

## Appendix A: Effective (Isotropic) Radiated Power Output Data

### Test Result

| Band         | Channel | Up Slot Num | Power(dBm) | Limit(dBm) | Verdict |
|--------------|---------|-------------|------------|------------|---------|
| GPRS850      | 128     | 1           | 33.18      | 38.45      | PASS    |
| GPRS850      | 190     | 1           | 33.06      | 38.45      | PASS    |
| GPRS850      | 251     | 1           | 33.16      | 38.45      | PASS    |
| GPRS850      | 128     | 2           | 32.38      | 38.45      | PASS    |
| GPRS850      | 190     | 2           | 32.24      | 38.45      | PASS    |
| GPRS850      | 251     | 2           | 32.33      | 38.45      | PASS    |
| GPRS850      | 128     | 3           | 30.62      | 38.45      | PASS    |
| GPRS850      | 190     | 3           | 30.45      | 38.45      | PASS    |
| GPRS850      | 251     | 3           | 30.56      | 38.45      | PASS    |
| GPRS850      | 128     | 4           | 29.48      | 38.45      | PASS    |
| GPRS850      | 190     | 4           | 29.32      | 38.45      | PASS    |
| GPRS850      | 251     | 4           | 29.41      | 38.45      | PASS    |
| GPRS190<br>0 | 512     | 1           | 32.06      | 33         | PASS    |
| GPRS190<br>0 | 661     | 1           | 32.20      | 33         | PASS    |
| GPRS190<br>0 | 810     | 1           | 32.12      | 33         | PASS    |
| GPRS190<br>0 | 512     | 2           | 31.31      | 33         | PASS    |
| GPRS190<br>0 | 661     | 2           | 31.45      | 33         | PASS    |
| GPRS190<br>0 | 810     | 2           | 31.40      | 33         | PASS    |
| GPRS190<br>0 | 512     | 3           | 29.55      | 33         | PASS    |
| GPRS190<br>0 | 661     | 3           | 29.70      | 33         | PASS    |
| GPRS190<br>0 | 810     | 3           | 29.65      | 33         | PASS    |
| GPRS190<br>0 | 512     | 4           | 28.46      | 33         | PASS    |
| GPRS190<br>0 | 661     | 4           | 28.60      | 33         | PASS    |
| GPRS190<br>0 | 810     | 4           | 28.58      | 33         | PASS    |

| Band | Channel | Up Slot Num | Power(dBm) | Limit(dBm) | Verdict |
|------|---------|-------------|------------|------------|---------|
|------|---------|-------------|------------|------------|---------|

|               |     |   |       |       |      |
|---------------|-----|---|-------|-------|------|
| EGPRS8<br>50  | 128 | 1 | 28.84 | 38.45 | PASS |
| EGPRS8<br>50  | 190 | 1 | 28.30 | 38.45 | PASS |
| EGPRS8<br>50  | 251 | 1 | 27.94 | 38.45 | PASS |
| EGPRS8<br>50  | 128 | 2 | 27.75 | 38.45 | PASS |
| EGPRS8<br>50  | 190 | 2 | 27.31 | 38.45 | PASS |
| EGPRS8<br>50  | 251 | 2 | 26.95 | 38.45 | PASS |
| EGPRS8<br>50  | 128 | 3 | 25.65 | 38.45 | PASS |
| EGPRS8<br>50  | 190 | 3 | 25.26 | 38.45 | PASS |
| EGPRS8<br>50  | 251 | 3 | 24.94 | 38.45 | PASS |
| EGPRS8<br>50  | 128 | 4 | 24.56 | 38.45 | PASS |
| EGPRS8<br>50  | 190 | 4 | 24.16 | 38.45 | PASS |
| EGPRS8<br>50  | 251 | 4 | 23.78 | 38.45 | PASS |
| EGPRS1<br>900 | 512 | 1 | 28.35 | 33    | PASS |
| EGPRS1<br>900 | 661 | 1 | 28.17 | 33    | PASS |
| EGPRS1<br>900 | 810 | 1 | 28.72 | 33    | PASS |
| EGPRS1<br>900 | 512 | 2 | 27.42 | 33    | PASS |
| EGPRS1<br>900 | 661 | 2 | 27.32 | 33    | PASS |
| EGPRS1<br>900 | 810 | 2 | 27.82 | 33    | PASS |
| EGPRS1<br>900 | 512 | 3 | 25.71 | 33    | PASS |
| EGPRS1<br>900 | 661 | 3 | 25.71 | 33    | PASS |
| EGPRS1<br>900 | 810 | 3 | 26.09 | 33    | PASS |
| EGPRS1<br>900 | 512 | 4 | 24.83 | 33    | PASS |

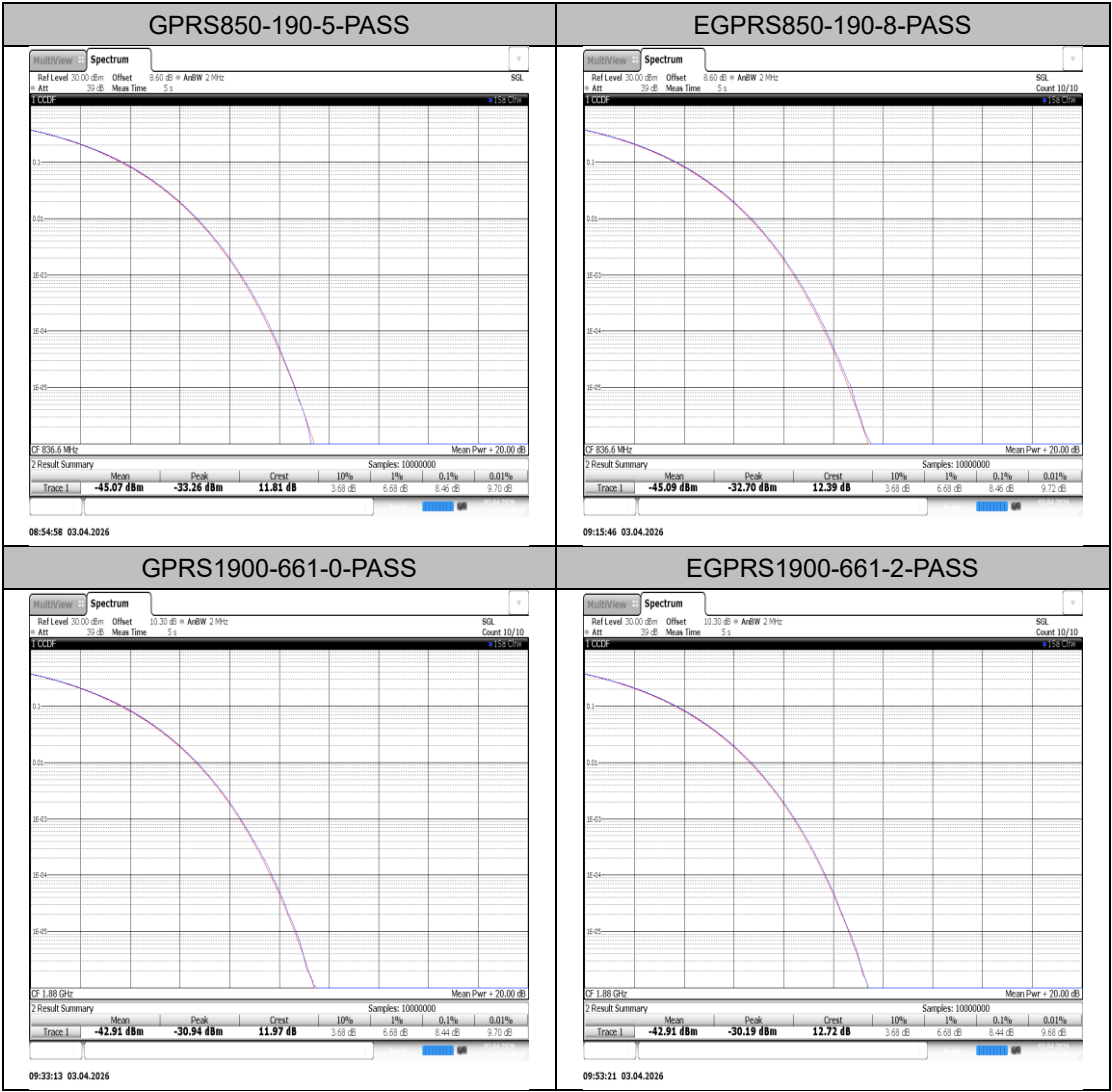
|               |     |   |       |    |      |
|---------------|-----|---|-------|----|------|
| EGPRS1<br>900 | 661 | 4 | 24.71 | 33 | PASS |
| EGPRS1<br>900 | 810 | 4 | 25.21 | 33 | PASS |

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

### Test Result

| Band      | Channel | Result(dB) | Limit(dB) | Verdict |
|-----------|---------|------------|-----------|---------|
| GPRS850   | 190     | 8.46       | 13        | PASS    |
| EGPRS850  | 190     | 8.46       | 13        | PASS    |
| GPRS1900  | 661     | 8.44       | 13        | PASS    |
| EGPRS1900 | 661     | 8.44       | 13        | PASS    |

Test Graphs

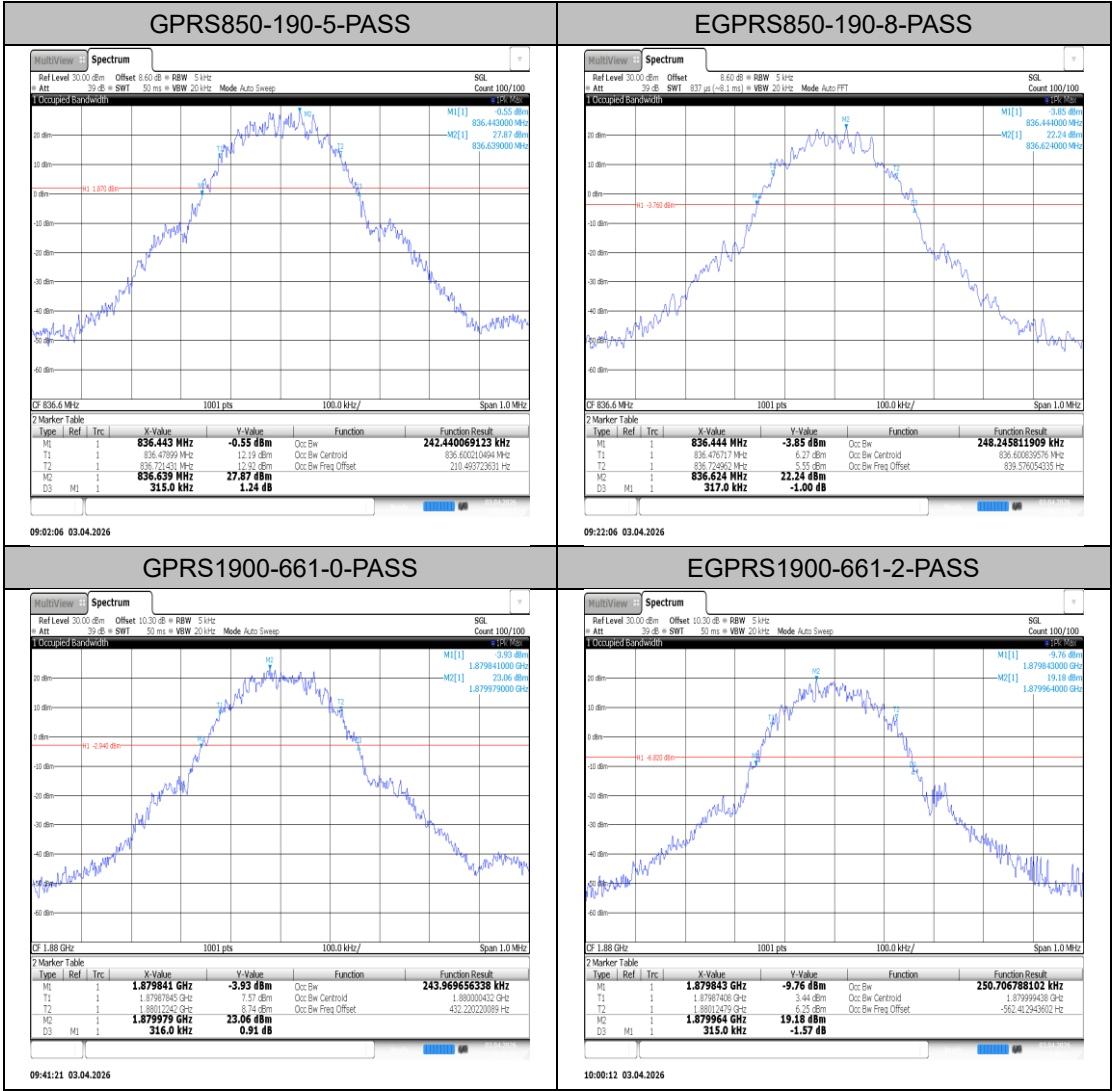


## Appendix C: 26dB Bandwidth and Occupied Bandwidth

### Test Result

| Band      | Channel | Occupied<br>Bandwidth (MHz) | 26dB Bandwidth<br>(MHz) | Verdict |
|-----------|---------|-----------------------------|-------------------------|---------|
| GPRS850   | 190     | 0.242                       | 0.32                    | PASS    |
| EGPRS850  | 190     | 0.248                       | 0.32                    | PASS    |
| GPRS1900  | 661     | 0.244                       | 0.32                    | PASS    |
| EGPRS1900 | 661     | 0.251                       | 0.31                    | PASS    |

# Test Graphs

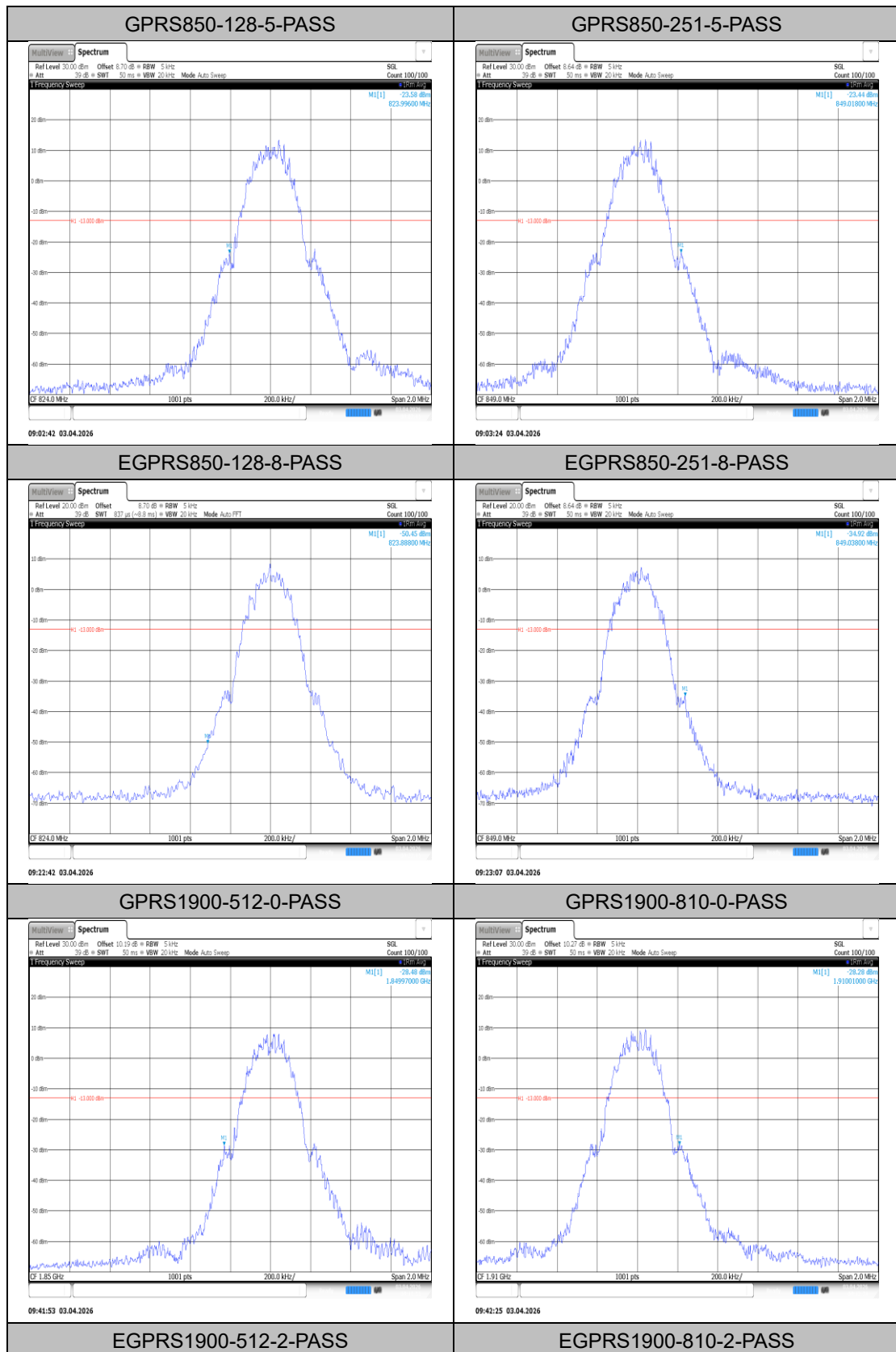


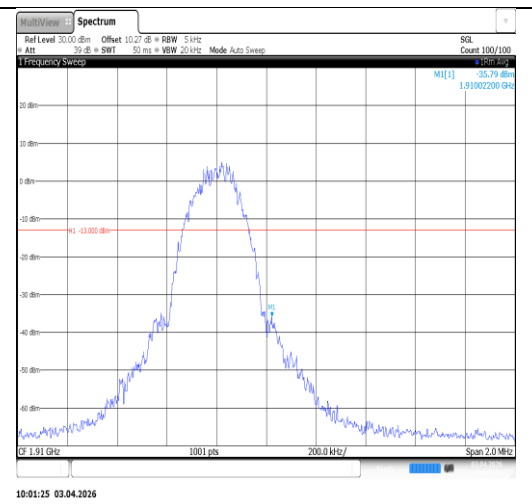
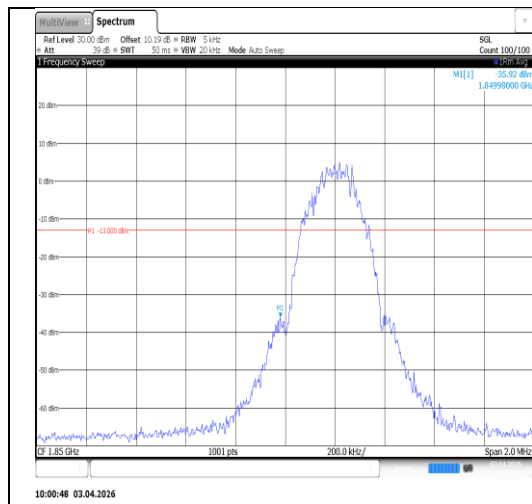
## Appendix D: Band Edge

### Test Result

| Band      | Channel | Freq (MHz) | Result (dBm) | Limit(dBm) | Verdict |
|-----------|---------|------------|--------------|------------|---------|
| GPRS850   | 128     | 824.00     | -23.58       | -13        | PASS    |
| GPRS850   | 251     | 849.02     | -23.44       | -13        | PASS    |
| EGPRS850  | 128     | 823.89     | -70.10       | -13        | PASS    |
| EGPRS850  | 251     | 849.04     | -34.92       | -13        | PASS    |
| GPRS1900  | 512     | 1849.97    | -28.48       | -13        | PASS    |
| GPRS1900  | 810     | 1910.01    | -28.28       | -13        | PASS    |
| EGPRS1900 | 512     | 1849.98    | -35.92       | -13        | PASS    |
| EGPRS1900 | 810     | 1910.02    | -35.79       | -13        | PASS    |

# Test Graphs



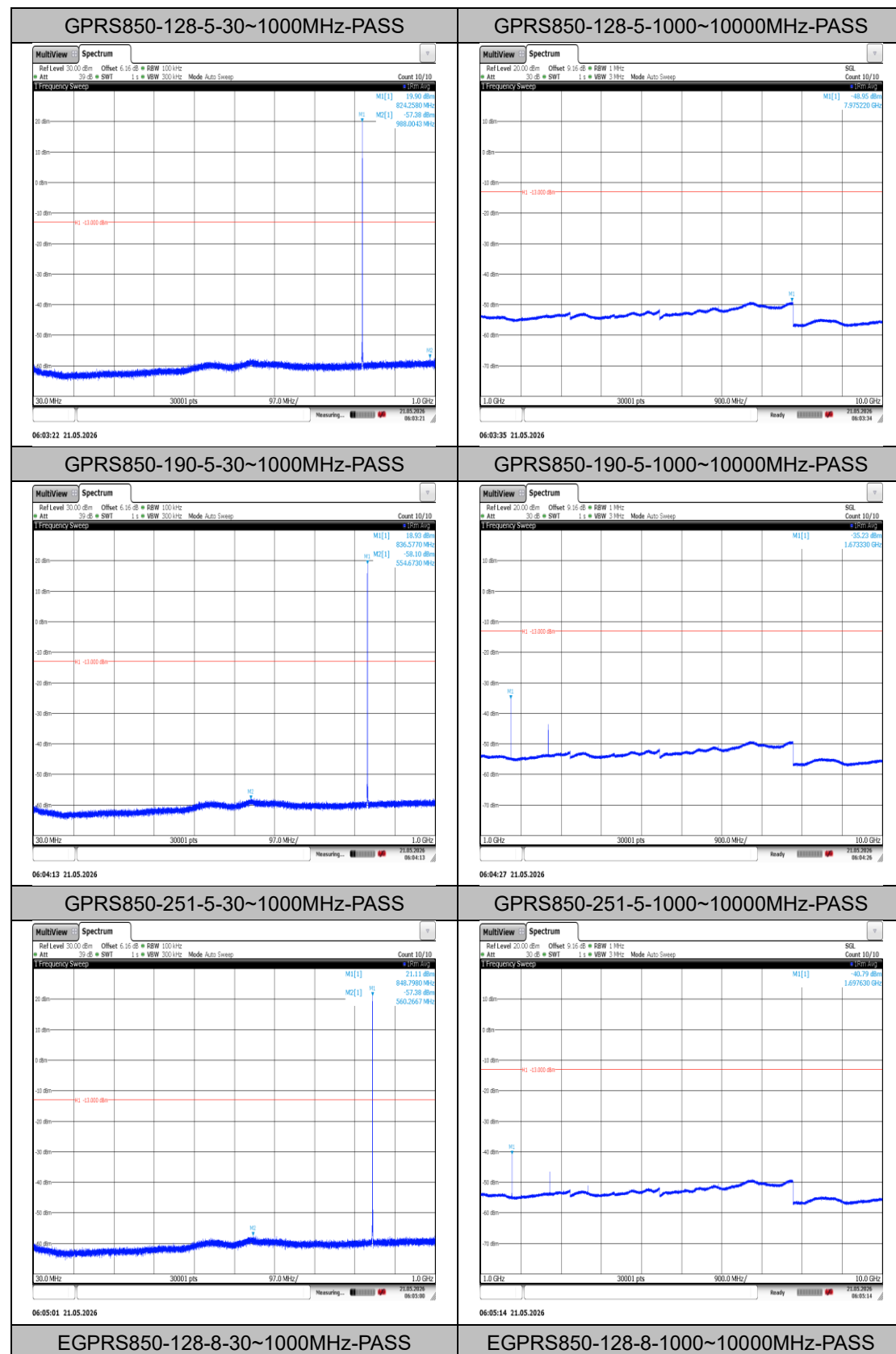


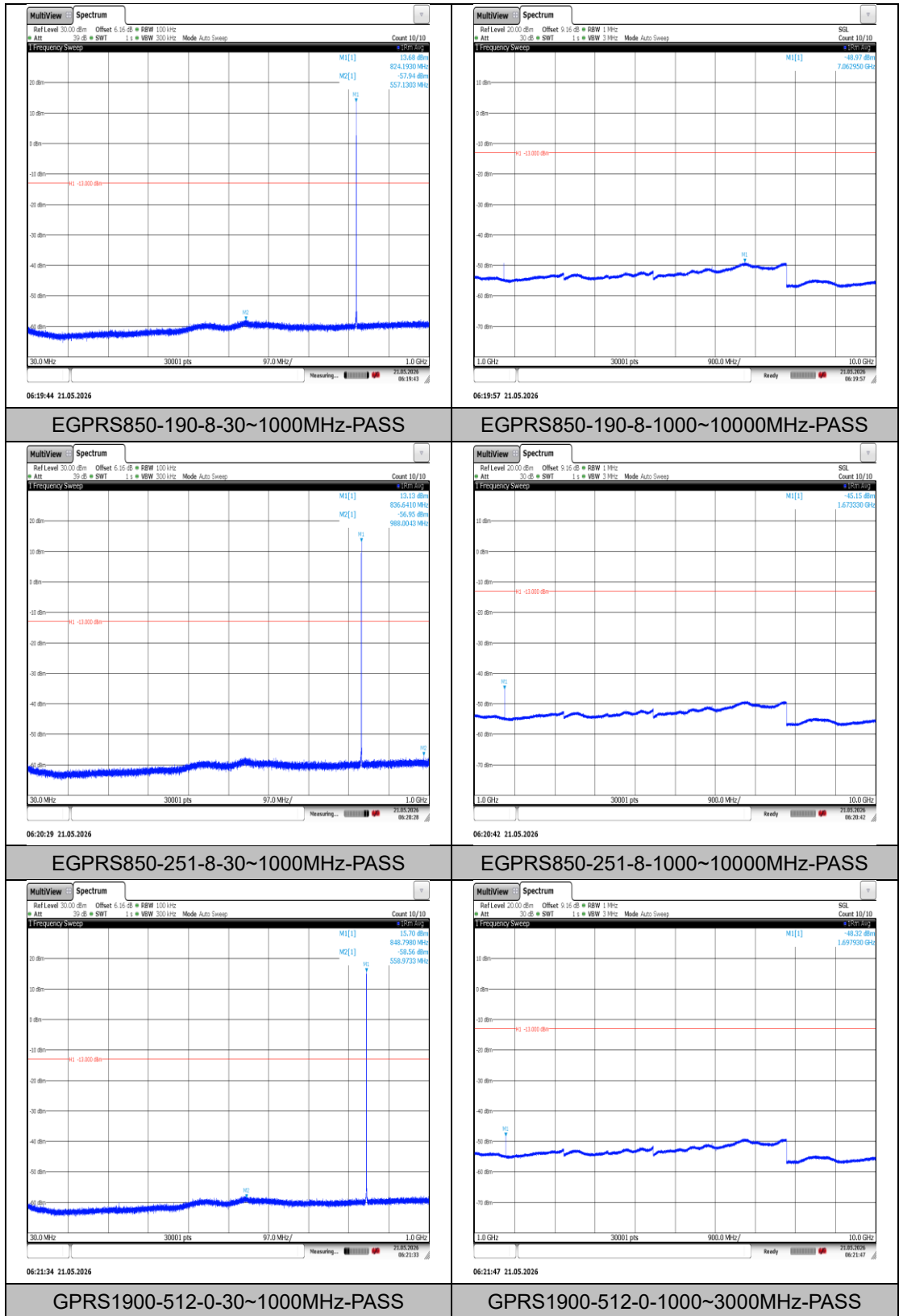
## Appendix E: Conducted Spurious Emission

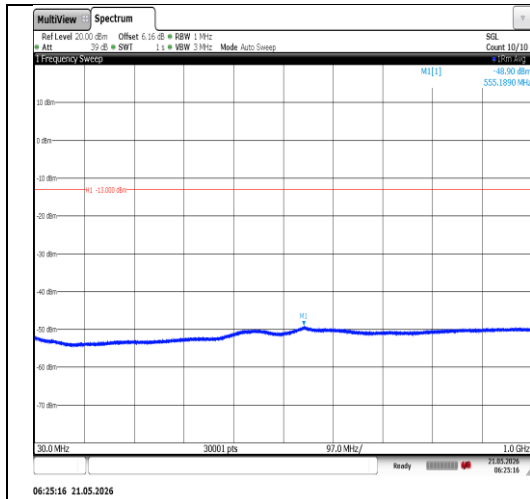
### Test Result

| Band      | Channel | Frequency Range(MHz) | Max.Freq. (MHz) | Result (dBm) | Limit (dBm) | Verdict |
|-----------|---------|----------------------|-----------------|--------------|-------------|---------|
| GPRS850   | 128     | 30~1000MHz           | 988             | -57.38       | -13         | PASS    |
| GPRS850   | 128     | 1000~10000MHz        | 7975.22         | -48.95       | -13         | PASS    |
| GPRS850   | 190     | 30~1000MHz           | 554.67          | -58.1        | -13         | PASS    |
| GPRS850   | 190     | 1000~10000MHz        | 1673.33         | -35.23       | -13         | PASS    |
| GPRS850   | 251     | 30~1000MHz           | 560.27          | -57.2        | -13         | PASS    |
| GPRS850   | 251     | 1000~10000MHz        | 1697.63         | -40.79       | -13         | PASS    |
| EGPRS850  | 128     | 30~1000MHz           | 557.13          | -57.85       | -13         | PASS    |
| EGPRS850  | 128     | 1000~10000MHz        | 7062.95         | -48.97       | -13         | PASS    |
| EGPRS850  | 190     | 30~1000MHz           | 988             | -56.78       | -13         | PASS    |
| EGPRS850  | 190     | 1000~10000MHz        | 1673.33         | -45.15       | -13         | PASS    |
| EGPRS850  | 251     | 30~1000MHz           | 558.97          | -58.32       | -13         | PASS    |
| EGPRS850  | 251     | 1000~10000MHz        | 1697.93         | -48.32       | -13         | PASS    |
| GPRS1900  | 512     | 30~1000MHz           | 555.19          | -48.9        | -13         | PASS    |
| GPRS1900  | 512     | 1000~3000MHz         | 2975.87         | -45.57       | -13         | PASS    |
| GPRS1900  | 512     | 3000~18000MHz        | 7078.61         | -46.2        | -13         | PASS    |
| GPRS1900  | 661     | 30~1000MHz           | 556.22          | -49.06       | -13         | PASS    |
| GPRS1900  | 661     | 1000~3000MHz         | 2998.47         | -45.76       | -13         | PASS    |
| GPRS1900  | 661     | 3000~18000MHz        | 7008.62         | -46.33       | -13         | PASS    |
| GPRS1900  | 810     | 30~1000MHz           | 563.37          | -49.1        | -13         | PASS    |
| GPRS1900  | 810     | 1000~3000MHz         | 2996.6          | -45.51       | -13         | PASS    |
| GPRS1900  | 810     | 3000~18000MHz        | 7089.11         | -46.22       | -13         | PASS    |
| EGPRS1900 | 512     | 30~1000MHz           | 555.8           | -48.87       | -13         | PASS    |
| EGPRS1900 | 512     | 1000~3000MHz         | 2982.33         | -45.62       | -13         | PASS    |
| EGPRS1900 | 512     | 3000~18000MHz        | 7981.08         | -46.33       | -13         | PASS    |
| EGPRS1900 | 661     | 30~1000MHz           | 555.42          | -49.12       | -13         | PASS    |
| EGPRS1900 | 661     | 1000~3000MHz         | 2995.8          | -45.66       | -13         | PASS    |
| EGPRS1900 | 661     | 3000~18000MHz        | 7012.12         | -46.26       | -13         | PASS    |
| EGPRS1900 | 810     | 30~1000MHz           | 555.9           | -48.8        | -13         | PASS    |
| EGPRS1900 | 810     | 1000~3000MHz         | 2996.2          | -45.32       | -13         | PASS    |
| EGPRS1900 | 810     | 3000~18000MHz        | 7961.58         | -46.19       | -13         | PASS    |

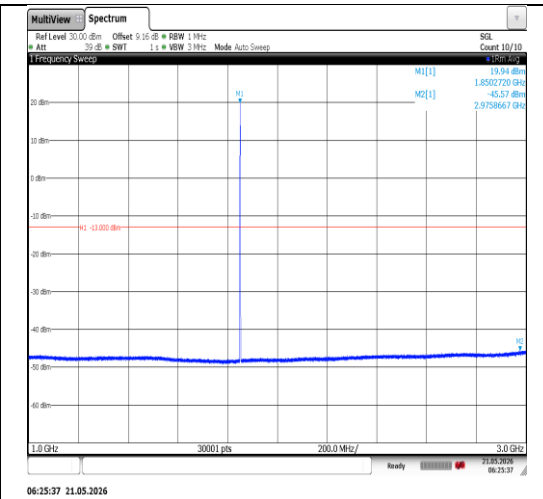
## Test Graphs



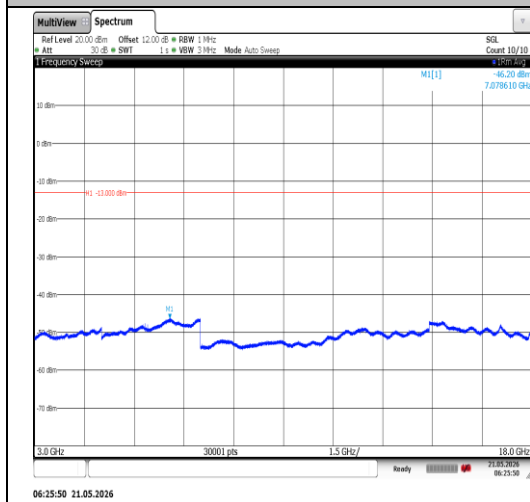




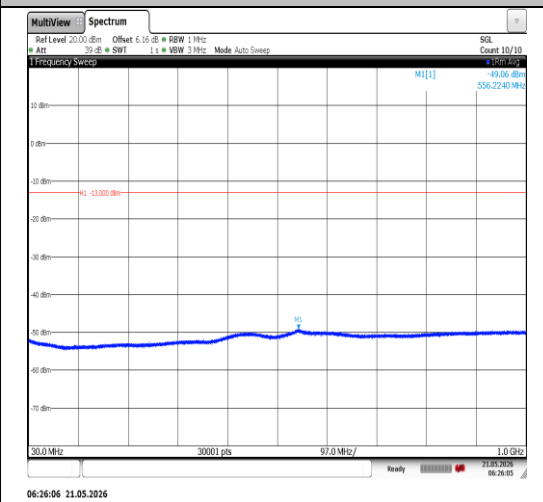
GPRS1900-512-0-3000~18000MHz-PASS



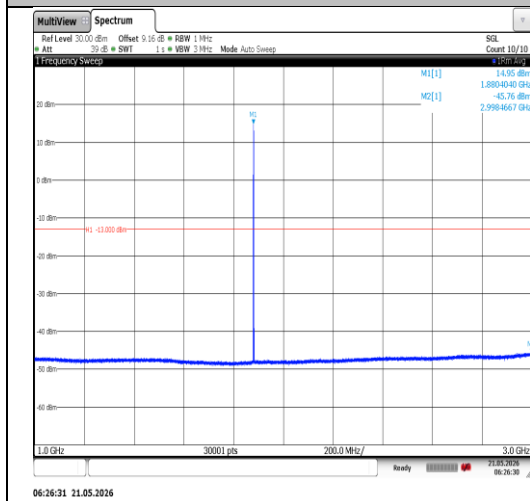
GPRS1900-661-0-30~1000MHz-PASS



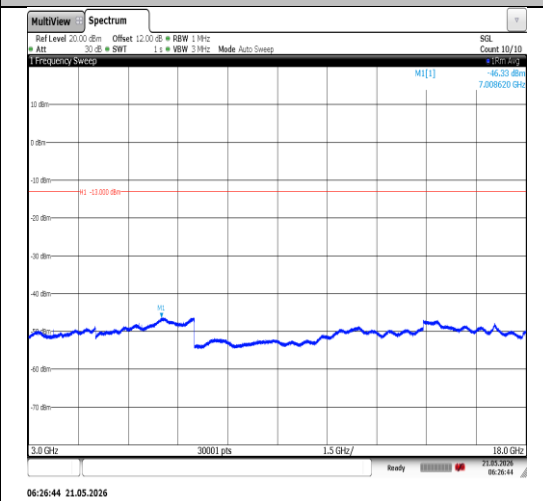
GPRS1900-661-0-1000~3000MHz-PASS



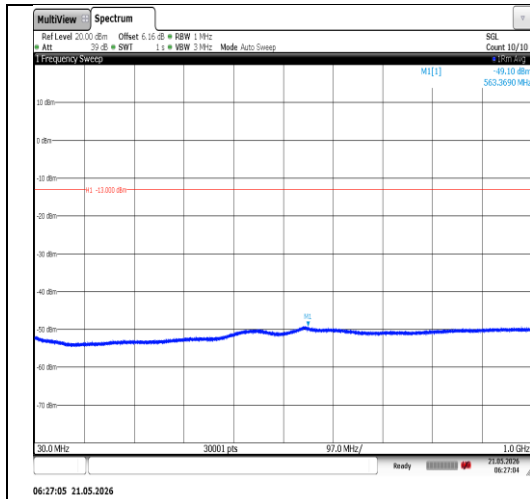
GPRS1900-661-0-3000~18000MHz-PASS



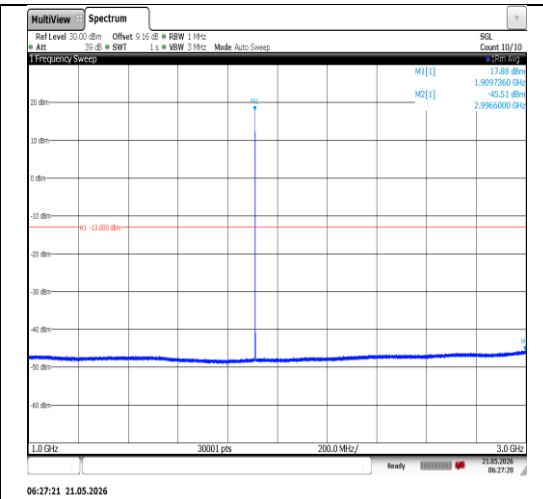
GPRS1900-810-0-30~1000MHz-PASS



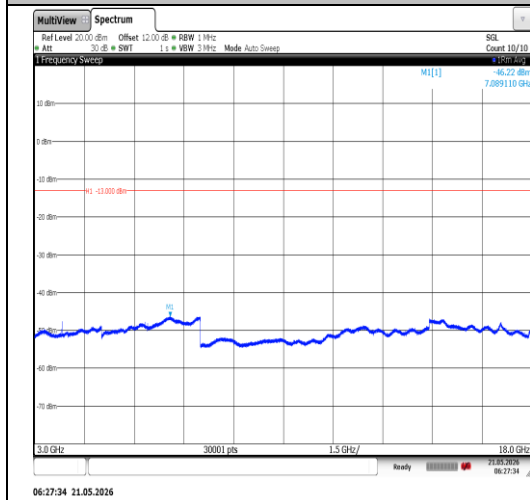
GPRS1900-810-0-1000~3000MHz-PASS



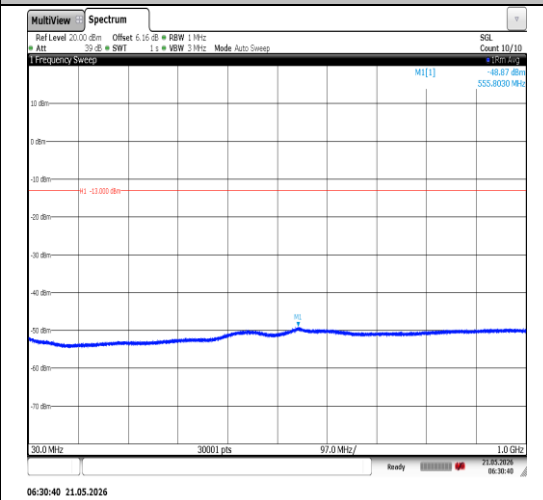
GPRS1900-810-0-3000~18000MHz-PASS



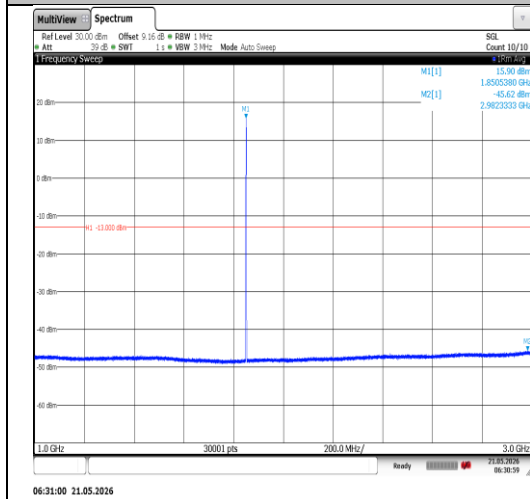
EGPRS1900-512-2-30~1000MHz-PASS



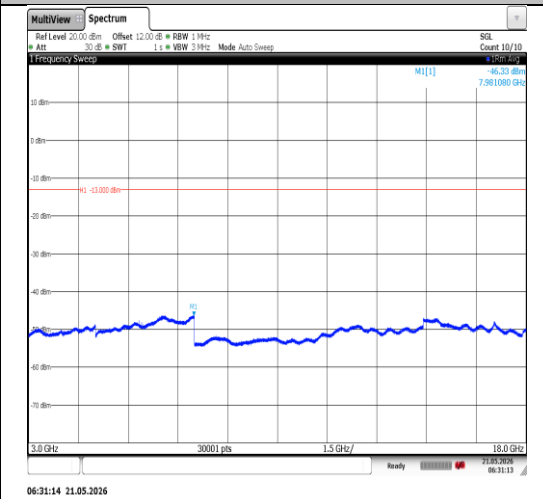
EGPRS1900-512-2-1000~3000MHz-PASS



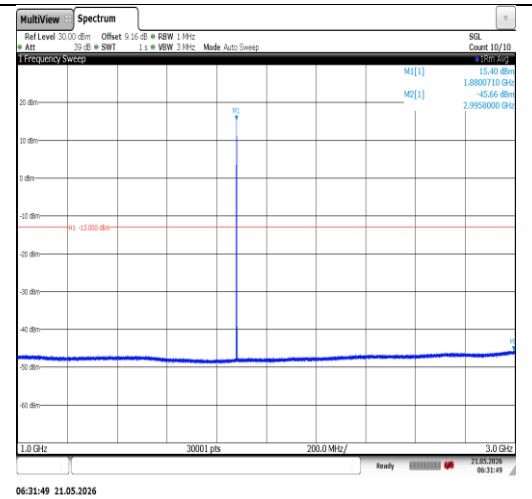
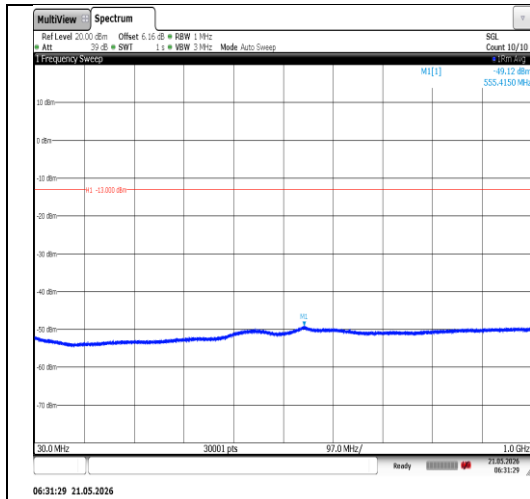
EGPRS1900-512-2-3000~18000MHz-PASS



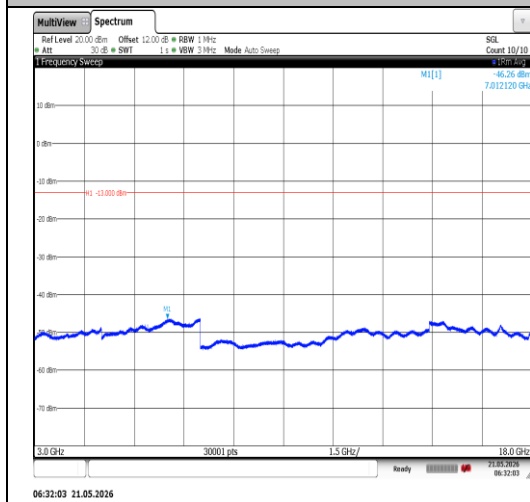
EGPRS1900-661-2-30~1000MHz-PASS



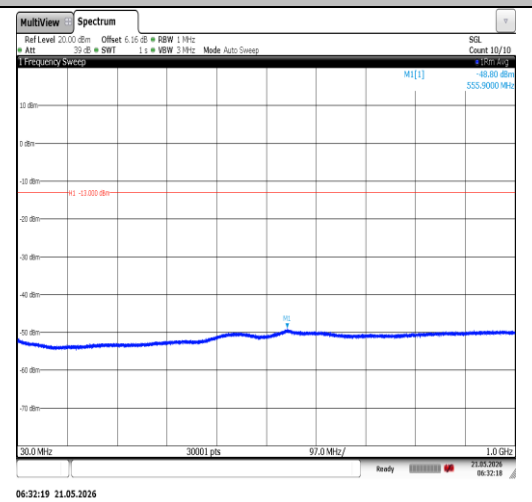
EGPRS1900-661-2-1000~3000MHz-PASS



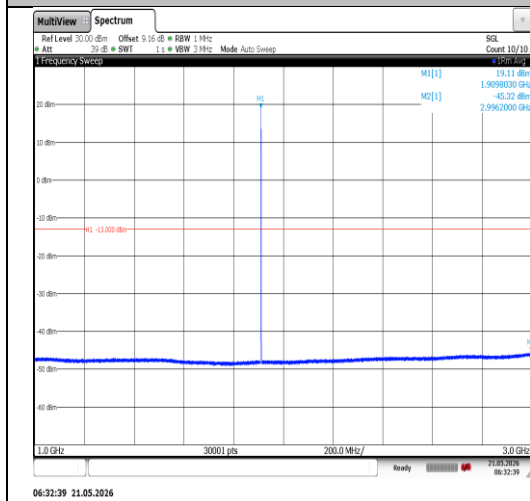
### EGPRS1900-661-2-3000~18000MHz-PASS



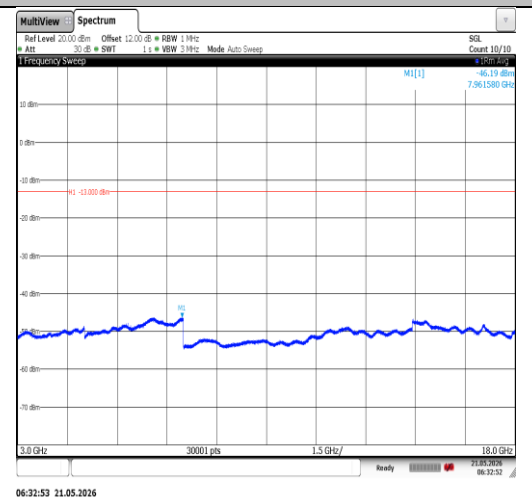
### EGPRS1900-810-2-30~1000MHz-PASS



### EGPRS1900-810-2-1000~3000MHz-PASS



### EGPRS1900-810-2-3000~18000MHz-PASS



## Appendix F: Frequency Stability

### Test Result

| Voltage   |         |               |                  |                |                 |             |         |
|-----------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| Band      | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| GPRS850   | 190     | VN            | NT               | 9.07           | 0.010842        | ±2.5        | PASS    |
| GPRS850   | 190     | VL            | NT               | 12.01          | 0.014356        | ±2.5        | PASS    |
| GPRS850   | 190     | VH            | NT               | 11.07          | 0.013232        | ±2.5        | PASS    |
| EGPRS850  | 190     | VN            | NT               | 6.55           | 0.007829        | ±2.5        | PASS    |
| EGPRS850  | 190     | VL            | NT               | 5.78           | 0.006909        | ±2.5        | PASS    |
| EGPRS850  | 190     | VH            | NT               | 6.52           | 0.007793        | ±2.5        | PASS    |
| GPRS1900  | 661     | VN            | NT               | 23.50          | 0.012500        | ±2.5        | PASS    |
| GPRS1900  | 661     | VL            | NT               | 24.31          | 0.012931        | ±2.5        | PASS    |
| GPRS1900  | 661     | VH            | NT               | 22.41          | 0.011920        | ±2.5        | PASS    |
| EGPRS1900 | 661     | VN            | NT               | 26.28          | 0.013979        | ±2.5        | PASS    |
| EGPRS1900 | 661     | VL            | NT               | 27.02          | 0.014372        | ±2.5        | PASS    |
| EGPRS1900 | 661     | VH            | NT               | 28.73          | 0.015282        | ±2.5        | PASS    |

| Temperature |         |               |                  |                |                 |             |         |
|-------------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| Band        | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| GPRS850     | 190     | NV            | 50               | 16.85          | 0.020141        | ±2.5        | PASS    |
| GPRS850     | 190     | NV            | -30              | 11.20          | 0.013388        | ±2.5        | PASS    |
| GPRS850     | 190     | NV            | -20              | 14.50          | 0.017332        | ±2.5        | PASS    |
| GPRS850     | 190     | NV            | -10              | 13.30          | 0.015898        | ±2.5        | PASS    |
| GPRS850     | 190     | NV            | 0                | 13.04          | 0.015587        | ±2.5        | PASS    |
| GPRS850     | 190     | NV            | 10               | 13.01          | 0.015551        | ±2.5        | PASS    |
| GPRS850     | 190     | NV            | 20               | 12.43          | 0.014858        | ±2.5        | PASS    |
| GPRS850     | 190     | NV            | 30               | 13.50          | 0.016137        | ±2.5        | PASS    |
| GPRS850     | 190     | NV            | 40               | 15.59          | 0.018635        | ±2.5        | PASS    |
| EGPRS850    | 190     | NV            | -30              | 9.78           | 0.011690        | ±2.5        | PASS    |
| EGPRS850    | 190     | NV            | -20              | 11.11          | 0.013280        | ±2.5        | PASS    |
| EGPRS850    | 190     | NV            | -10              | 5.26           | 0.006287        | ±2.5        | PASS    |
| EGPRS850    | 190     | NV            | 0                | 4.52           | 0.005403        | ±2.5        | PASS    |
| EGPRS850    | 190     | NV            | 10               | 6.81           | 0.008140        | ±2.5        | PASS    |
| EGPRS850    | 190     | NV            | 20               | 7.26           | 0.008678        | ±2.5        | PASS    |
| EGPRS850    | 190     | NV            | 30               | 5.81           | 0.006945        | ±2.5        | PASS    |

|               |     |    |     |       |          |      |      |
|---------------|-----|----|-----|-------|----------|------|------|
| EGPRS850      | 190 | NV | 40  | 6.46  | 0.007722 | ±2.5 | PASS |
| EGPRS850      | 190 | NV | 50  | 6.49  | 0.007758 | ±2.5 | PASS |
| GPRS1900      | 661 | NV | -30 | 23.50 | 0.012500 | ±2.5 | PASS |
| GPRS1900      | 661 | NV | -20 | 21.99 | 0.011697 | ±2.5 | PASS |
| GPRS1900      | 661 | NV | -10 | 21.63 | 0.011505 | ±2.5 | PASS |
| GPRS1900      | 661 | NV | 0   | 27.38 | 0.014564 | ±2.5 | PASS |
| GPRS1900      | 661 | NV | 10  | 23.28 | 0.012383 | ±2.5 | PASS |
| GPRS1900      | 661 | NV | 20  | 19.63 | 0.010441 | ±2.5 | PASS |
| GPRS1900      | 661 | NV | 30  | 26.38 | 0.014032 | ±2.5 | PASS |
| GPRS1900      | 661 | NV | 40  | 19.95 | 0.010612 | ±2.5 | PASS |
| GPRS1900      | 661 | NV | 50  | 22.08 | 0.011745 | ±2.5 | PASS |
| EGPRS190<br>0 | 661 | NV | 50  | 33.35 | 0.017739 | ±2.5 | PASS |
| EGPRS190<br>0 | 661 | NV | -30 | 27.67 | 0.014718 | ±2.5 | PASS |
| EGPRS190<br>0 | 661 | NV | -20 | 30.45 | 0.016197 | ±2.5 | PASS |
| EGPRS190<br>0 | 661 | NV | -10 | 25.96 | 0.013809 | ±2.5 | PASS |
| EGPRS190<br>0 | 661 | NV | 0   | 24.96 | 0.013277 | ±2.5 | PASS |
| EGPRS190<br>0 | 661 | NV | 10  | 30.12 | 0.016021 | ±2.5 | PASS |
| EGPRS190<br>0 | 661 | NV | 20  | 29.38 | 0.015628 | ±2.5 | PASS |
| EGPRS190<br>0 | 661 | NV | 30  | 27.83 | 0.014803 | ±2.5 | PASS |
| EGPRS190<br>0 | 661 | NV | 40  | 28.73 | 0.015282 | ±2.5 | PASS |