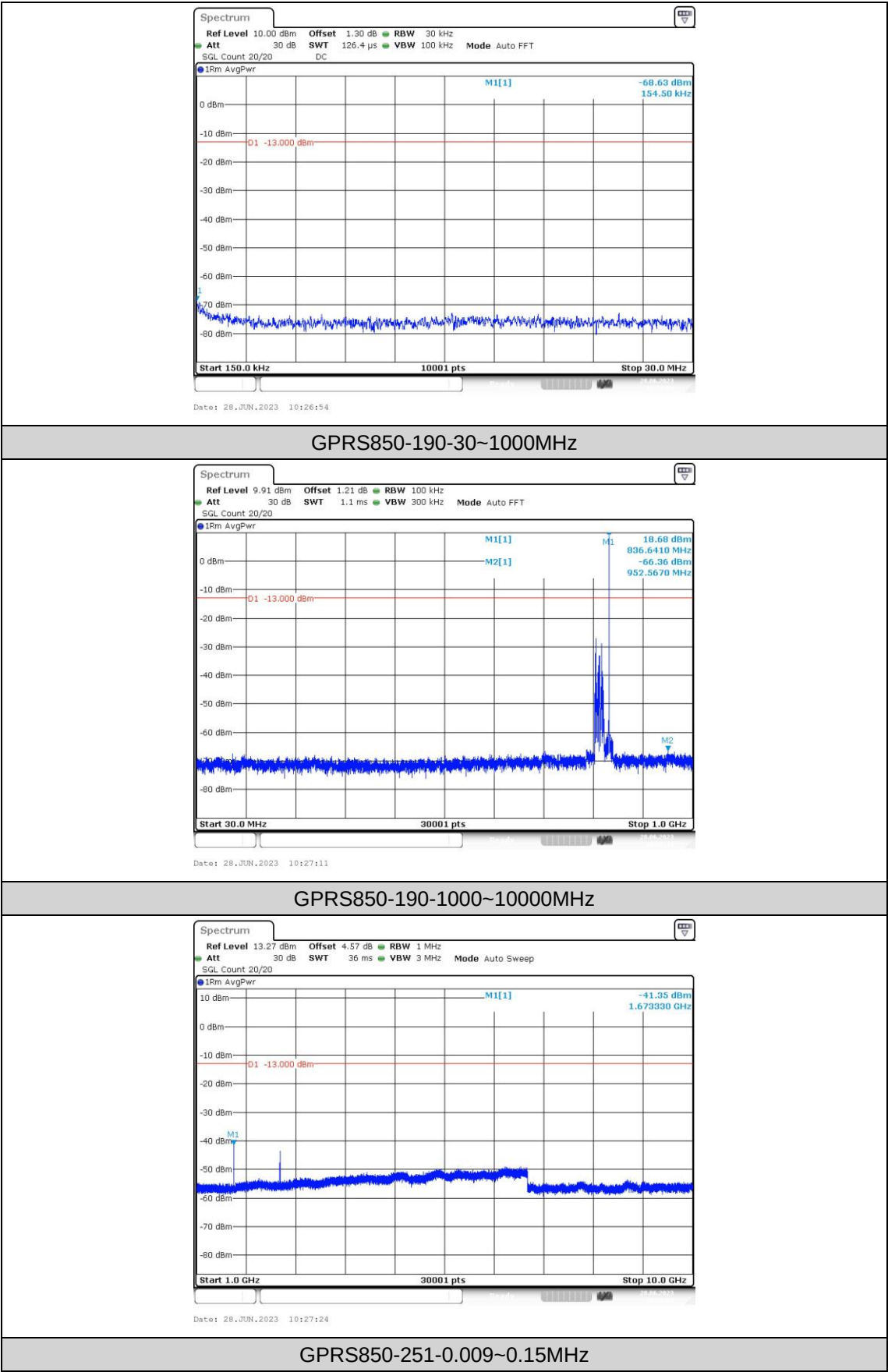


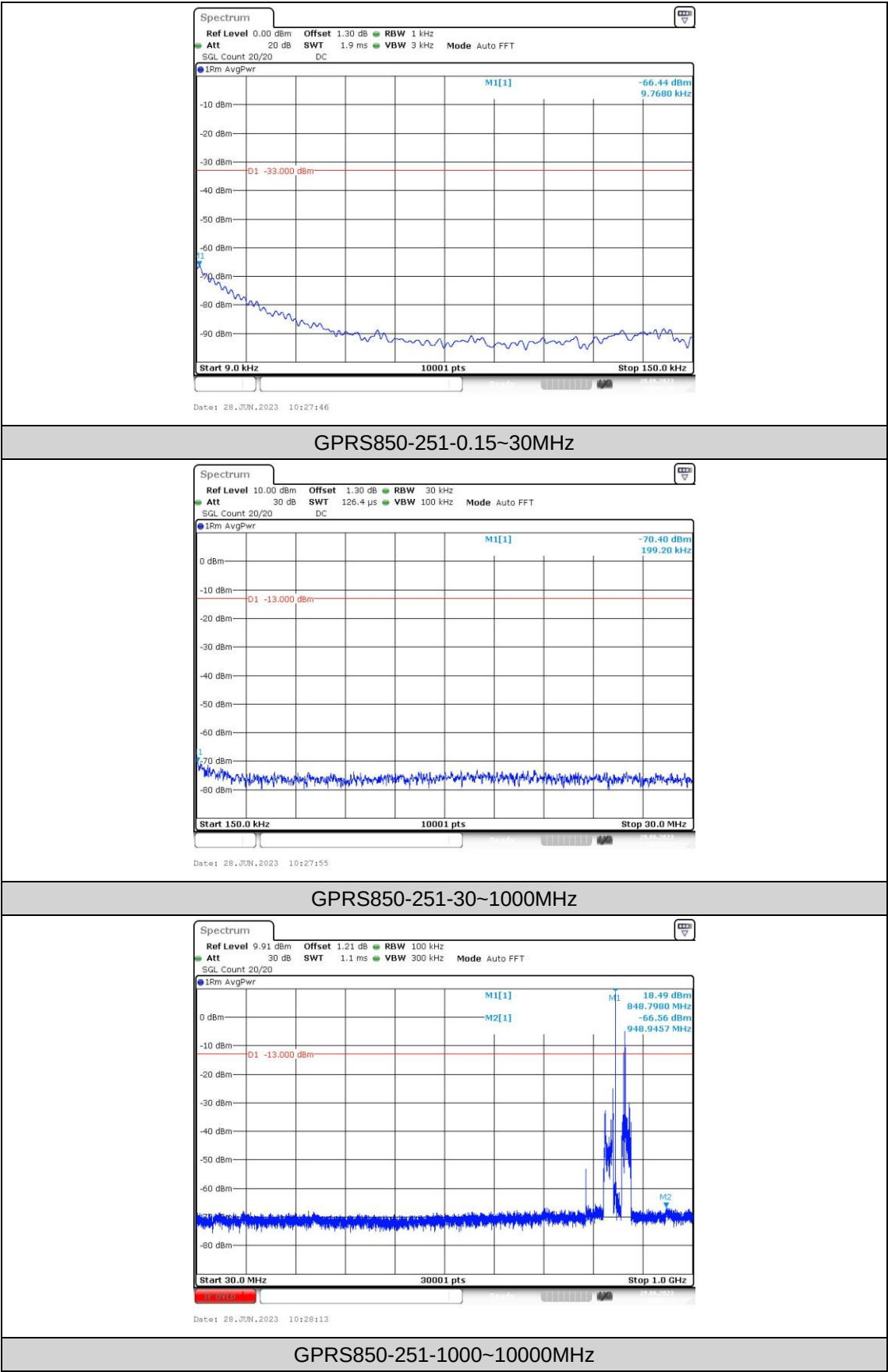


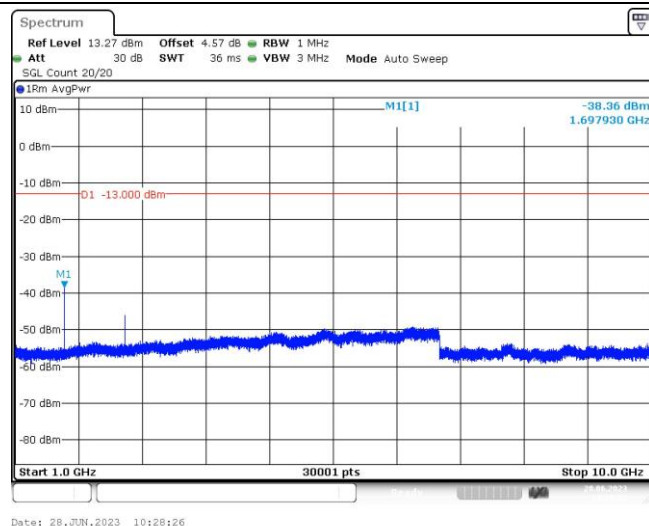




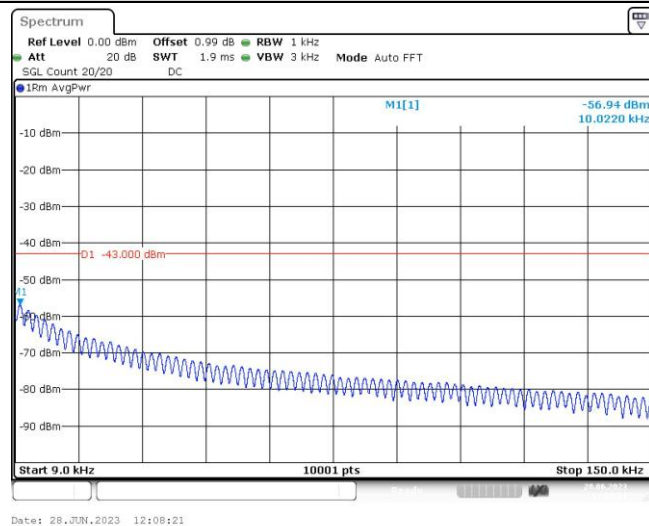




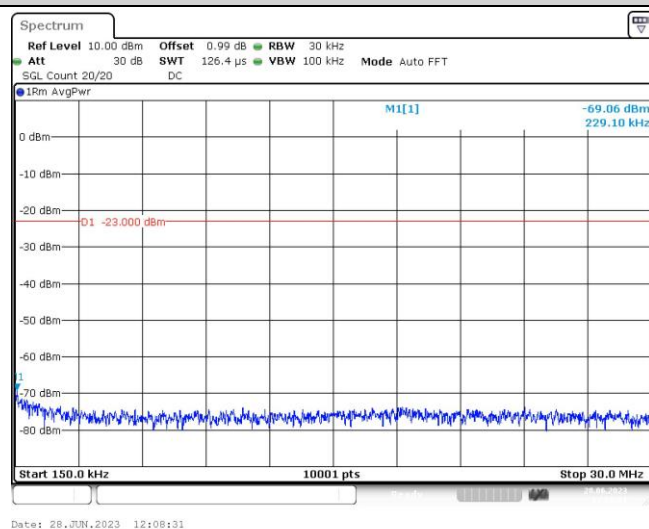




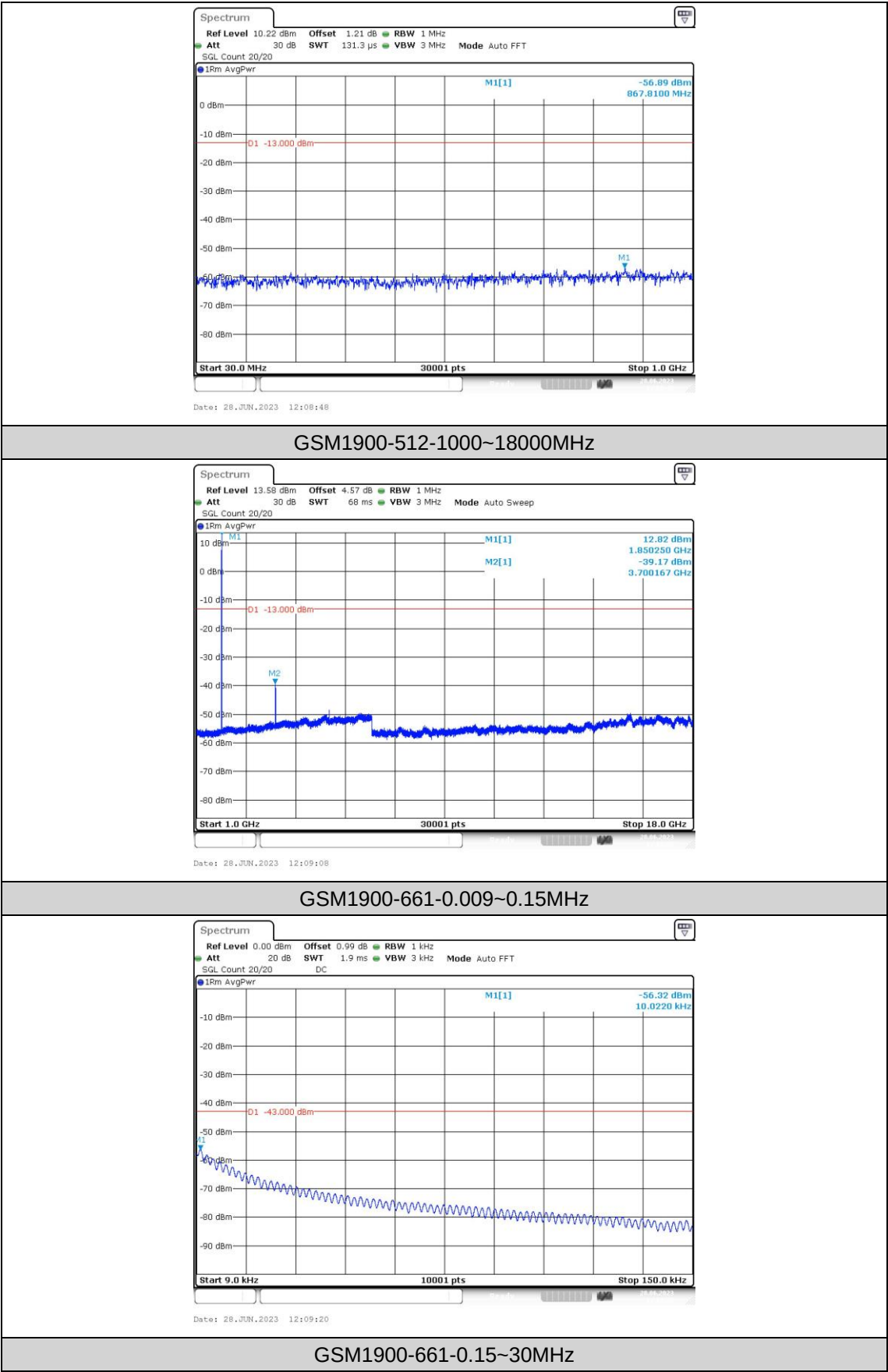
## GSM1900-512-0.009~0.15MHz

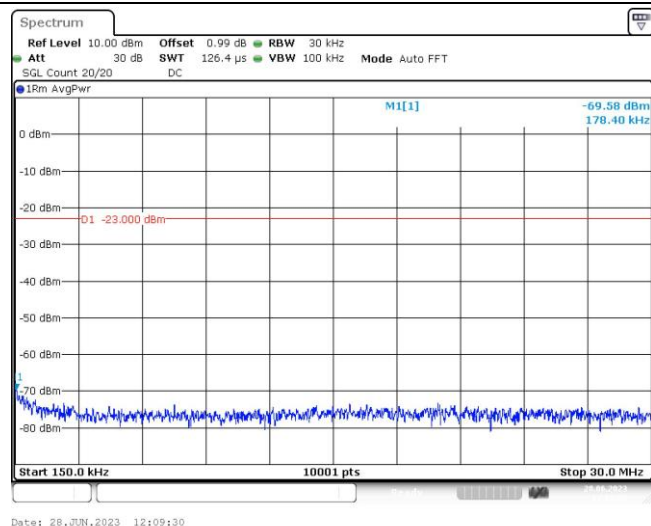


## GSM1900-512-0.15~30MHz

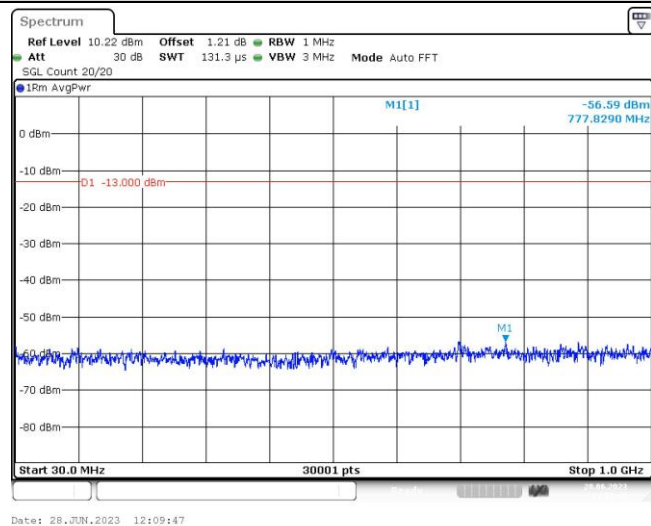


## GSM1900-512-30~1000MHz

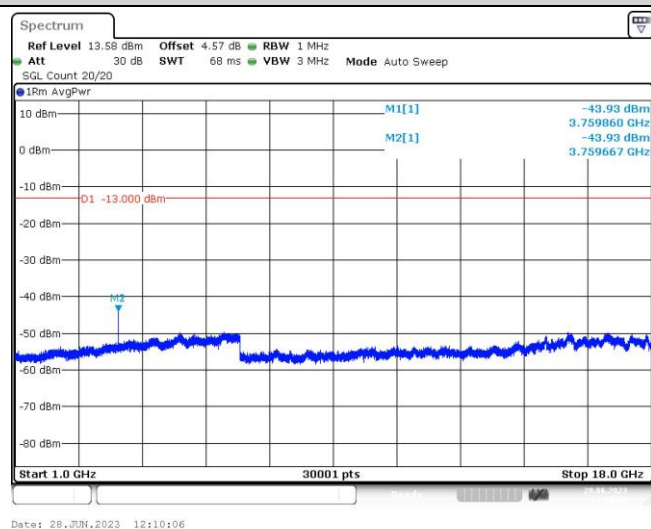




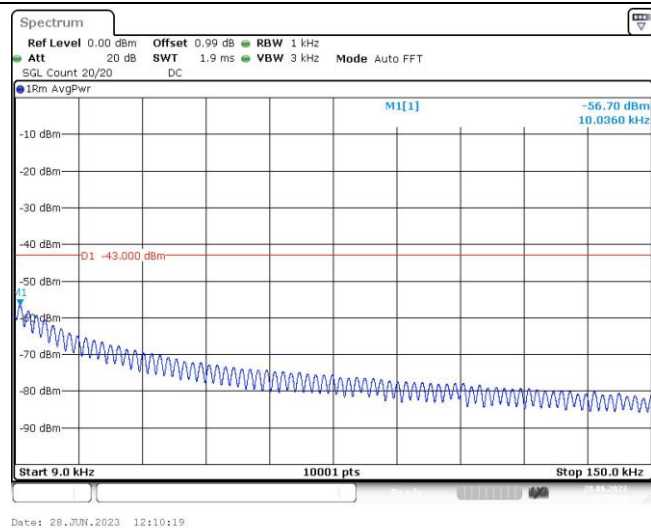
## GSM1900-661-30~1000MHz



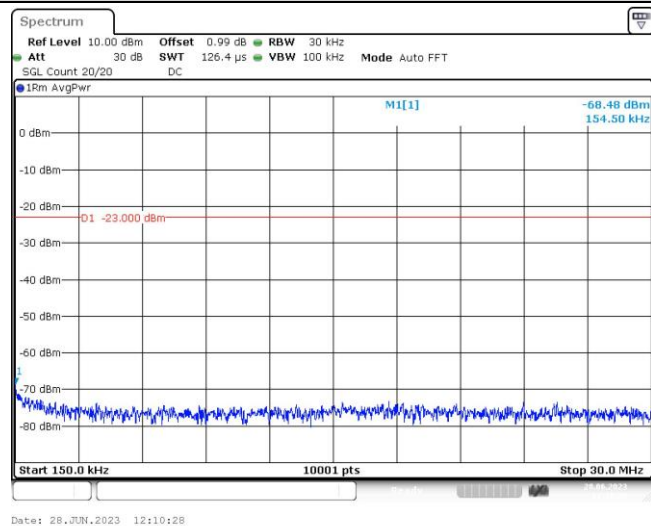
## GSM1900-661-1000~18000MHz



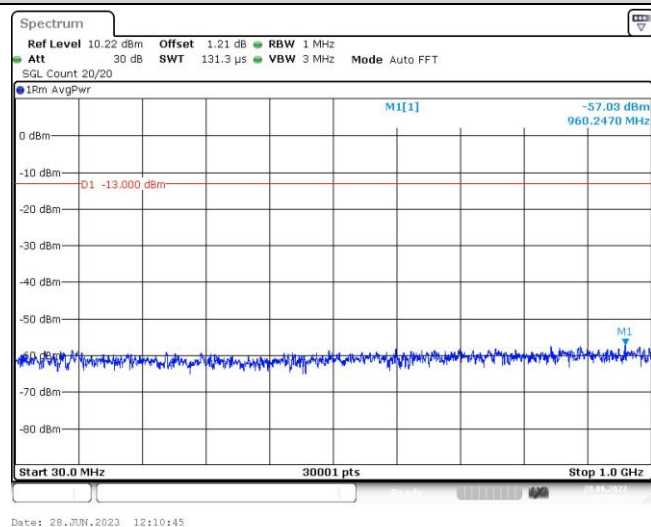
## GSM1900-810-0.009~0.15MHz



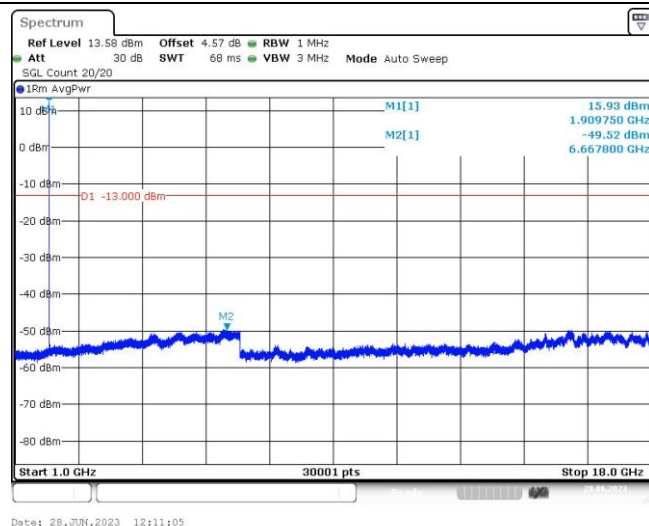
## GSM1900-810-0.15~30MHz



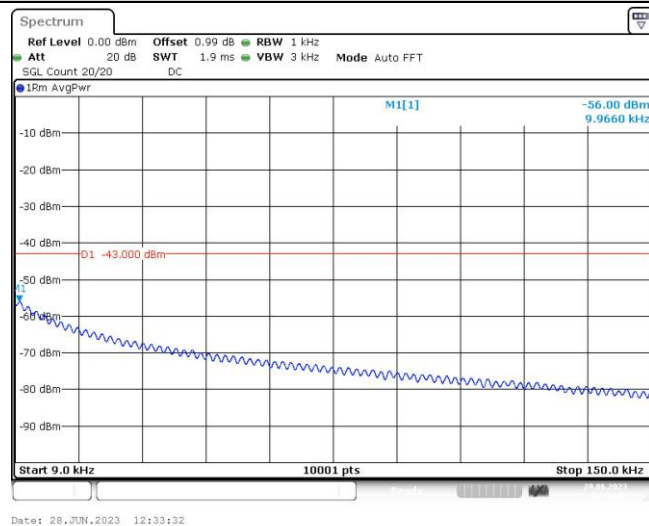
## GSM1900-810-30~1000MHz



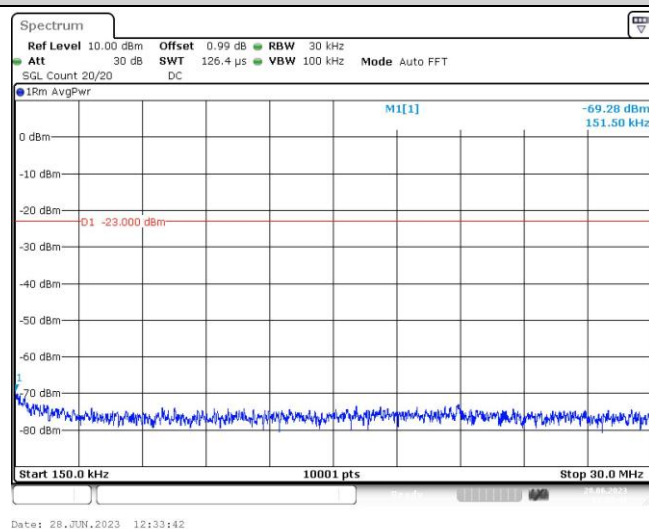
## GSM1900-810-1000~18000MHz



## GPRS1900-512-0.009~0.15MHz



## GPRS1900-512-0.15~30MHz



## GPRS1900-512-30~1000MHz

