

# APPENDIX REPORT

|                 |                 |                     |              |
|-----------------|-----------------|---------------------|--------------|
| Project No.     | SHT2207088501EW | Radio Specification | GSM          |
| Test sample No. | YPHT22070885003 | Model No.           | Smart K      |
| Start test date | 2022/7/28       | Finish date         | 2022/7/28    |
| Temperature     | 25.2℃           | Humidity            | 32%          |
| Test Engineer   | Tiancheng.Huang | Auditor             | Xiaodong Zhu |

| Appendix clause | Test item                              | Result |
|-----------------|----------------------------------------|--------|
| A               | Conducted Output Power                 | PASS   |
| B               | Peak-to-Average Ratio                  | PASS   |
| C               | 26 dB Bandwidth and Occupied Bandwidth | PASS   |
| D               | Band edge                              | PASS   |
| E               | Conducted Spurious Emission            | PASS   |
| F               | Frequency Stability                    | PASS   |
| G               | ERP and EIRP                           | PASS   |

## 8.1 Appendix A: Conducted Output Power

### Test Result

| Band    | Channel | PCL | Power(dBm) | Limit(dBm) | Verdict |
|---------|---------|-----|------------|------------|---------|
| GSM850  | 128     | 5   | 32.48      | 38.5       | PASS    |
| GSM850  | 190     | 5   | 32.47      | 38.5       | PASS    |
| GSM850  | 251     | 5   | 32.47      | 38.5       | PASS    |
| GSM1900 | 512     | 0   | 29.13      | 33         | PASS    |
| GSM1900 | 661     | 0   | 29.41      | 33         | PASS    |
| GSM1900 | 810     | 0   | 29.45      | 33         | PASS    |

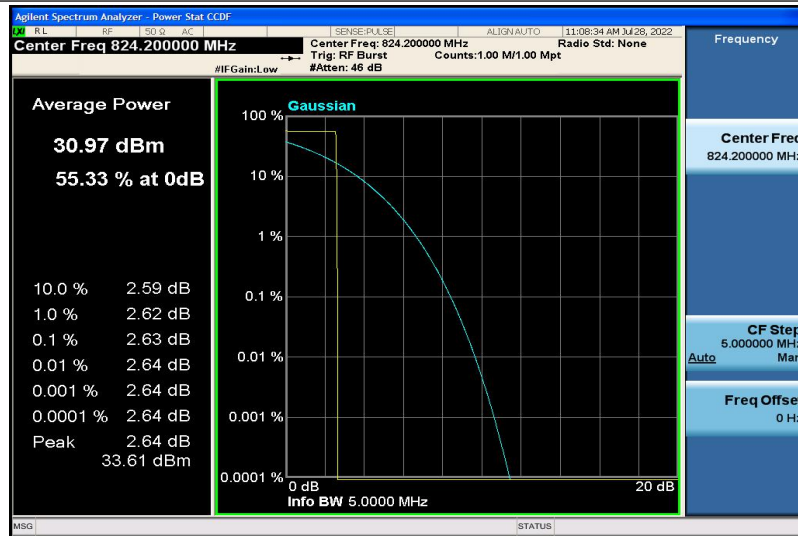
| Band     | Channel | PCL | Slot | Power(dBm) | Limit(dBm) | Verdict |
|----------|---------|-----|------|------------|------------|---------|
| GPRS850  | 128     | 5   | 1    | 32.50      | 38.5       | PASS    |
| GPRS850  | 128     | 5   | 2    | 32.01      | 38.5       | PASS    |
| GPRS850  | 128     | 5   | 3    | 30.43      | 38.5       | PASS    |
| GPRS850  | 128     | 5   | 4    | 29.16      | 38.5       | PASS    |
| GPRS850  | 190     | 5   | 1    | 32.33      | 38.5       | PASS    |
| GPRS850  | 190     | 5   | 2    | 31.98      | 38.5       | PASS    |
| GPRS850  | 190     | 5   | 3    | 30.47      | 38.5       | PASS    |
| GPRS850  | 190     | 5   | 4    | 29.14      | 38.5       | PASS    |
| GPRS850  | 251     | 5   | 1    | 32.03      | 38.5       | PASS    |
| GPRS850  | 251     | 5   | 2    | 31.66      | 38.5       | PASS    |
| GPRS850  | 251     | 5   | 3    | 29.98      | 38.5       | PASS    |
| GPRS850  | 251     | 5   | 4    | 28.78      | 38.5       | PASS    |
| GPRS1900 | 512     | 0   | 1    | 29.09      | 33         | PASS    |
| GPRS1900 | 512     | 0   | 2    | 28.26      | 33         | PASS    |
| GPRS1900 | 512     | 0   | 3    | 27.19      | 33         | PASS    |
| GPRS1900 | 512     | 0   | 4    | 24.80      | 33         | PASS    |
| GPRS1900 | 661     | 0   | 1    | 29.27      | 33         | PASS    |
| GPRS1900 | 661     | 0   | 2    | 28.68      | 33         | PASS    |
| GPRS1900 | 661     | 0   | 3    | 27.50      | 33         | PASS    |
| GPRS1900 | 661     | 0   | 4    | 25.27      | 33         | PASS    |
| GPRS1900 | 810     | 0   | 1    | 29.33      | 33         | PASS    |
| GPRS1900 | 810     | 0   | 2    | 28.83      | 33         | PASS    |
| GPRS1900 | 810     | 0   | 3    | 27.69      | 33         | PASS    |
| GPRS1900 | 810     | 0   | 4    | 25.51      | 33         | PASS    |

## 8.2 Appendix B: Peak-to-Average Ratio

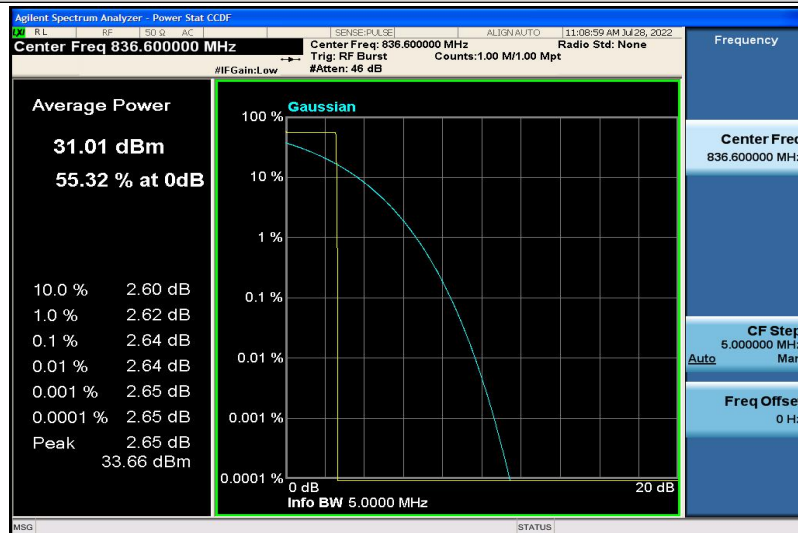
### Test Result

| Band     | Channel | Peak-to-Average Ratio(dB) | Limit(dBm) | Verdict |
|----------|---------|---------------------------|------------|---------|
| GSM850   | 128     | 2.63                      | 13         | PASS    |
| GSM850   | 190     | 2.64                      | 13         | PASS    |
| GSM850   | 251     | 2.63                      | 13         | PASS    |
| GPRS850  | 128     | 2.64                      | 13         | PASS    |
| GPRS850  | 190     | 2.64                      | 13         | PASS    |
| GPRS850  | 251     | 2.65                      | 13         | PASS    |
| GSM1900  | 512     | 2.67                      | 13         | PASS    |
| GSM1900  | 661     | 2.66                      | 13         | PASS    |
| GSM1900  | 810     | 2.66                      | 13         | PASS    |
| GPRS1900 | 512     | 2.67                      | 13         | PASS    |
| GPRS1900 | 661     | 2.67                      | 13         | PASS    |
| GPRS1900 | 810     | 2.66                      | 13         | PASS    |

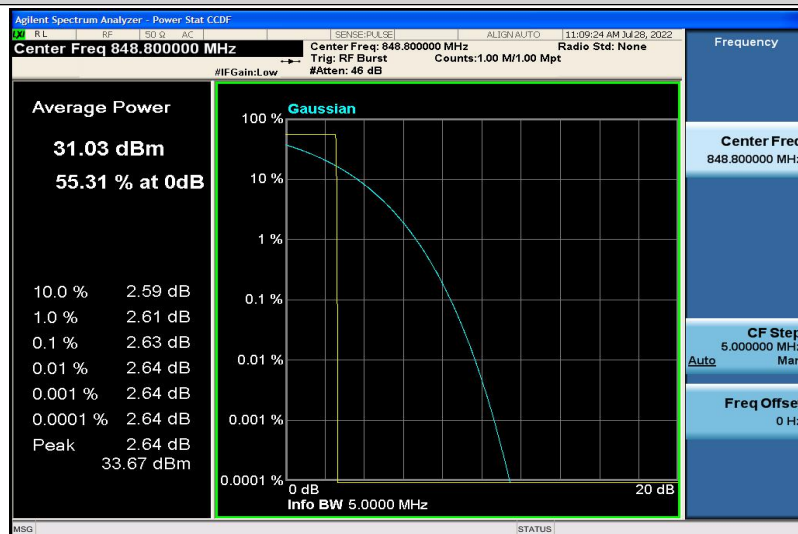
## Test Graphs



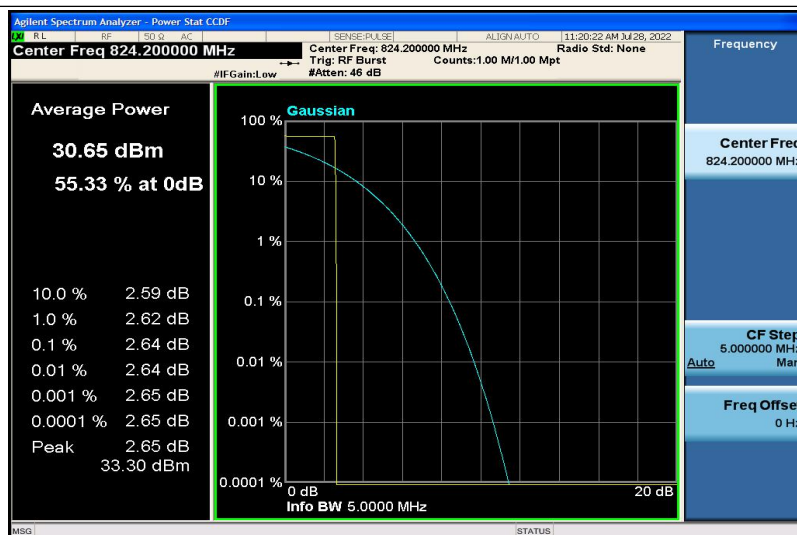
GSM850-128



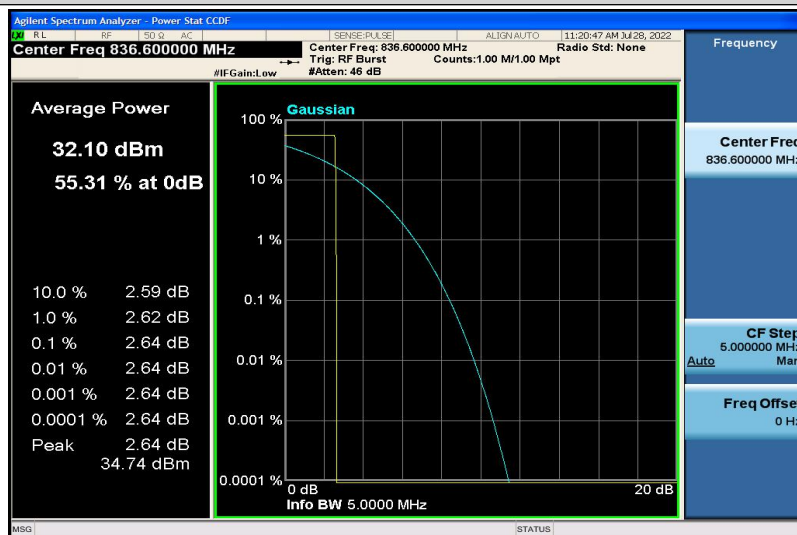
GSM850-190



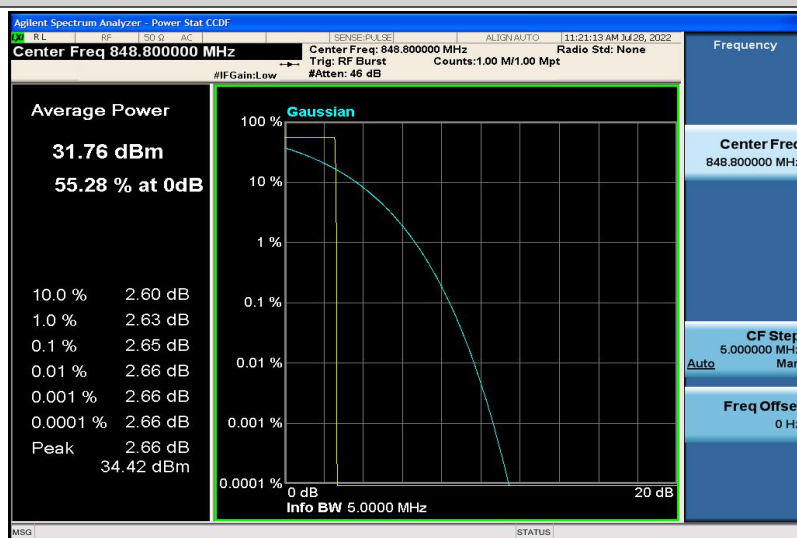
GSM850-251



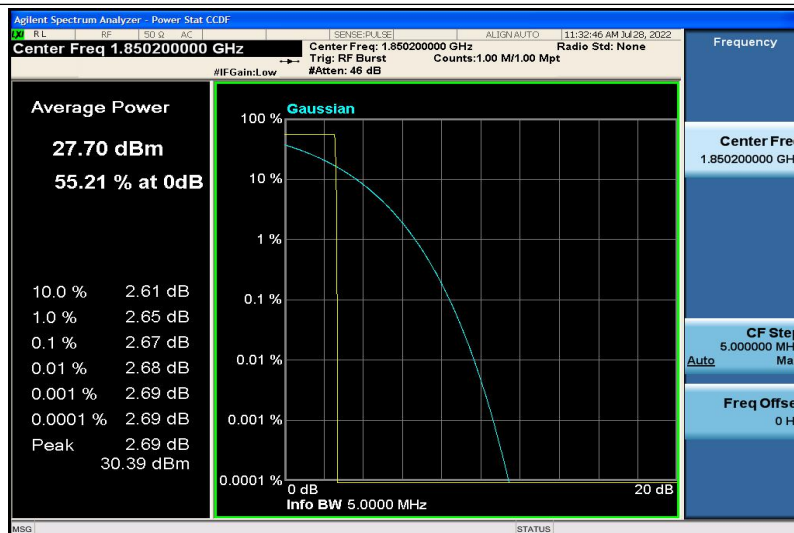
## GPRS850-128



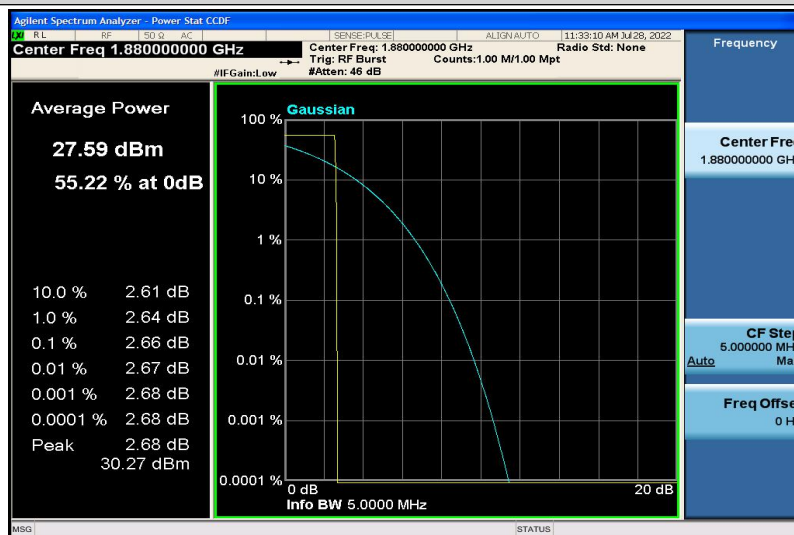
## GPRS850-190



## GPRS850-251



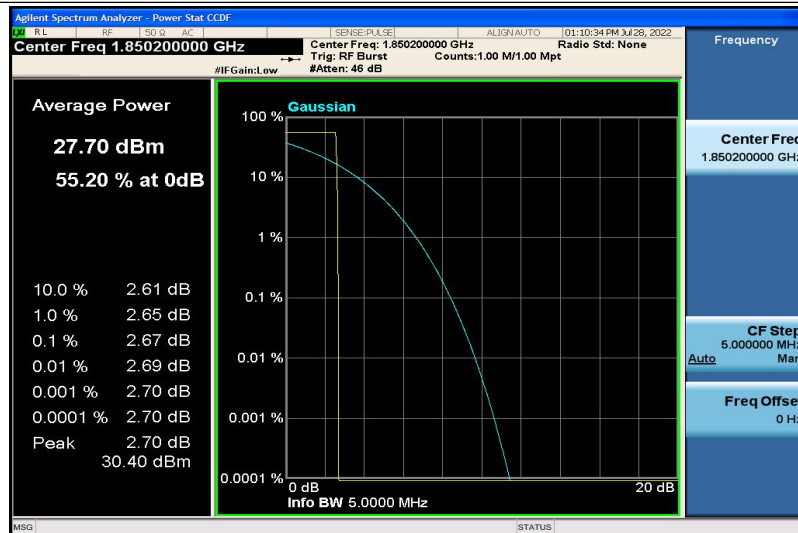
GSM1900-512



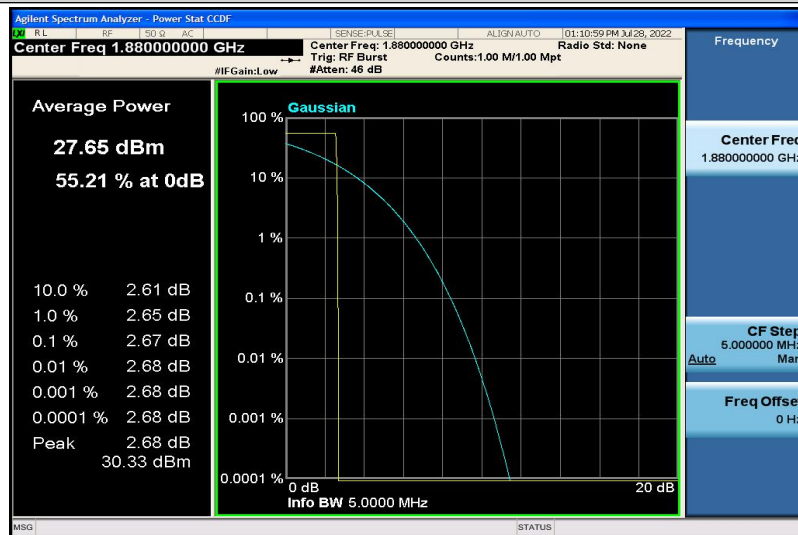
GSM1900-661



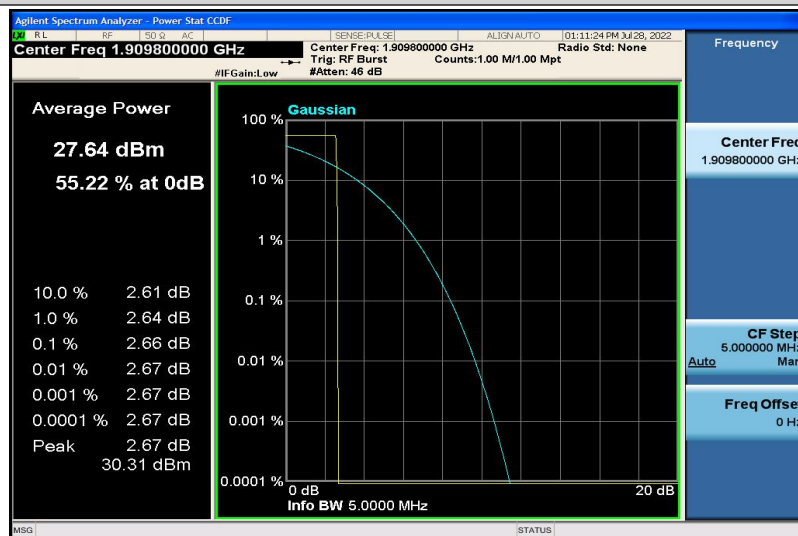
GSM1900-810



GPRS1900-512



GPRS1900-661



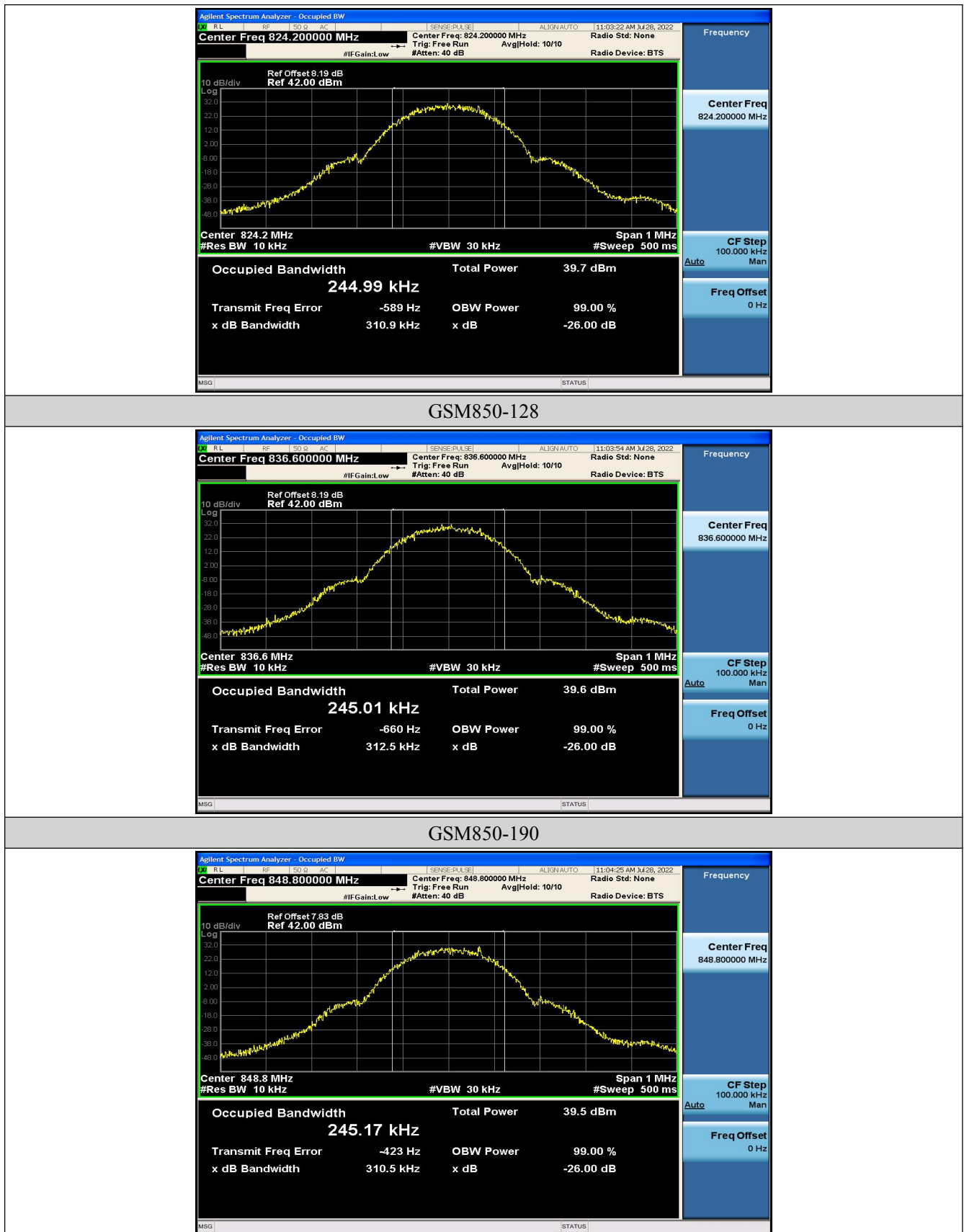
GPRS1900-810

### 8.3 Appendix C: 26dB Bandwidth and Occupied Bandwidth

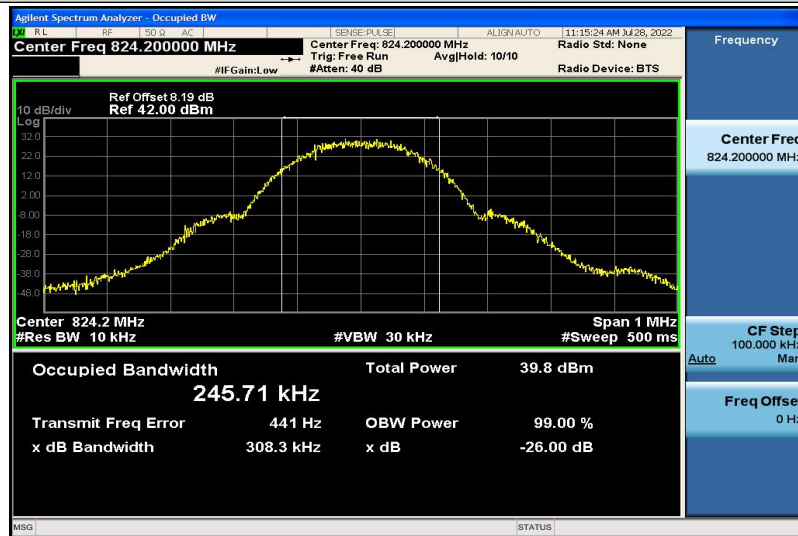
#### Test Result

| Band     | Channel | Occupied Bandwidth<br>(kHz) | 26dB Bandwidth<br>(kHz) | Limit(kHz) | Verdict |
|----------|---------|-----------------------------|-------------------------|------------|---------|
| GSM850   | 128     | 244.99                      | 310.9                   | ---        | PASS    |
| GSM850   | 190     | 245.01                      | 312.5                   | ---        | PASS    |
| GSM850   | 251     | 245.17                      | 310.5                   | ---        | PASS    |
| GPRS850  | 128     | 245.71                      | 308.3                   | ---        | PASS    |
| GPRS850  | 190     | 243.95                      | 313.8                   | ---        | PASS    |
| GPRS850  | 251     | 246.70                      | 319.5                   | ---        | PASS    |
| GSM1900  | 512     | 244.60                      | 318.3                   | ---        | PASS    |
| GSM1900  | 661     | 245.08                      | 313.1                   | ---        | PASS    |
| GSM1900  | 810     | 247.00                      | 312.7                   | ---        | PASS    |
| GPRS1900 | 512     | 245.22                      | 314.8                   | ---        | PASS    |
| GPRS1900 | 661     | 246.71                      | 317.9                   | ---        | PASS    |
| GPRS1900 | 810     | 243.74                      | 312.0                   | ---        | PASS    |

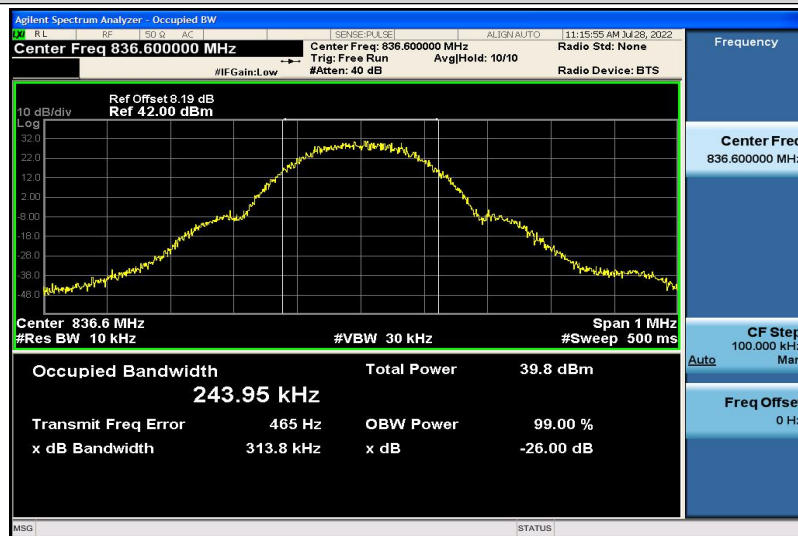
## Test Graphs



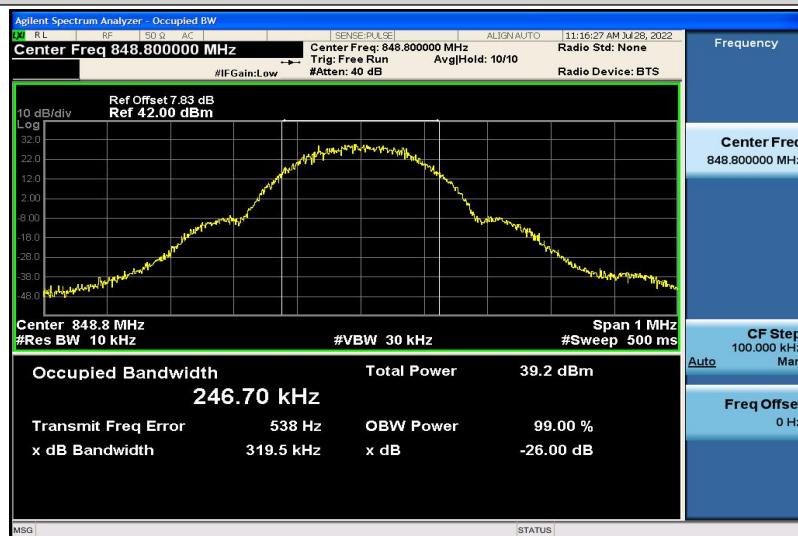
## GSM850-251



## GPRS850-128



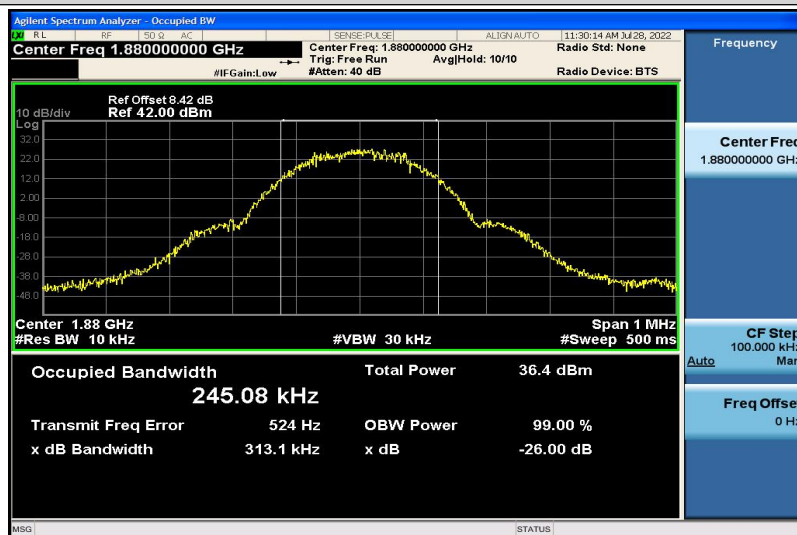
## GPRS850-190



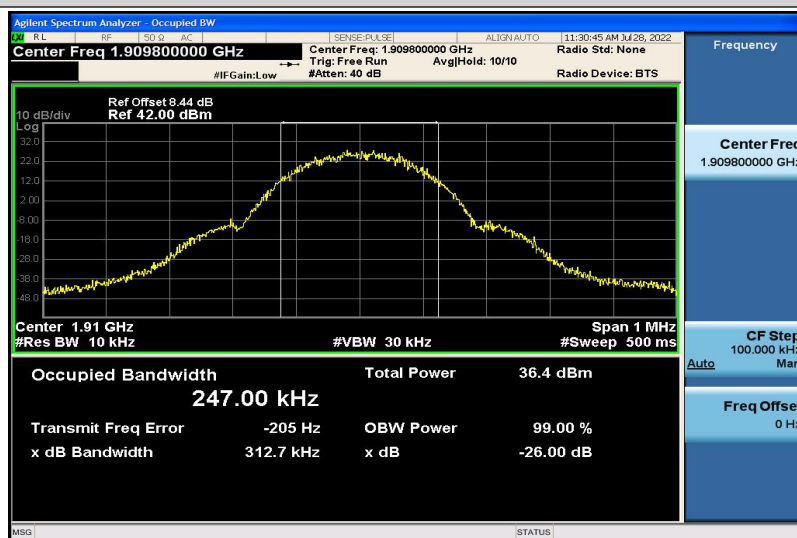
## GPRS850-251



## GSM1900-512



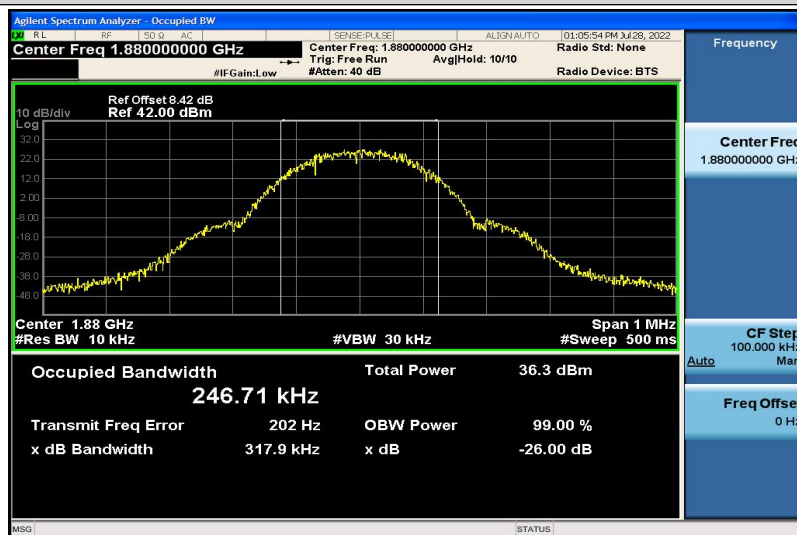
## GSM1900-661



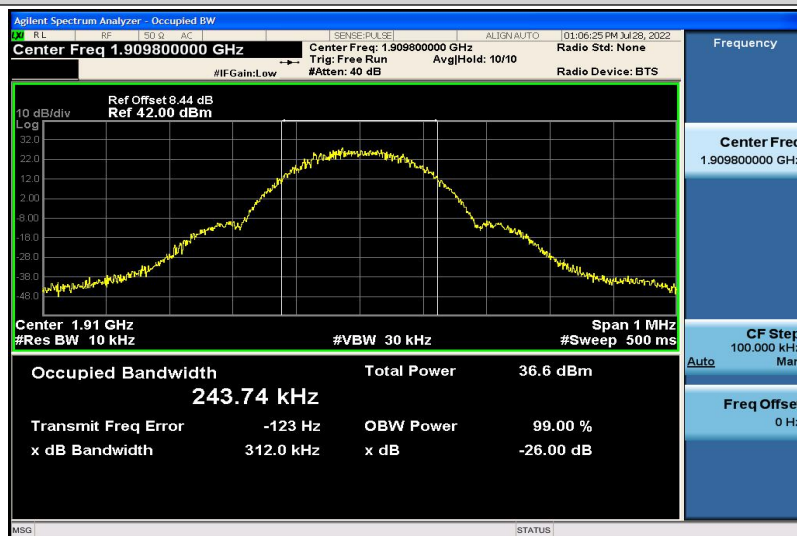
## GSM1900-810



## GPRS1900-512



## GPRS1900-661



## GPRS1900-810

## 8.4 Appendix D: Band Edge

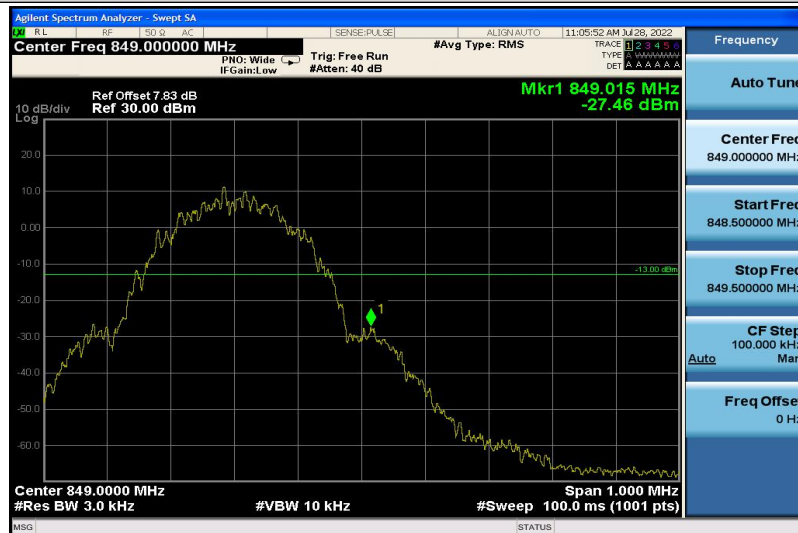
### Test Result

| Band     | Channel | Value(dBm) | Limit(dBm) | Verdict |
|----------|---------|------------|------------|---------|
| GSM850   | 128     | -27.68     | -13        | PASS    |
| GSM850   | 251     | -27.46     | -13        | PASS    |
| GPRS850  | 128     | -25.39     | -13        | PASS    |
| GPRS850  | 251     | -25.07     | -13        | PASS    |
| GSM1900  | 512     | -29.37     | -13        | PASS    |
| GSM1900  | 810     | -30.27     | -13        | PASS    |
| GPRS1900 | 512     | -29.93     | -13        | PASS    |
| GPRS1900 | 810     | -27.64     | -13        | PASS    |

## Test Graphs



GSM850-128



GSM850-251



GPRS850-128



GPRS850-251



GSM1900-512



GSM1900-810



GPRS1900-512



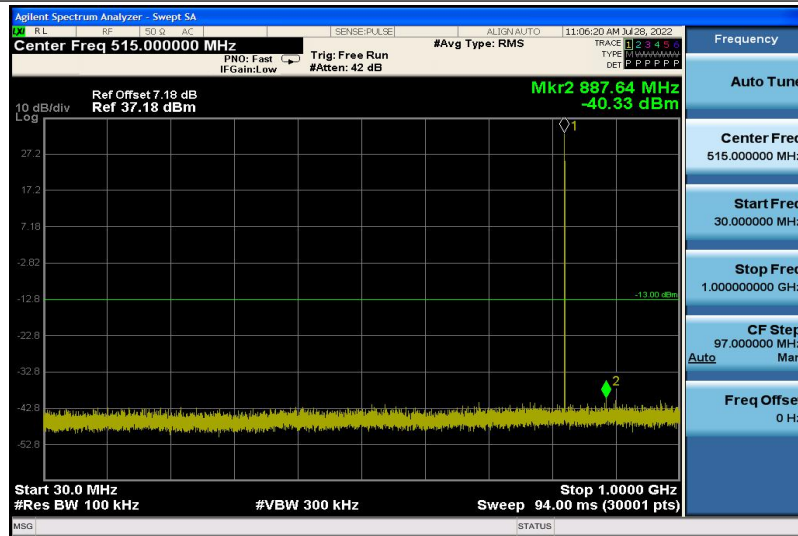
GPRS1900-810

## 8.5 Appendix E: Conducted Spurious Emission

### Test Result

| Band     | Channel | Frequency Range(Mhz) | Value(dBm) | Limit(dBm) | Verdict |
|----------|---------|----------------------|------------|------------|---------|
| GSM850   | 128     | 30~1000              | -40.33     | -13        | PASS    |
| GSM850   | 128     | 1000~10000           | -25.86     | -13        | PASS    |
| GSM850   | 190     | 30~1000              | -40.63     | -13        | PASS    |
| GSM850   | 190     | 1000~10000           | -25.88     | -13        | PASS    |
| GSM850   | 251     | 30~1000              | -40.85     | -13        | PASS    |
| GSM850   | 251     | 1000~10000           | -25.58     | -13        | PASS    |
| GPRS850  | 128     | 30~1000              | -40.79     | -13        | PASS    |
| GPRS850  | 128     | 1000~10000           | -25.90     | -13        | PASS    |
| GPRS850  | 190     | 30~1000              | -40.85     | -13        | PASS    |
| GPRS850  | 190     | 1000~10000           | -24.07     | -13        | PASS    |
| GPRS850  | 251     | 30~1000              | -40.90     | -13        | PASS    |
| GPRS850  | 251     | 1000~10000           | -26.01     | -13        | PASS    |
| GSM1900  | 512     | 30~1000              | -40.68     | -13        | PASS    |
| GSM1900  | 512     | 1000~20000           | -20.63     | -13        | PASS    |
| GSM1900  | 661     | 30~1000              | -40.80     | -13        | PASS    |
| GSM1900  | 661     | 1000~20000           | -19.75     | -13        | PASS    |
| GSM1900  | 810     | 30~1000              | -40.45     | -13        | PASS    |
| GSM1900  | 810     | 1000~20000           | -20.14     | -13        | PASS    |
| GPRS1900 | 512     | 30~1000              | -40.56     | -13        | PASS    |
| GPRS1900 | 512     | 1000~20000           | -19.88     | -13        | PASS    |
| GPRS1900 | 661     | 30~1000              | -40.57     | -13        | PASS    |
| GPRS1900 | 661     | 1000~20000           | -19.66     | -13        | PASS    |
| GPRS1900 | 810     | 30~1000              | -40.77     | -13        | PASS    |
| GPRS1900 | 810     | 1000~20000           | -20.33     | -13        | PASS    |

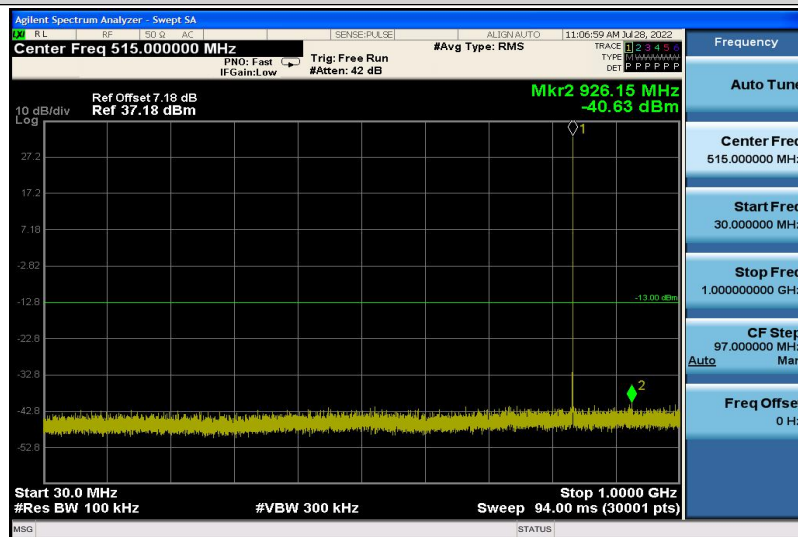
## Test Graphs



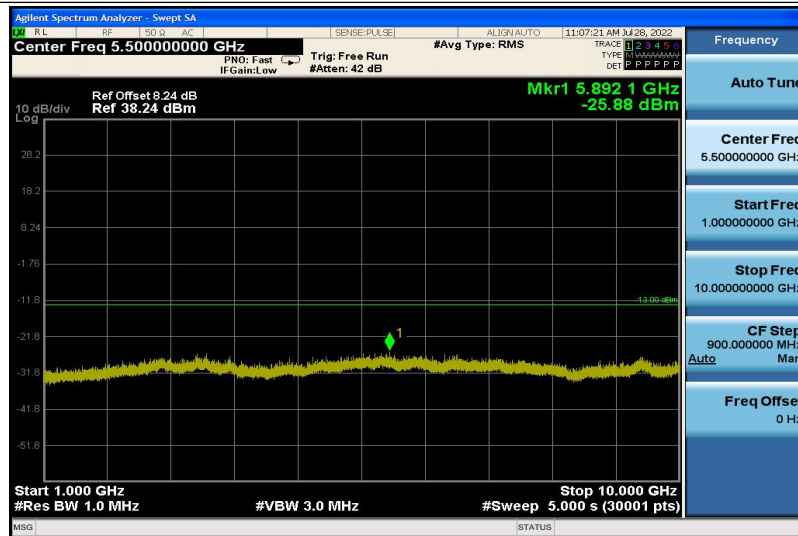
GSM850-128-30~1000



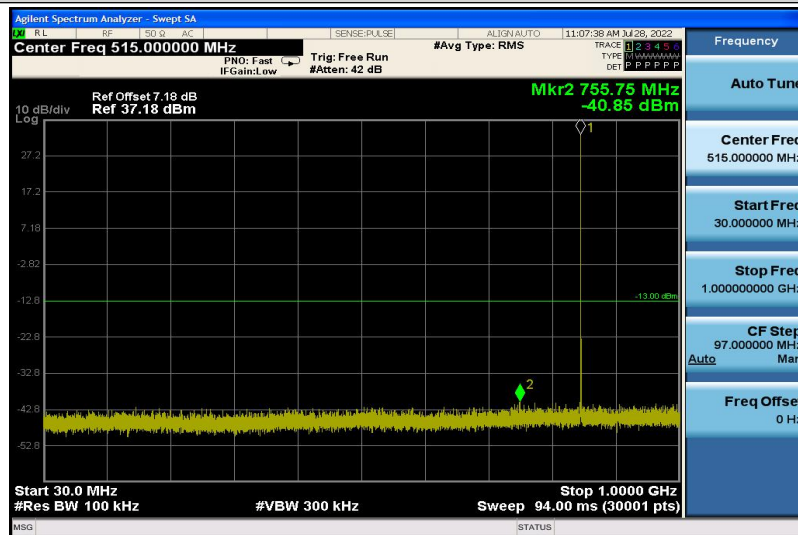
GSM850-128-1000~10000



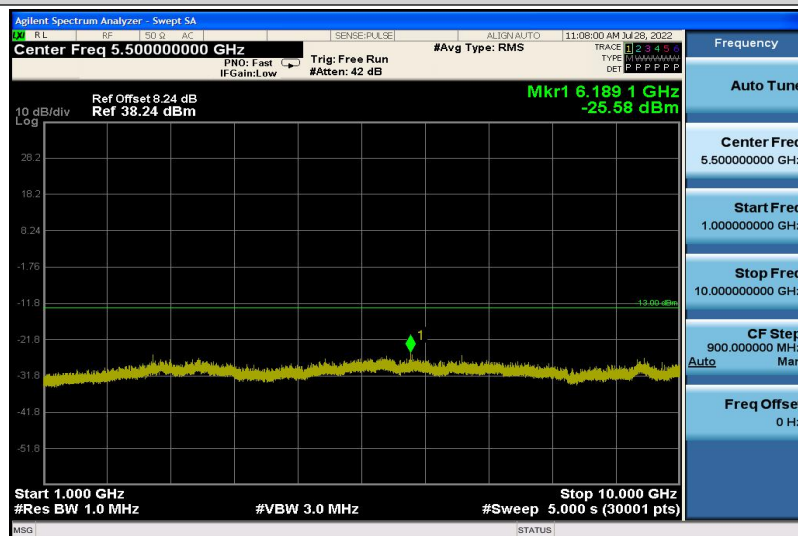
GSM850-190-30~1000



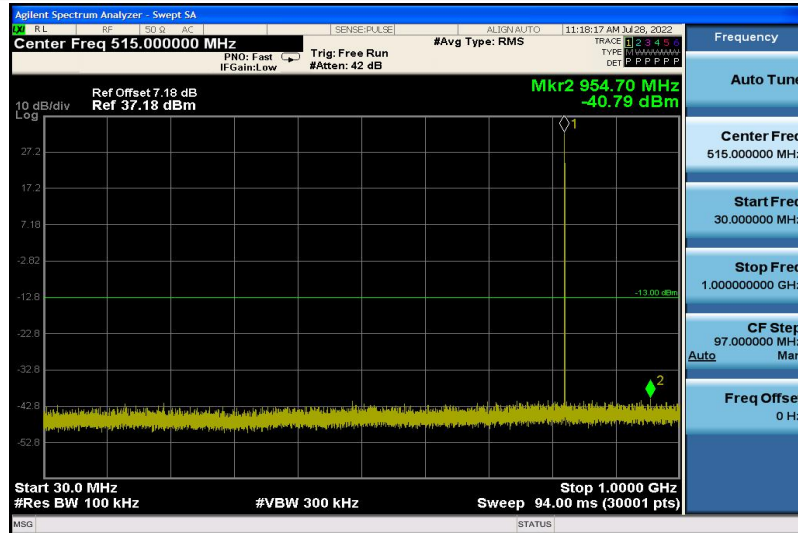
GSM850-190-1000~10000



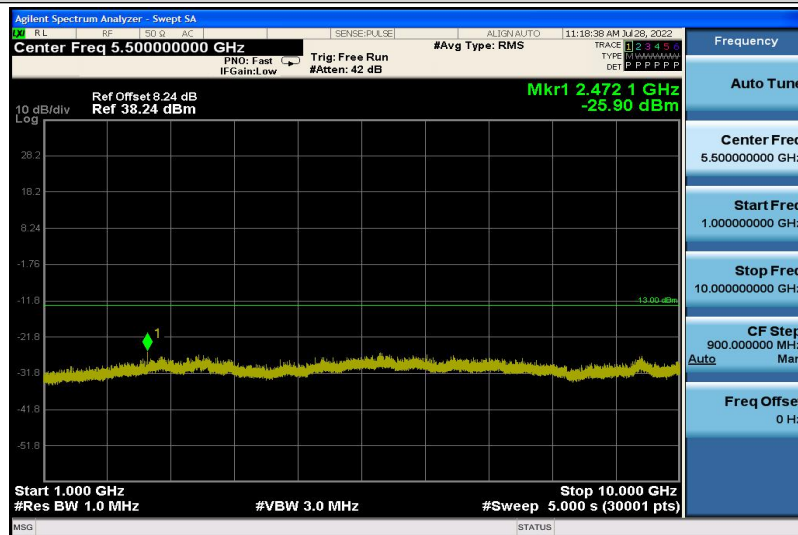
GSM850-251-30~1000



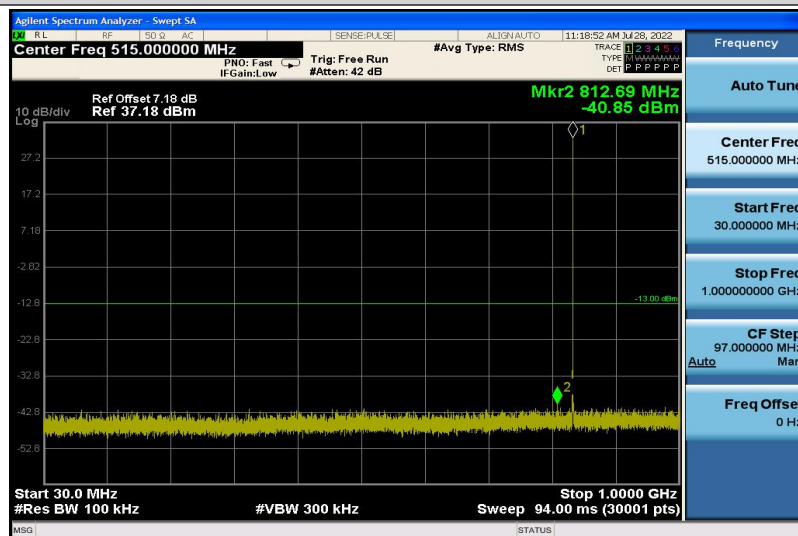
GSM850-251-1000~10000



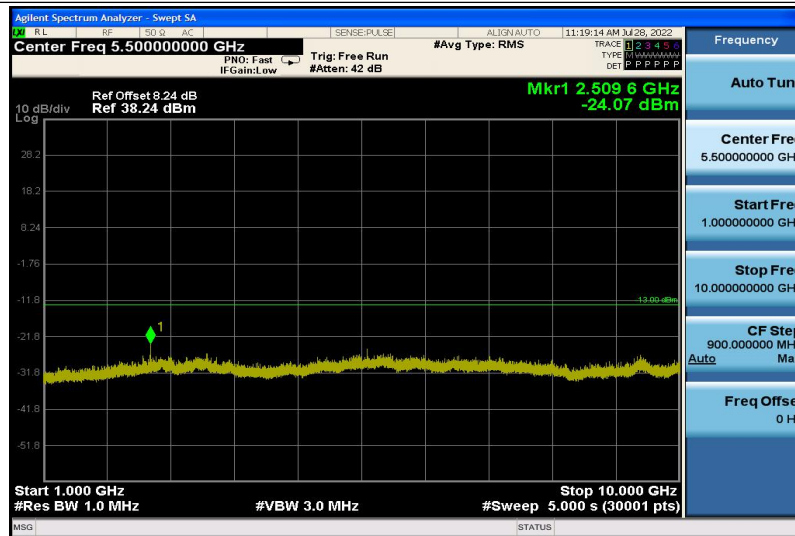
GPRS850-128-30~1000



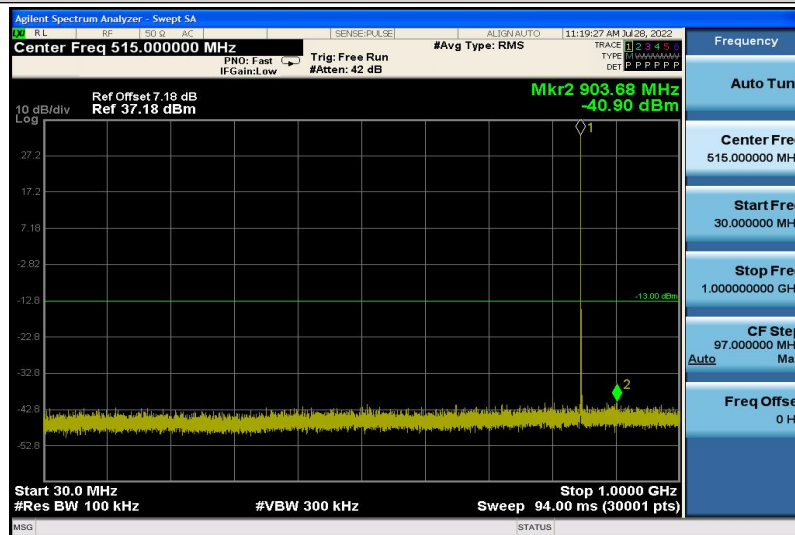
GPRS850-128-1000~10000



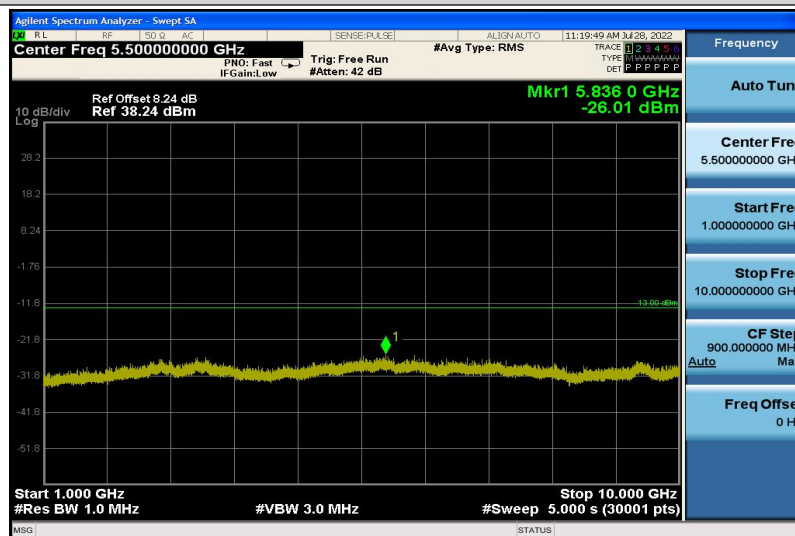
GPRS850-190-30~1000



## GPRS850-190-1000~10000



## GPRS850-251-30~1000



## GPRS850-251-1000~10000