





Appendix F: Frequency Stability

Test Result

| Voltage | | | | | | | |
|----------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| Band | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| GSM850 | 128 | VN | NT | 16.79 | 0.020371 | ±2.5 | PASS |
| GSM850 | 128 | VL | NT | 22.02 | 0.026717 | ±2.5 | PASS |
| GSM850 | 128 | VH | NT | 15.63 | 0.018964 | ±2.5 | PASS |
| GSM850 | 190 | VN | NT | 16.11 | 0.019257 | ±2.5 | PASS |
| GSM850 | 190 | VL | NT | 12.14 | 0.014511 | ±2.5 | PASS |
| GSM850 | 190 | VH | NT | 12.40 | 0.014822 | ±2.5 | PASS |
| GSM850 | 251 | VN | NT | 14.88 | 0.017531 | ±2.5 | PASS |
| GSM850 | 251 | VL | NT | 12.04 | 0.014185 | ±2.5 | PASS |
| GSM850 | 251 | VH | NT | 16.95 | 0.019969 | ±2.5 | PASS |
| GPRS850 | 128 | VN | NT | 26.31 | 0.031922 | ±2.5 | PASS |
| GPRS850 | 128 | VL | NT | 19.66 | 0.023853 | ±2.5 | PASS |
| GPRS850 | 128 | VH | NT | 16.85 | 0.020444 | ±2.5 | PASS |
| GPRS850 | 190 | VN | NT | 19.05 | 0.022771 | ±2.5 | PASS |
| GPRS850 | 190 | VL | NT | 21.86 | 0.026130 | ±2.5 | PASS |
| GPRS850 | 190 | VH | NT | 21.92 | 0.026201 | ±2.5 | PASS |
| GPRS850 | 251 | VN | NT | 27.48 | 0.032375 | ±2.5 | PASS |
| GPRS850 | 251 | VL | NT | 24.80 | 0.029218 | ±2.5 | PASS |
| GPRS850 | 251 | VH | NT | 12.24 | 0.014420 | ±2.5 | PASS |
| EGPRS850 | 128 | VN | NT | 15.08 | 0.018297 | ±2.5 | PASS |
| EGPRS850 | 128 | VL | NT | 17.53 | 0.021269 | ±2.5 | PASS |
| EGPRS850 | 128 | VH | NT | 15.21 | 0.018454 | ±2.5 | PASS |
| EGPRS850 | 190 | VN | NT | 18.85 | 0.022532 | ±2.5 | PASS |
| EGPRS850 | 190 | VL | NT | 17.27 | 0.020643 | ±2.5 | PASS |
| EGPRS850 | 190 | VH | NT | 16.14 | 0.019292 | ±2.5 | PASS |
| EGPRS850 | 251 | VN | NT | 19.89 | 0.023433 | ±2.5 | PASS |
| EGPRS850 | 251 | VL | NT | 18.27 | 0.021525 | ±2.5 | PASS |
| EGPRS850 | 251 | VH | NT | 17.60 | 0.020735 | ±2.5 | PASS |

| Temperature | | | | | | | |
|-------------|---------|---------------|------------------|----------------|-----------------|-------------|---------|
| Band | Channel | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| GSM850 | 128 | NV | -30 | 12.27 | 0.014887 | ±2.5 | PASS |
| GSM850 | 128 | NV | -20 | 21.28 | 0.025819 | ±2.5 | PASS |
| GSM850 | 128 | NV | -10 | 17.27 | 0.020954 | ±2.5 | PASS |

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|---------|-----|----|-----|-------|----------|------|------|
| GSM850 | 128 | NV | 0 | 20.53 | 0.024909 | ±2.5 | PASS |
| GSM850 | 128 | NV | 10 | 18.44 | 0.022373 | ±2.5 | PASS |
| GSM850 | 128 | NV | 20 | 17.18 | 0.020844 | ±2.5 | PASS |
| GSM850 | 128 | NV | 30 | 16.21 | 0.019668 | ±2.5 | PASS |
| GSM850 | 128 | NV | 40 | 13.79 | 0.016731 | ±2.5 | PASS |
| GSM850 | 128 | NV | 50 | 21.66 | 0.026280 | ±2.5 | PASS |
| GSM850 | 190 | NV | -30 | 5.71 | 0.006825 | ±2.5 | PASS |
| GSM850 | 190 | NV | -20 | 9.10 | 0.010877 | ±2.5 | PASS |
| GSM850 | 190 | NV | -10 | 14.56 | 0.017404 | ±2.5 | PASS |
| GSM850 | 190 | NV | 0 | 18.34 | 0.021922 | ±2.5 | PASS |
| GSM850 | 190 | NV | 10 | 13.14 | 0.015706 | ±2.5 | PASS |
| GSM850 | 190 | NV | 20 | 10.40 | 0.012431 | ±2.5 | PASS |
| GSM850 | 190 | NV | 30 | 10.30 | 0.012312 | ±2.5 | PASS |
| GSM850 | 190 | NV | 40 | 15.14 | 0.018097 | ±2.5 | PASS |
| GSM850 | 190 | NV | 50 | 16.37 | 0.019567 | ±2.5 | PASS |
| GSM850 | 251 | NV | -30 | 14.98 | 0.017648 | ±2.5 | PASS |
| GSM850 | 251 | NV | -20 | 14.40 | 0.016965 | ±2.5 | PASS |
| GSM850 | 251 | NV | -10 | 18.31 | 0.021572 | ±2.5 | PASS |
| GSM850 | 251 | NV | 0 | 17.76 | 0.020924 | ±2.5 | PASS |
| GSM850 | 251 | NV | 10 | 16.95 | 0.019969 | ±2.5 | PASS |
| GSM850 | 251 | NV | 20 | 17.08 | 0.020123 | ±2.5 | PASS |
| GSM850 | 251 | NV | 30 | 13.33 | 0.015705 | ±2.5 | PASS |
| GSM850 | 251 | NV | 40 | 16.30 | 0.019204 | ±2.5 | PASS |
| GSM850 | 251 | NV | 50 | 9.43 | 0.011110 | ±2.5 | PASS |
| GPRS850 | 128 | NV | -30 | 18.89 | 0.022919 | ±2.5 | PASS |
| GPRS850 | 128 | NV | -20 | 20.63 | 0.025030 | ±2.5 | PASS |
| GPRS850 | 128 | NV | -10 | 21.63 | 0.026244 | ±2.5 | PASS |
| GPRS850 | 128 | NV | 0 | 21.95 | 0.026632 | ±2.5 | PASS |
| GPRS850 | 128 | NV | 10 | 19.15 | 0.023235 | ±2.5 | PASS |
| GPRS850 | 128 | NV | 20 | 21.60 | 0.026207 | ±2.5 | PASS |
| GPRS850 | 128 | NV | 30 | 23.92 | 0.029022 | ±2.5 | PASS |
| GPRS850 | 128 | NV | 40 | 16.72 | 0.020286 | ±2.5 | PASS |
| GPRS850 | 128 | NV | 50 | 21.41 | 0.025977 | ±2.5 | PASS |
| GPRS850 | 190 | NV | -30 | 20.66 | 0.024695 | ±2.5 | PASS |
| GPRS850 | 190 | NV | -20 | 25.12 | 0.030026 | ±2.5 | PASS |
| GPRS850 | 190 | NV | -10 | 19.79 | 0.023655 | ±2.5 | PASS |
| GPRS850 | 190 | NV | 0 | 22.89 | 0.027361 | ±2.5 | PASS |
| GPRS850 | 190 | NV | 10 | 22.57 | 0.026978 | ±2.5 | PASS |
| GPRS850 | 190 | NV | 20 | 20.40 | 0.024384 | ±2.5 | PASS |
| GPRS850 | 190 | NV | 30 | 21.24 | 0.025388 | ±2.5 | PASS |
| GPRS850 | 190 | NV | 40 | 23.50 | 0.028090 | ±2.5 | PASS |

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|----------|-----|----|-----|-------|----------|------|------|
| GPRS850 | 190 | NV | 50 | 21.73 | 0.025974 | ±2.5 | PASS |
| GPRS850 | 251 | NV | -30 | 15.92 | 0.018756 | ±2.5 | PASS |
| GPRS850 | 251 | NV | -20 | 16.01 | 0.018862 | ±2.5 | PASS |
| GPRS850 | 251 | NV | -10 | 16.50 | 0.019439 | ±2.5 | PASS |
| GPRS850 | 251 | NV | 0 | 14.11 | 0.016623 | ±2.5 | PASS |
| GPRS850 | 251 | NV | 10 | 18.73 | 0.022066 | ±2.5 | PASS |
| GPRS850 | 251 | NV | 20 | 15.17 | 0.017872 | ±2.5 | PASS |
| GPRS850 | 251 | NV | 30 | 11.49 | 0.013537 | ±2.5 | PASS |
| GPRS850 | 251 | NV | 40 | 14.59 | 0.017189 | ±2.5 | PASS |
| GPRS850 | 251 | NV | 50 | 12.40 | 0.014609 | ±2.5 | PASS |
| EGPRS850 | 128 | NV | -30 | 21.02 | 0.025504 | ±2.5 | PASS |
| EGPRS850 | 128 | NV | -20 | 12.56 | 0.015239 | ±2.5 | PASS |
| EGPRS850 | 128 | NV | -10 | 14.69 | 0.017823 | ±2.5 | PASS |
| EGPRS850 | 128 | NV | 0 | 17.66 | 0.021427 | ±2.5 | PASS |
| EGPRS850 | 128 | NV | 10 | 13.62 | 0.016525 | ±2.5 | PASS |
| EGPRS850 | 128 | NV | 20 | 18.89 | 0.022919 | ±2.5 | PASS |
| EGPRS850 | 128 | NV | 30 | 17.92 | 0.021742 | ±2.5 | PASS |
| EGPRS850 | 128 | NV | 40 | 15.66 | 0.019000 | ±2.5 | PASS |
| EGPRS850 | 128 | NV | 50 | 11.36 | 0.013783 | ±2.5 | PASS |
| EGPRS850 | 190 | NV | -30 | 23.44 | 0.028018 | ±2.5 | PASS |
| EGPRS850 | 190 | NV | -20 | 15.82 | 0.018910 | ±2.5 | PASS |
| EGPRS850 | 190 | NV | -10 | 18.60 | 0.022233 | ±2.5 | PASS |
| EGPRS850 | 190 | NV | 0 | 15.76 | 0.018838 | ±2.5 | PASS |
| EGPRS850 | 190 | NV | 10 | 17.79 | 0.021265 | ±2.5 | PASS |
| EGPRS850 | 190 | NV | 20 | 17.56 | 0.020990 | ±2.5 | PASS |
| EGPRS850 | 190 | NV | 30 | 18.79 | 0.022460 | ±2.5 | PASS |
| EGPRS850 | 190 | NV | 40 | 20.11 | 0.024038 | ±2.5 | PASS |
| EGPRS850 | 190 | NV | 50 | 21.44 | 0.025628 | ±2.5 | PASS |
| EGPRS850 | 251 | NV | -30 | 7.26 | 0.008553 | ±2.5 | PASS |
| EGPRS850 | 251 | NV | -20 | 10.01 | 0.011793 | ±2.5 | PASS |
| EGPRS850 | 251 | NV | -10 | 7.68 | 0.009048 | ±2.5 | PASS |
| EGPRS850 | 251 | NV | 0 | 10.88 | 0.012818 | ±2.5 | PASS |
| EGPRS850 | 251 | NV | 10 | 14.24 | 0.016777 | ±2.5 | PASS |
| EGPRS850 | 251 | NV | 20 | 18.85 | 0.022208 | ±2.5 | PASS |
| EGPRS850 | 251 | NV | 30 | 20.40 | 0.024034 | ±2.5 | PASS |
| EGPRS850 | 251 | NV | 40 | 9.69 | 0.011416 | ±2.5 | PASS |
| EGPRS850 | 251 | NV | 50 | 9.91 | 0.011675 | ±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



