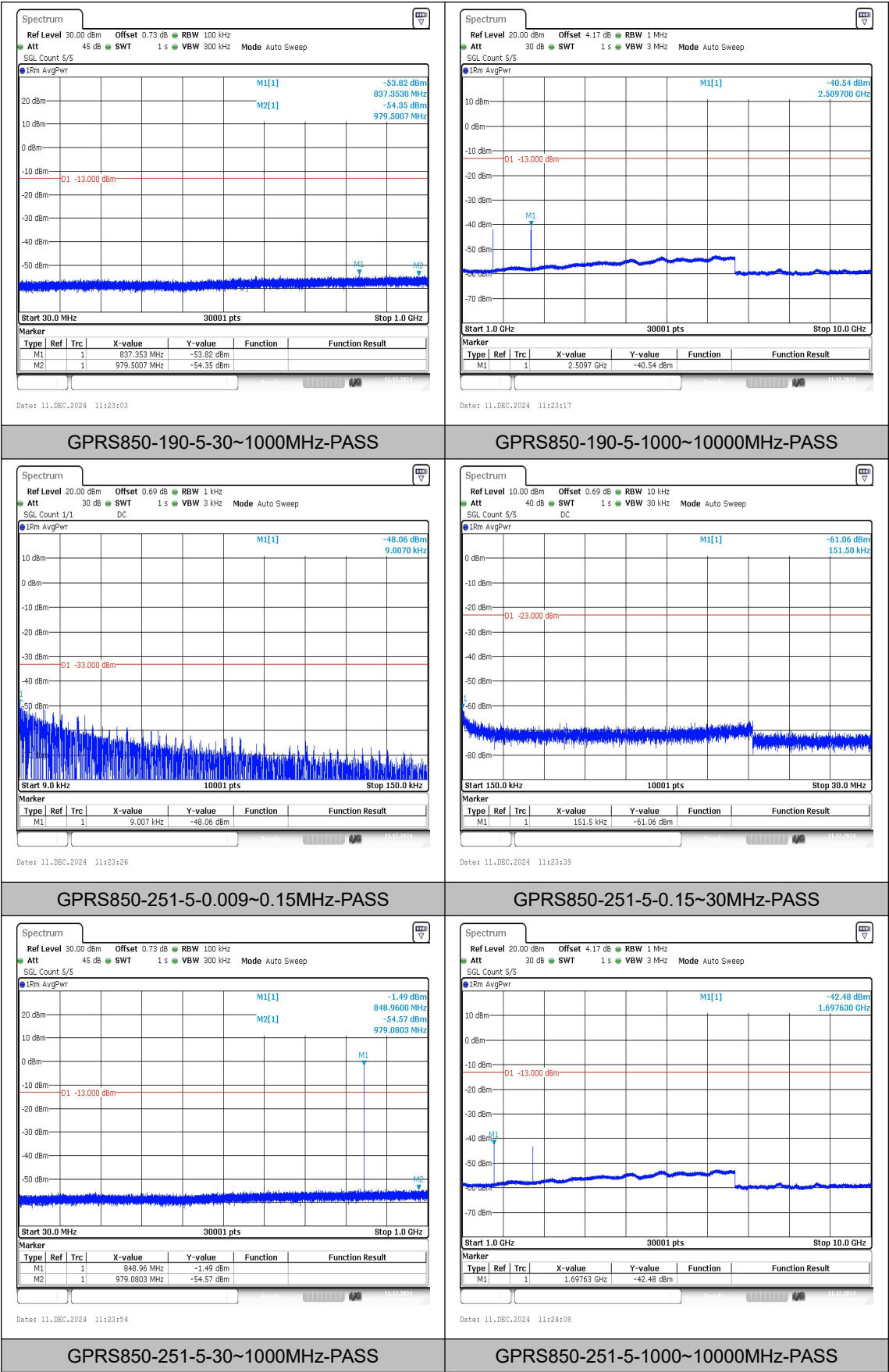
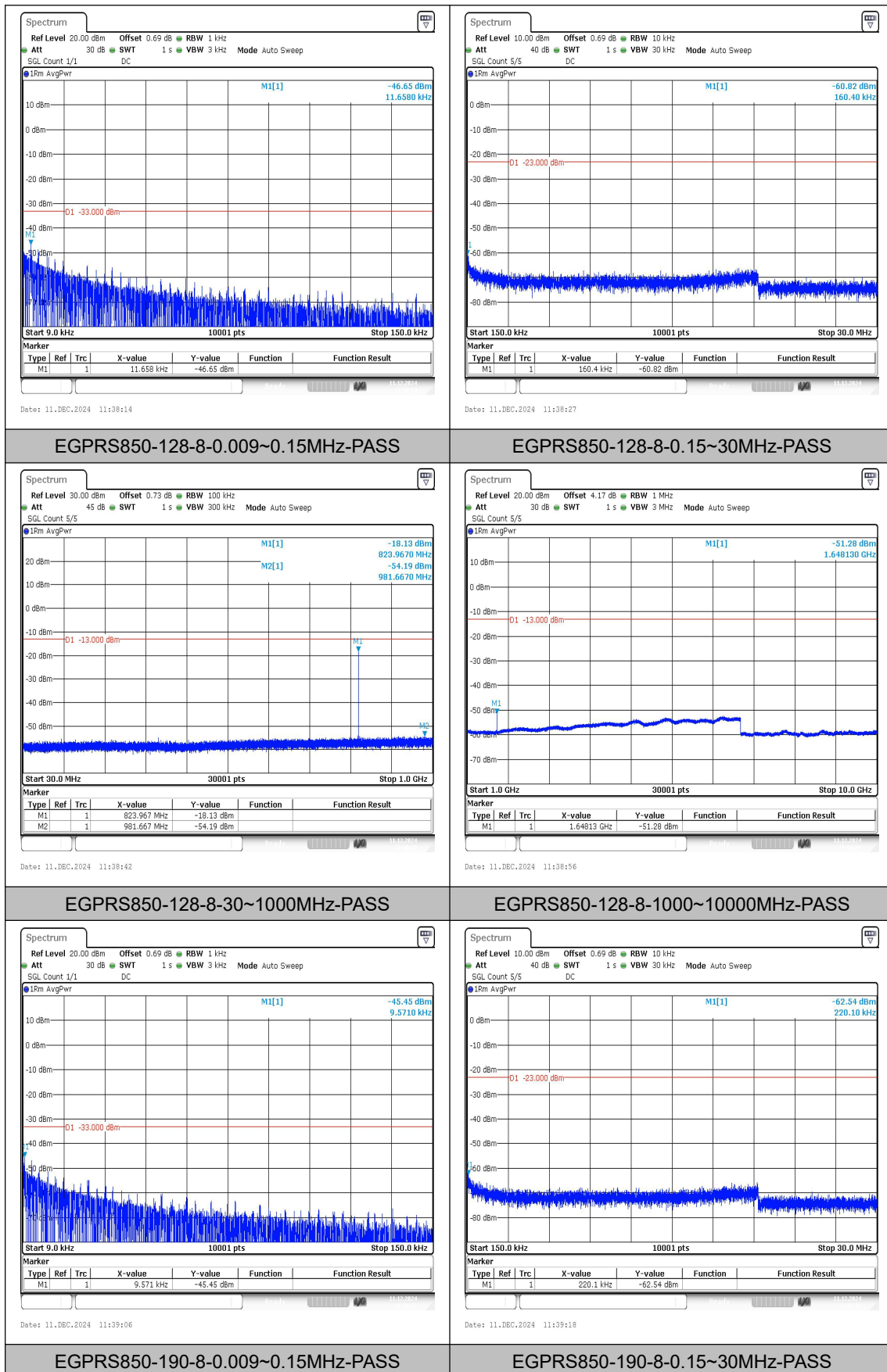
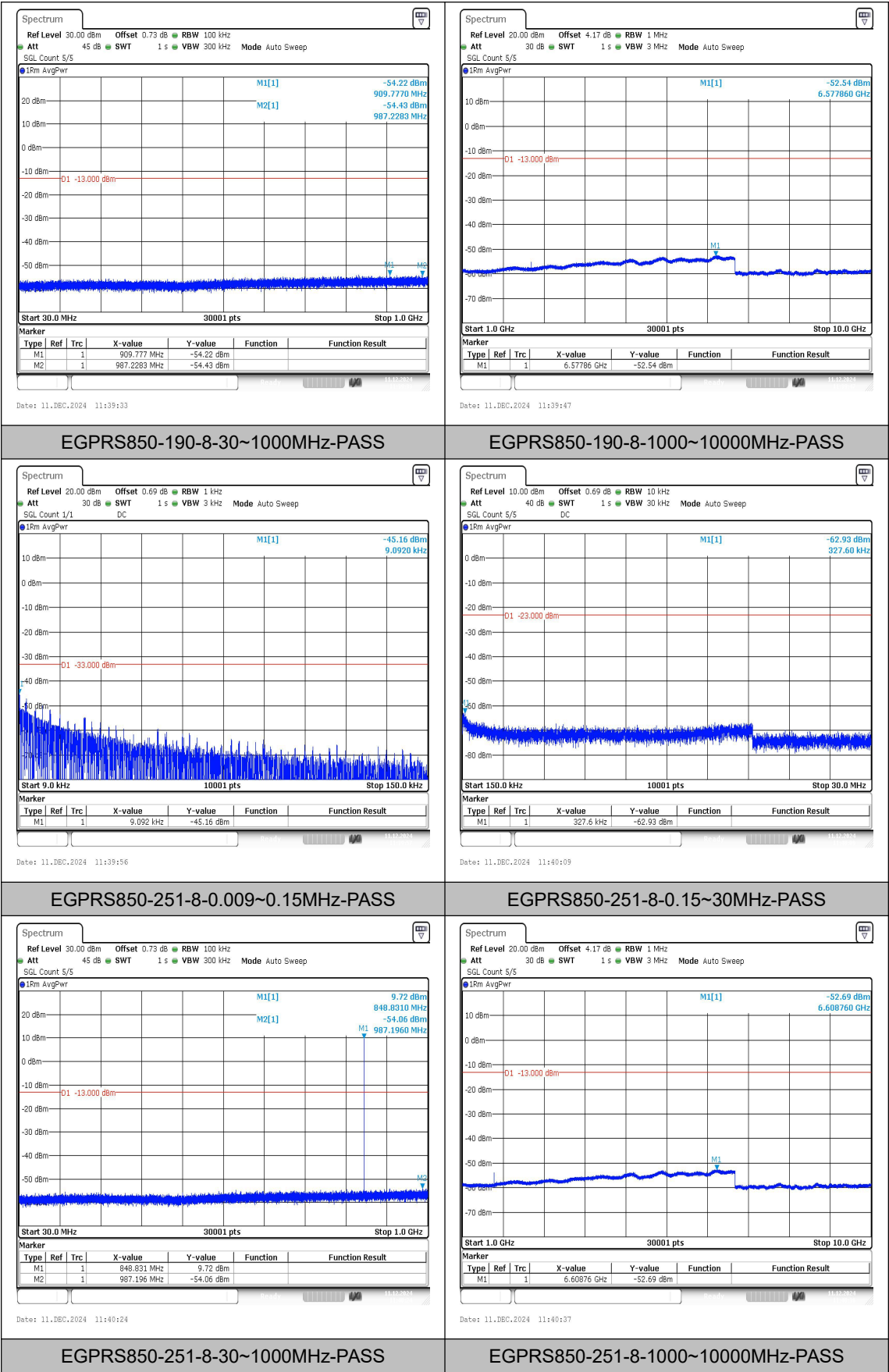








## Appendix F: Frequency Stability

### Test Result

| Voltage  |         |               |                  |                |                 |             |         |
|----------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| Band     | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| GSM850   | 128     | VN            | NT               | -1.61          | -0.001953       | ±2.5        | PASS    |
| GSM850   | 128     | VL            | NT               | -2.00          | -0.002427       | ±2.5        | PASS    |
| GSM850   | 128     | VH            | NT               | -2.78          | -0.003373       | ±2.5        | PASS    |
| GSM850   | 190     | VN            | NT               | 1.26           | 0.001506        | ±2.5        | PASS    |
| GSM850   | 190     | VL            | NT               | -0.71          | -0.000849       | ±2.5        | PASS    |
| GSM850   | 190     | VH            | NT               | -1.42          | -0.001697       | ±2.5        | PASS    |
| GSM850   | 251     | VN            | NT               | 9.43           | 0.011110        | ±2.5        | PASS    |
| GSM850   | 251     | VL            | NT               | 5.97           | 0.007033        | ±2.5        | PASS    |
| GSM850   | 251     | VH            | NT               | 8.04           | 0.009472        | ±2.5        | PASS    |
| GPRS850  | 128     | VN            | NT               | -0.68          | -0.000825       | ±2.5        | PASS    |
| GPRS850  | 128     | VL            | NT               | 0.97           | 0.001177        | ±2.5        | PASS    |
| GPRS850  | 128     | VH            | NT               | 1.03           | 0.001250        | ±2.5        | PASS    |
| GPRS850  | 190     | VN            | NT               | -2.10          | -0.002510       | ±2.5        | PASS    |
| GPRS850  | 190     | VL            | NT               | 0.42           | 0.000502        | ±2.5        | PASS    |
| GPRS850  | 190     | VH            | NT               | -2.52          | -0.003012       | ±2.5        | PASS    |
| GPRS850  | 251     | VN            | NT               | 2.39           | 0.002816        | ±2.5        | PASS    |
| GPRS850  | 251     | VL            | NT               | 2.55           | 0.003004        | ±2.5        | PASS    |
| GPRS850  | 251     | VH            | NT               | 5.17           | 0.006091        | ±2.5        | PASS    |
| EGPRS850 | 128     | VN            | NT               | -3.71          | -0.004501       | ±2.5        | PASS    |
| EGPRS850 | 128     | VL            | NT               | -3.03          | -0.003676       | ±2.5        | PASS    |
| EGPRS850 | 128     | VH            | NT               | -0.61          | -0.000740       | ±2.5        | PASS    |
| EGPRS850 | 190     | VN            | NT               | -2.29          | -0.002737       | ±2.5        | PASS    |
| EGPRS850 | 190     | VL            | NT               | -2.45          | -0.002929       | ±2.5        | PASS    |
| EGPRS850 | 190     | VH            | NT               | -0.19          | -0.000227       | ±2.5        | PASS    |
| EGPRS850 | 251     | VN            | NT               | -3.16          | -0.003723       | ±2.5        | PASS    |
| EGPRS850 | 251     | VL            | NT               | 0.36           | 0.000424        | ±2.5        | PASS    |
| EGPRS850 | 251     | VH            | NT               | 1.03           | 0.001213        | ±2.5        | PASS    |

| Temperature |         |               |                  |                |                 |             |         |
|-------------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| Band        | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| GSM850      | 128     | NV            | -30              | -12.17         | -0.014766       | ±2.5        | PASS    |
| GSM850      | 128     | NV            | -20              | -8.36          | -0.010143       | ±2.5        | PASS    |

|         |     |    |     |       |           |      |      |
|---------|-----|----|-----|-------|-----------|------|------|
| GSM850  | 128 | NV | -10 | -7.65 | -0.009282 | ±2.5 | PASS |
| GSM850  | 128 | NV | 0   | -2.32 | -0.002815 | ±2.5 | PASS |
| GSM850  | 128 | NV | 10  | 8.33  | 0.010107  | ±2.5 | PASS |
| GSM850  | 128 | NV | 20  | 4.62  | 0.005605  | ±2.5 | PASS |
| GSM850  | 128 | NV | 30  | 0.58  | 0.000704  | ±2.5 | PASS |
| GSM850  | 128 | NV | 40  | -0.03 | -0.000036 | ±2.5 | PASS |
| GSM850  | 128 | NV | 50  | 1.07  | 0.001298  | ±2.5 | PASS |
| GSM850  | 190 | NV | -30 | 0.87  | 0.001040  | ±2.5 | PASS |
| GSM850  | 190 | NV | -20 | 2.58  | 0.003084  | ±2.5 | PASS |
| GSM850  | 190 | NV | -10 | 0.10  | 0.000120  | ±2.5 | PASS |
| GSM850  | 190 | NV | 0   | 1.26  | 0.001506  | ±2.5 | PASS |
| GSM850  | 190 | NV | 10  | -1.03 | -0.001231 | ±2.5 | PASS |
| GSM850  | 190 | NV | 20  | -0.29 | -0.000347 | ±2.5 | PASS |
| GSM850  | 190 | NV | 30  | -0.52 | -0.000622 | ±2.5 | PASS |
| GSM850  | 190 | NV | 40  | -1.16 | -0.001387 | ±2.5 | PASS |
| GSM850  | 190 | NV | 50  | 2.84  | 0.003395  | ±2.5 | PASS |
| GSM850  | 251 | NV | -30 | 7.62  | 0.008977  | ±2.5 | PASS |
| GSM850  | 251 | NV | -20 | 6.13  | 0.007222  | ±2.5 | PASS |
| GSM850  | 251 | NV | -10 | 7.01  | 0.008259  | ±2.5 | PASS |
| GSM850  | 251 | NV | 0   | 7.68  | 0.009048  | ±2.5 | PASS |
| GSM850  | 251 | NV | 10  | 8.30  | 0.009779  | ±2.5 | PASS |
| GSM850  | 251 | NV | 20  | 7.55  | 0.008895  | ±2.5 | PASS |
| GSM850  | 251 | NV | 30  | 3.55  | 0.004182  | ±2.5 | PASS |
| GSM850  | 251 | NV | 40  | 4.39  | 0.005172  | ±2.5 | PASS |
| GSM850  | 251 | NV | 50  | 10.40 | 0.012253  | ±2.5 | PASS |
| GPRS850 | 128 | NV | -30 | 2.74  | 0.003324  | ±2.5 | PASS |
| GPRS850 | 128 | NV | -20 | 8.39  | 0.010180  | ±2.5 | PASS |
| GPRS850 | 128 | NV | -10 | 5.52  | 0.006697  | ±2.5 | PASS |
| GPRS850 | 128 | NV | 0   | 1.78  | 0.002160  | ±2.5 | PASS |
| GPRS850 | 128 | NV | 10  | 4.65  | 0.005642  | ±2.5 | PASS |
| GPRS850 | 128 | NV | 20  | 4.23  | 0.005132  | ±2.5 | PASS |
| GPRS850 | 128 | NV | 30  | 2.03  | 0.002463  | ±2.5 | PASS |
| GPRS850 | 128 | NV | 40  | 4.20  | 0.005096  | ±2.5 | PASS |
| GPRS850 | 128 | NV | 50  | 6.65  | 0.008068  | ±2.5 | PASS |
| GPRS850 | 190 | NV | -30 | -1.97 | -0.002355 | ±2.5 | PASS |
| GPRS850 | 190 | NV | -20 | 0.77  | 0.000920  | ±2.5 | PASS |
| GPRS850 | 190 | NV | -10 | 5.42  | 0.006479  | ±2.5 | PASS |
| GPRS850 | 190 | NV | 0   | 11.01 | 0.013160  | ±2.5 | PASS |
| GPRS850 | 190 | NV | 10  | 5.68  | 0.006789  | ±2.5 | PASS |
| GPRS850 | 190 | NV | 20  | 5.49  | 0.006562  | ±2.5 | PASS |
| GPRS850 | 190 | NV | 30  | 3.55  | 0.004243  | ±2.5 | PASS |

|          |     |    |     |       |           |      |      |
|----------|-----|----|-----|-------|-----------|------|------|
| GPRS850  | 190 | NV | 40  | 7.43  | 0.008881  | ±2.5 | PASS |
| GPRS850  | 190 | NV | 50  | 10.72 | 0.012814  | ±2.5 | PASS |
| GPRS850  | 251 | NV | -30 | 5.00  | 0.005891  | ±2.5 | PASS |
| GPRS850  | 251 | NV | -20 | 3.03  | 0.003570  | ±2.5 | PASS |
| GPRS850  | 251 | NV | -10 | 8.20  | 0.009661  | ±2.5 | PASS |
| GPRS850  | 251 | NV | 0   | 8.07  | 0.009508  | ±2.5 | PASS |
| GPRS850  | 251 | NV | 10  | 8.62  | 0.010156  | ±2.5 | PASS |
| GPRS850  | 251 | NV | 20  | 4.84  | 0.005702  | ±2.5 | PASS |
| GPRS850  | 251 | NV | 30  | 11.04 | 0.013007  | ±2.5 | PASS |
| GPRS850  | 251 | NV | 40  | 7.59  | 0.008942  | ±2.5 | PASS |
| GPRS850  | 251 | NV | 50  | 7.39  | 0.008706  | ±2.5 | PASS |
| EGPRS850 | 128 | NV | -30 | 2.39  | 0.002900  | ±2.5 | PASS |
| EGPRS850 | 128 | NV | -20 | -3.52 | -0.004271 | ±2.5 | PASS |
| EGPRS850 | 128 | NV | -10 | -1.97 | -0.002390 | ±2.5 | PASS |
| EGPRS850 | 128 | NV | 0   | -0.81 | -0.000983 | ±2.5 | PASS |
| EGPRS850 | 128 | NV | 10  | 1.19  | 0.001444  | ±2.5 | PASS |
| EGPRS850 | 128 | NV | 20  | 1.49  | 0.001808  | ±2.5 | PASS |
| EGPRS850 | 128 | NV | 30  | 3.20  | 0.003883  | ±2.5 | PASS |
| EGPRS850 | 128 | NV | 40  | 1.52  | 0.001844  | ±2.5 | PASS |
| EGPRS850 | 128 | NV | 50  | 1.90  | 0.002305  | ±2.5 | PASS |
| EGPRS850 | 190 | NV | -30 | -3.52 | -0.004208 | ±2.5 | PASS |
| EGPRS850 | 190 | NV | -20 | -1.07 | -0.001279 | ±2.5 | PASS |
| EGPRS850 | 190 | NV | -10 | 5.13  | 0.006132  | ±2.5 | PASS |
| EGPRS850 | 190 | NV | 0   | 6.30  | 0.007530  | ±2.5 | PASS |
| EGPRS850 | 190 | NV | 10  | 5.71  | 0.006825  | ±2.5 | PASS |
| EGPRS850 | 190 | NV | 20  | 5.49  | 0.006562  | ±2.5 | PASS |
| EGPRS850 | 190 | NV | 30  | 4.58  | 0.005475  | ±2.5 | PASS |
| EGPRS850 | 190 | NV | 40  | 4.55  | 0.005439  | ±2.5 | PASS |
| EGPRS850 | 190 | NV | 50  | 5.62  | 0.006718  | ±2.5 | PASS |
| EGPRS850 | 251 | NV | -30 | -1.36 | -0.001602 | ±2.5 | PASS |
| EGPRS850 | 251 | NV | -20 | 2.13  | 0.002509  | ±2.5 | PASS |
| EGPRS850 | 251 | NV | -10 | 8.30  | 0.009779  | ±2.5 | PASS |
| EGPRS850 | 251 | NV | 0   | 10.27 | 0.012099  | ±2.5 | PASS |
| EGPRS850 | 251 | NV | 10  | 10.36 | 0.012205  | ±2.5 | PASS |
| EGPRS850 | 251 | NV | 20  | 7.17  | 0.008447  | ±2.5 | PASS |
| EGPRS850 | 251 | NV | 30  | 6.39  | 0.007528  | ±2.5 | PASS |
| EGPRS850 | 251 | NV | 40  | 1.03  | 0.001213  | ±2.5 | PASS |
| EGPRS850 | 251 | NV | 50  | 7.46  | 0.008789  | ±2.5 | PASS |

## Appendix G: Modulation Characteristics

### Test Result

| Band     | Channel | Result | Verdict |
|----------|---------|--------|---------|
| GSM850   | 128     | PASS   | PASS    |
| GSM850   | 190     | PASS   | PASS    |
| GSM850   | 251     | PASS   | PASS    |
| GPRS850  | 128     | PASS   | PASS    |
| GPRS850  | 190     | PASS   | PASS    |
| GPRS850  | 251     | PASS   | PASS    |
| EGPRS850 | 128     | PASS   | PASS    |
| EGPRS850 | 190     | PASS   | PASS    |
| EGPRS850 | 251     | PASS   | PASS    |

## Test Graphs

