

Appendix for WCDMA Band II

Model: VNE-N41

BTL-FCCP-7-2204C233

CONTENT

| | | |
|-----|--|----|
| 1 | Appendix_A: Effective (Isotropic) Radiated Power of Transmitter..... | 3 |
| 1.1 | Test Results..... | 3 |
| 2 | Appendix_B: Peak-to-Average Ratio | 4 |
| 2.1 | Test Results..... | 4 |
| 3 | Appendix_C: Modulation Characteristics | 5 |
| 3.1 | Test Plots..... | 5 |
| | Band 2_TM1_MCH..... | 5 |
| 4 | Appendix_D: Occupied Bandwidth..... | 6 |
| 4.1 | Test Results..... | 6 |
| 4.2 | Test Plots..... | 7 |
| | Band 2_TM1_LCH..... | 7 |
| | Band 2_TM1_MCH..... | 8 |
| | Band 2_TM1_HCH | 9 |
| 5 | Appendix_E: Band Edges Compliance | 10 |
| 5.1 | Test Results..... | 10 |
| 5.2 | Test Plots..... | 11 |
| | Band 2_TM1_LCH..... | 11 |
| | Band 2_TM1_HCH | 11 |
| 6 | Appendix_F: Spurious Emission at Antenna Terminal..... | 12 |
| 6.1 | Test Results..... | 12 |
| 6.2 | Test Plots..... | 13 |
| | Band 2_TM1_LCH..... | 13 |
| | Band 2_TM1_MCH..... | 15 |
| | Band 2_TM1_HCH | 17 |
| 7 | Appendix_G: Frequency Stability..... | 19 |
| 7.1 | Test Results..... | 19 |
| | Frequency Error vs. Voltage | 19 |
| | Frequency Error vs. Temperature | 20 |

1 Appendix_A: Effective (Isotropic) Radiated Power of Transmitter

1.1 Test Results

| Test Band | Test Mode | Test Channel | Conducted Power [dBm] | Gain [dBi] | ER(I)P [dBm] | Limit [dBm] | Verdict |
|-----------|-----------|--------------|-----------------------|------------|--------------|-------------|---------|
| 2 | TM1 | LCH | 23.52 | 0.1 | 23.62 | 33 | PASS |
| | | MCH | 23.60 | 0.1 | 23.70 | 33 | PASS |
| | | HCH | 23.54 | 0.1 | 23.64 | 33 | PASS |

2 Appendix_B: Peak-to-Average Ratio

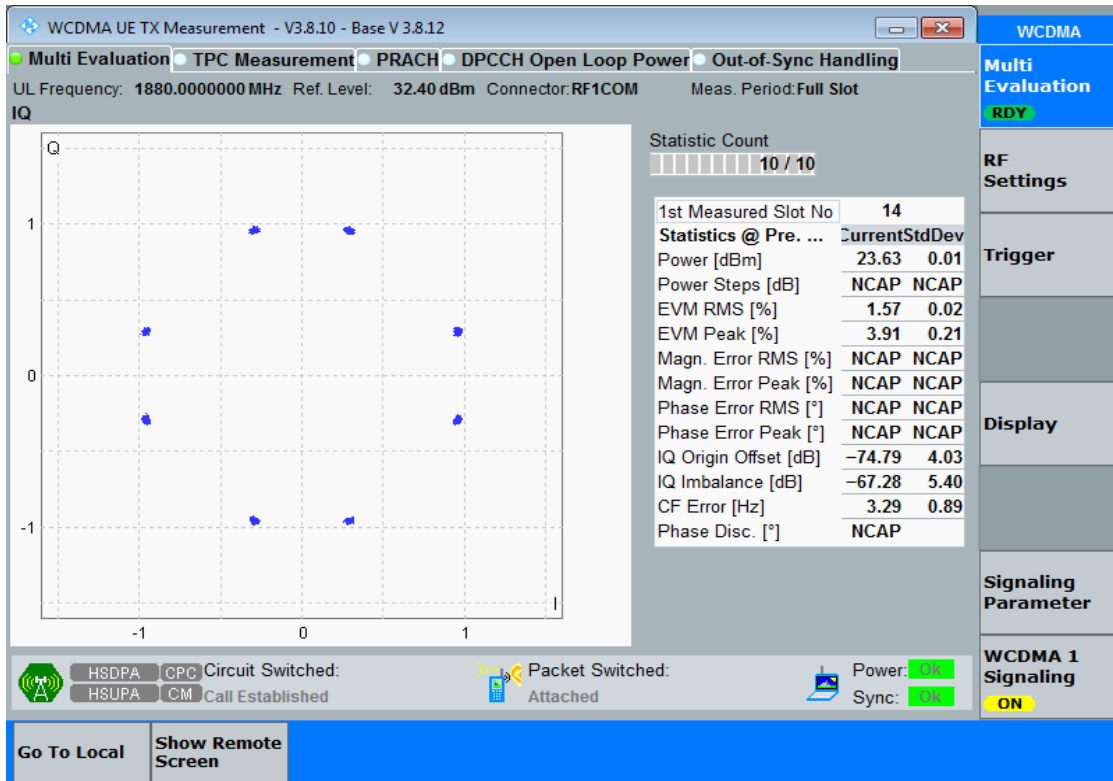
2.1 Test Results

| Test Band | Test Mode | Test Channel | Measured[dB] | Limit [dB] | Verdict |
|-----------|-----------|--------------|--------------|------------|---------|
| 2 | TM1 | LCH | 3.11 | 13 | PASS |
| | | MCH | 3.13 | 13 | PASS |
| | | HCH | 6.63 | 13 | PASS |

3 Appendix_C: Modulation Characteristics

3.1 Test Plots

Band 2_TM1_MCH



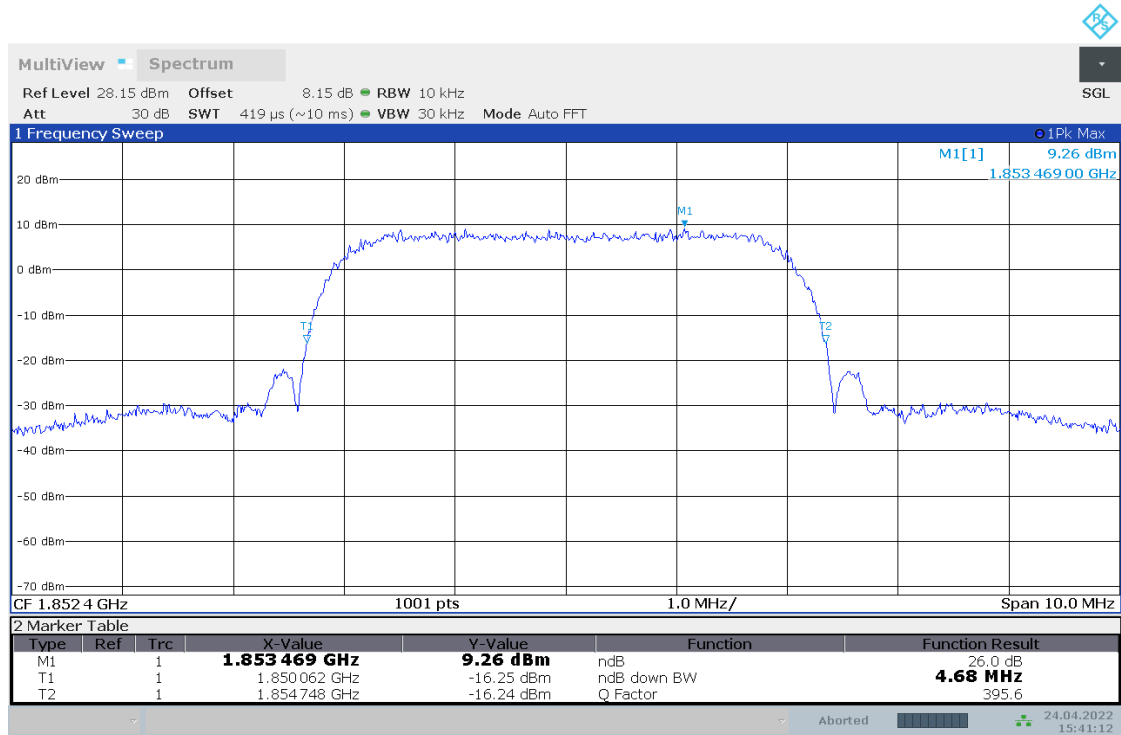
4 Appendix_D: Occupied Bandwidth

4.1 Test Results

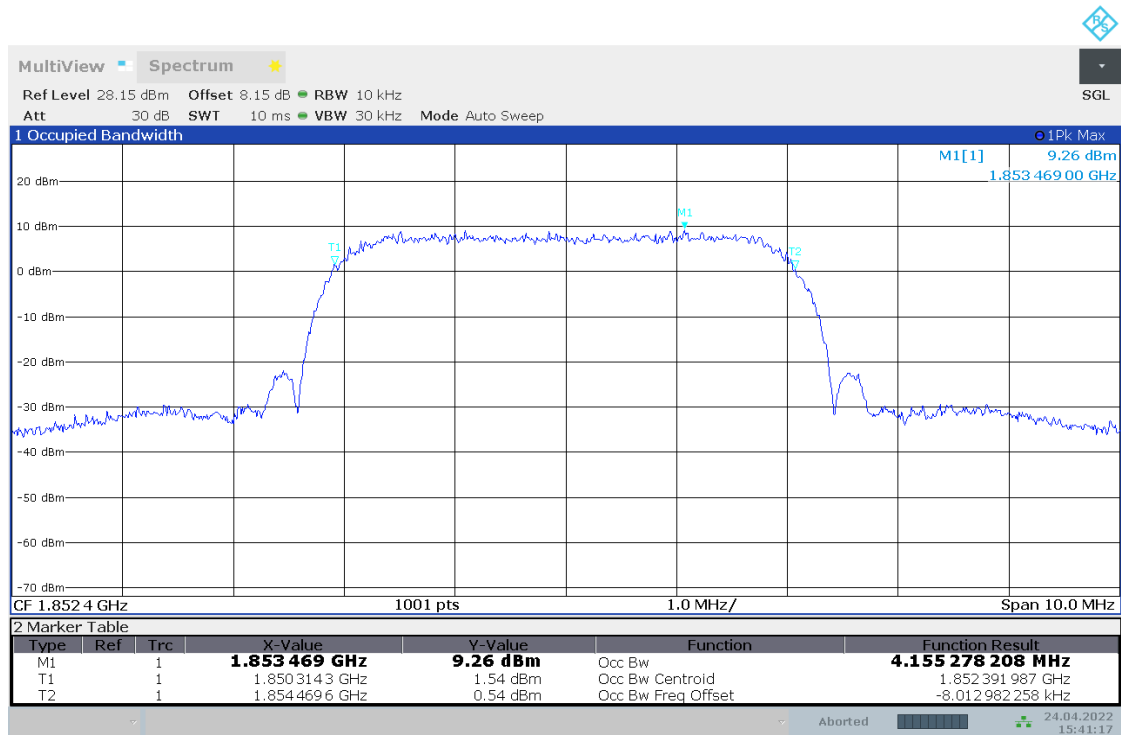
| Test Band | Test Mode | Test Channel | Occupied Bandwidth [MHz] | Emission Bandwidth [MHz] | Verdict |
|-----------|-----------|--------------|--------------------------|--------------------------|---------|
| 2 | TM1 | LCH | 4.16 | 4.68 | PASS |
| | | MCH | 4.15 | 4.68 | PASS |
| | | HCH | 4.15 | 4.68 | PASS |

4.2 Test Plots

Band 2_TM1_LCH

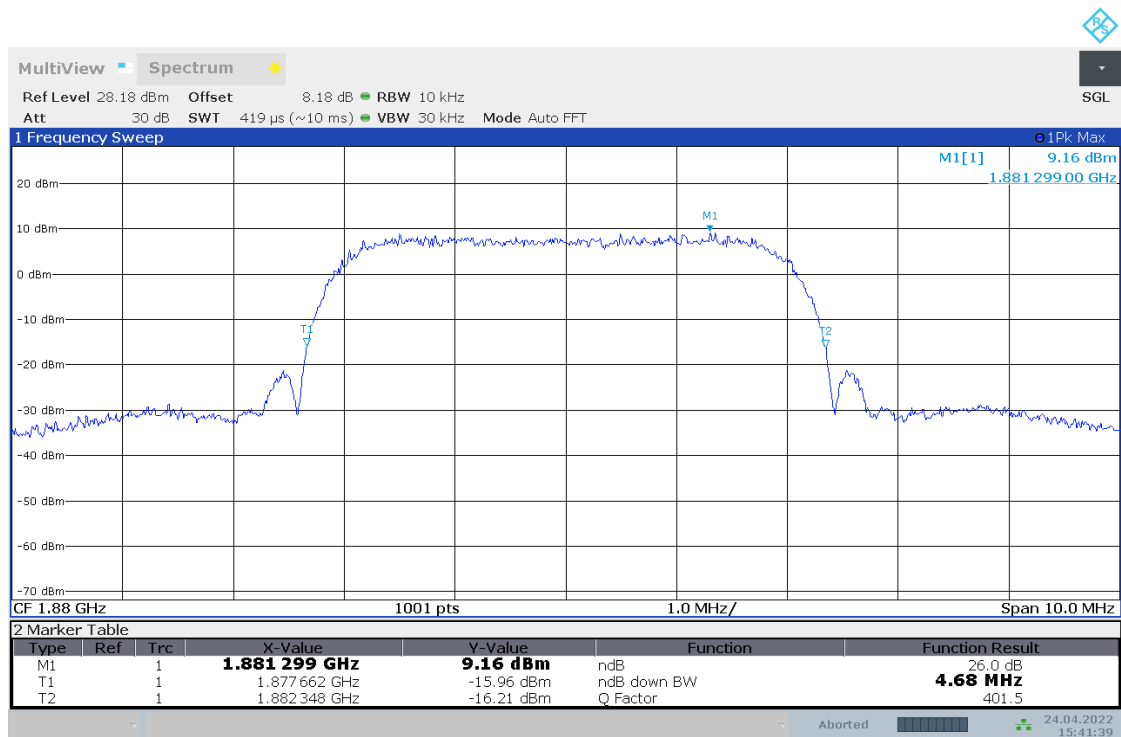


15:41:12 24.04.2022

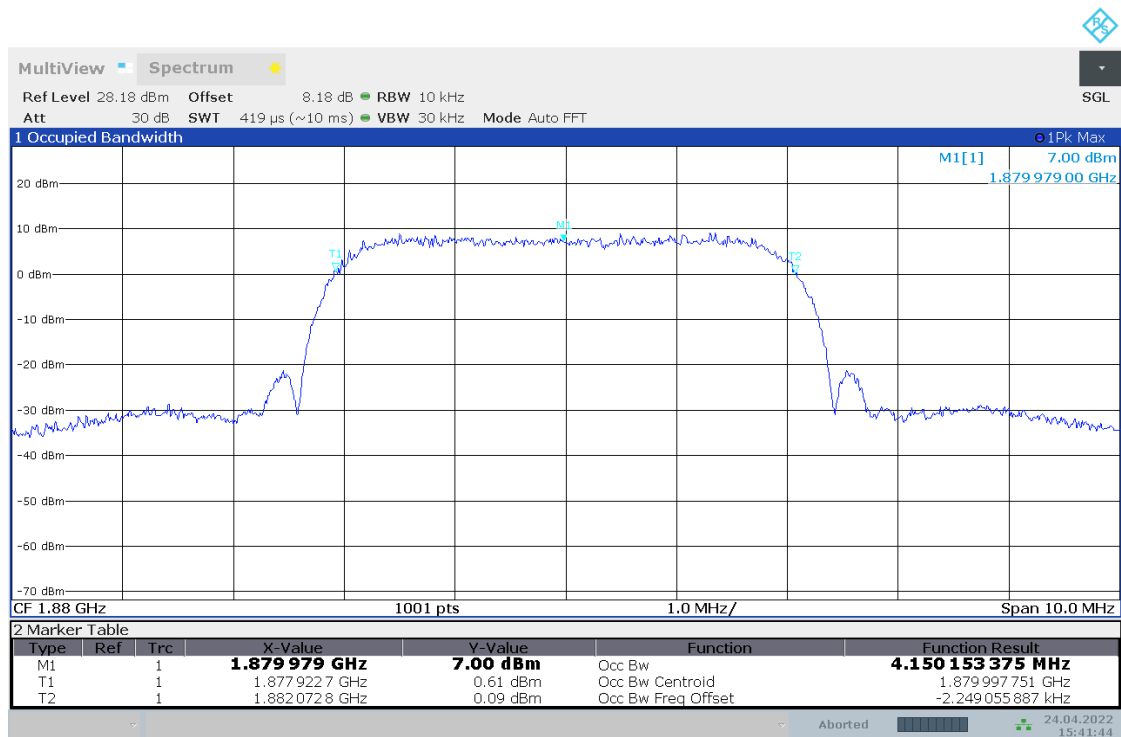


15:41:17 24.04.2022

Band 2_TM1_MCH

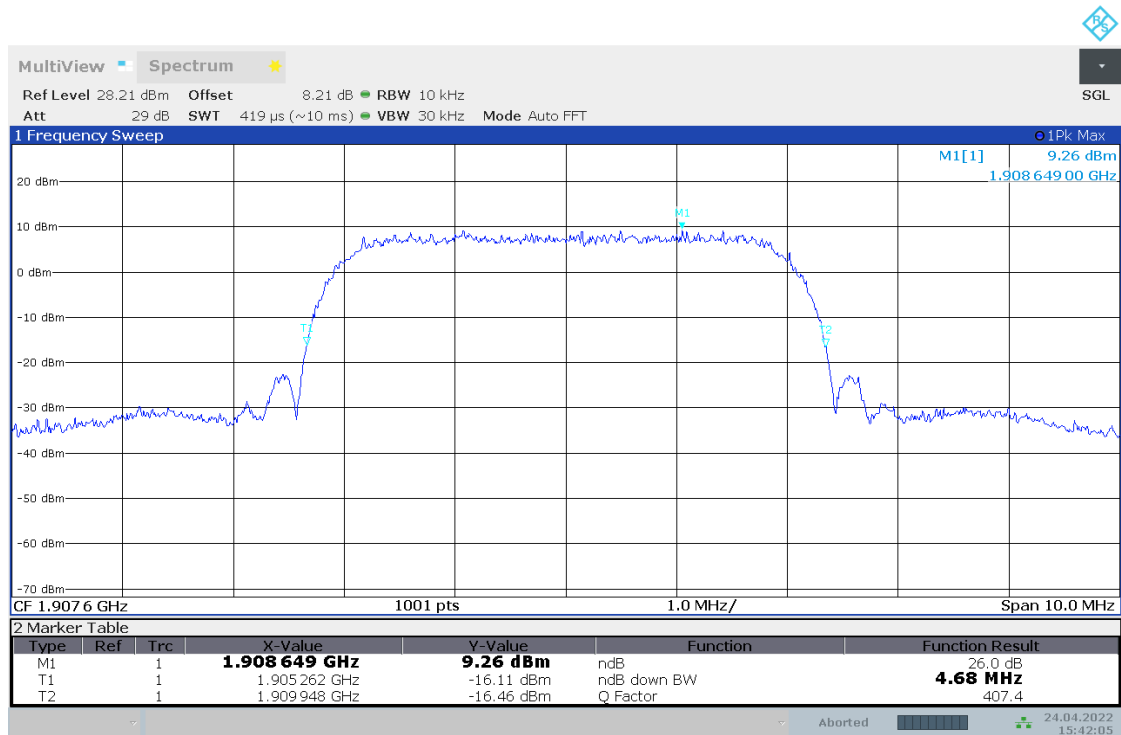


15:41:39 24.04.2022

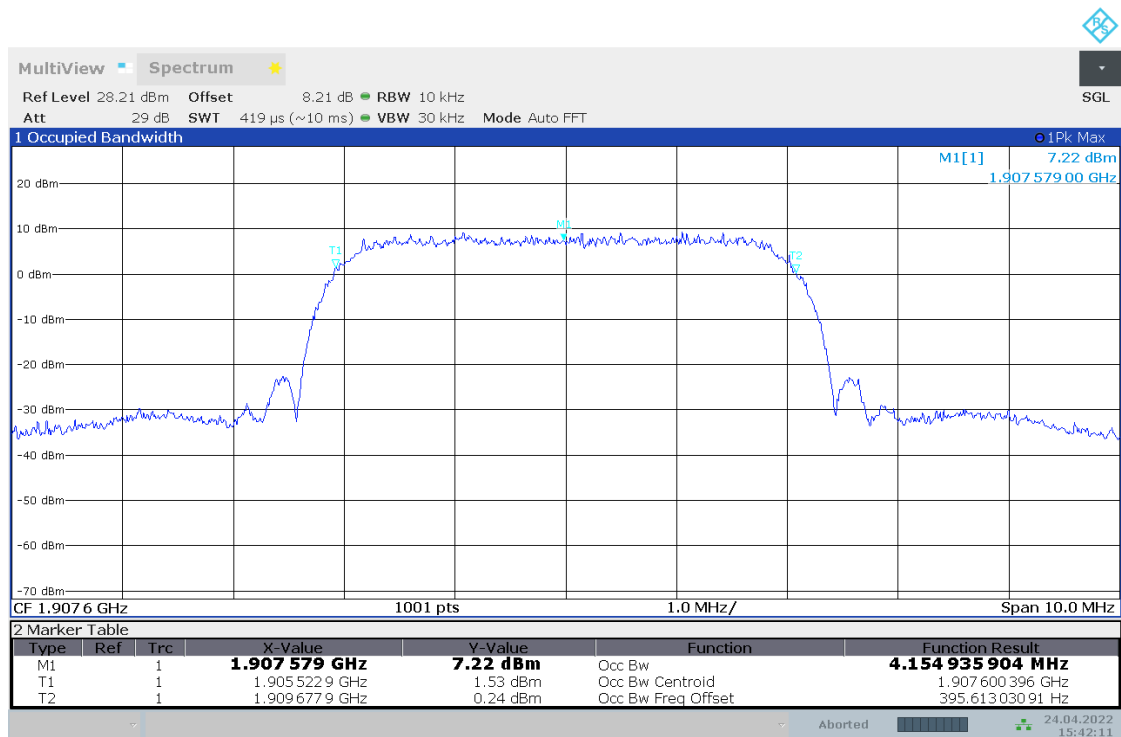


15:41:44 24.04.2022

Band 2_TM1_HCH



15:42:05 24.04.2022



15:42:11 24.04.2022

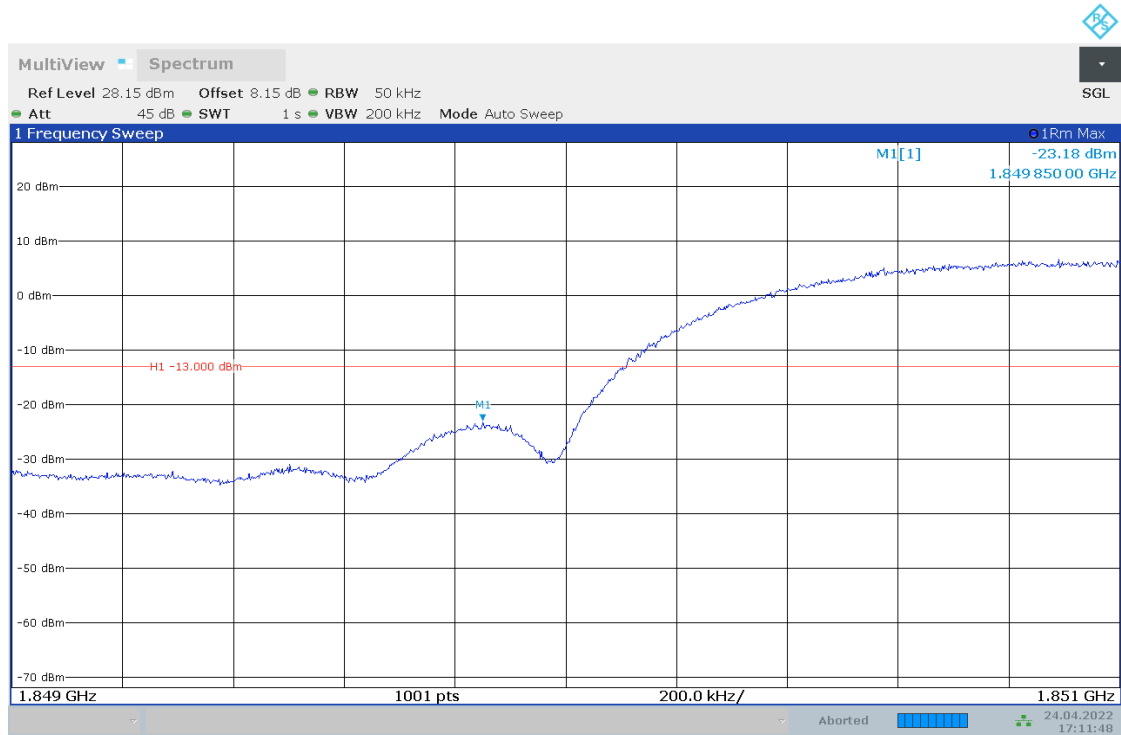
5 Appendix_E: Band Edges Compliance

5.1 Test Results

| Test Band | Test Mode | Test Channel | Measured Emissions Conformed to the Relevant Limits? | Verdict |
|-----------|-----------|--------------|--|---------|
| 2 | TM1 | LCH | Yes | PASS |
| | | HCH | Yes | PASS |

5.2 Test Plots

Band 2_TM1_LCH



17:11:49 24.04.2022

Band 2_TM1_HCH



17:12:30 24.04.2022

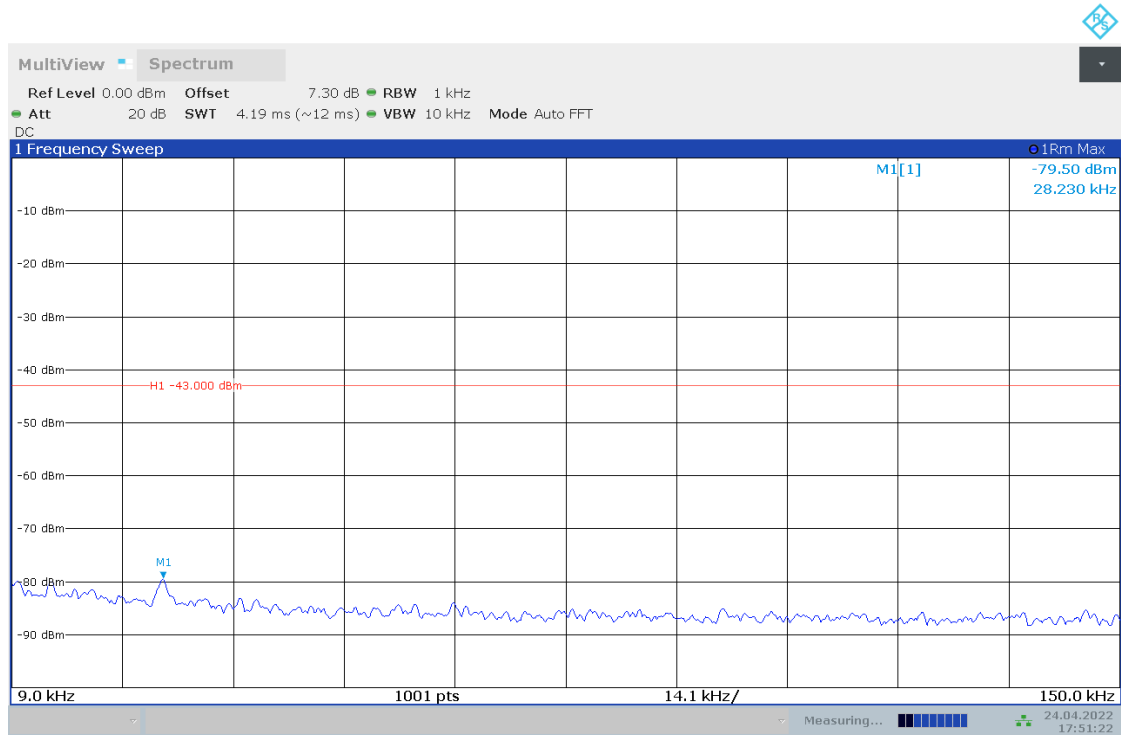
6 Appendix_F: Spurious Emission at Antenna Terminal

6.1 Test Results

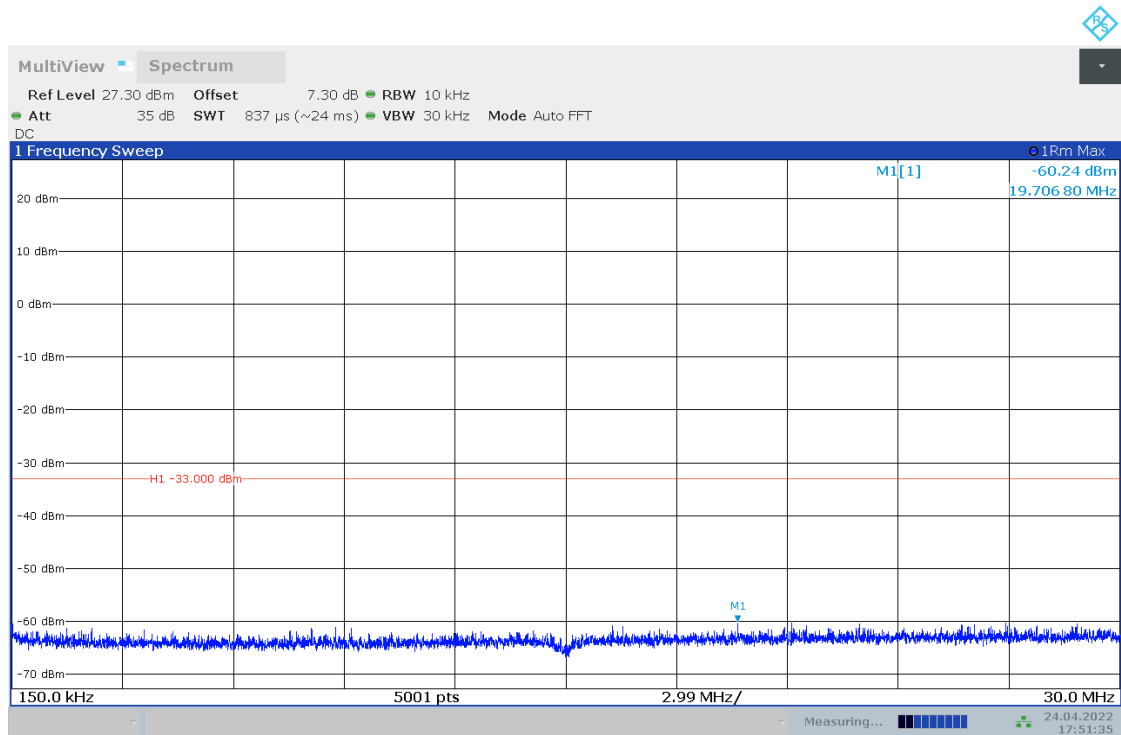
| Test Band | Test Mode | Test Channel | Measured Emissions Conformed to the Relevant Limits? | Verdict |
|-----------|-----------|--------------|--|---------|
| 2 | TM1 | LCH | Yes | PASS |
| | | MCH | Yes | PASS |
| | | HCH | Yes | PASS |

6.2 Test Plots

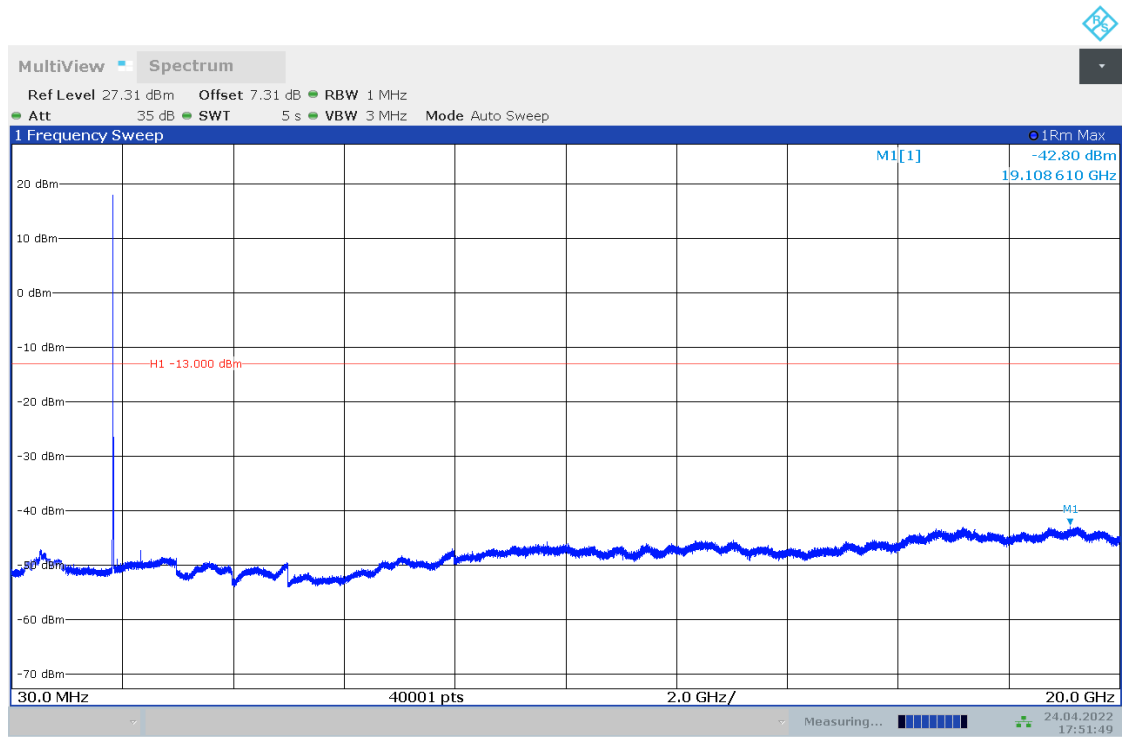
Band 2_TM1_LCH



17:51:22 24.04.2022

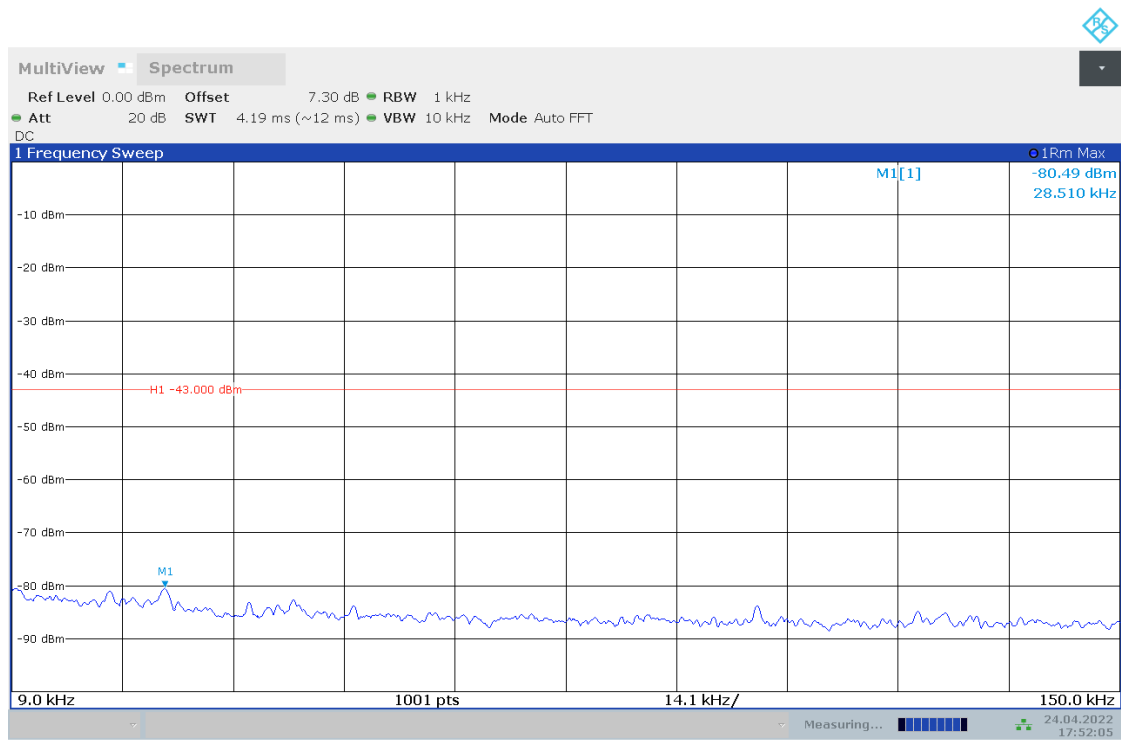


17:51:36 24.04.2022

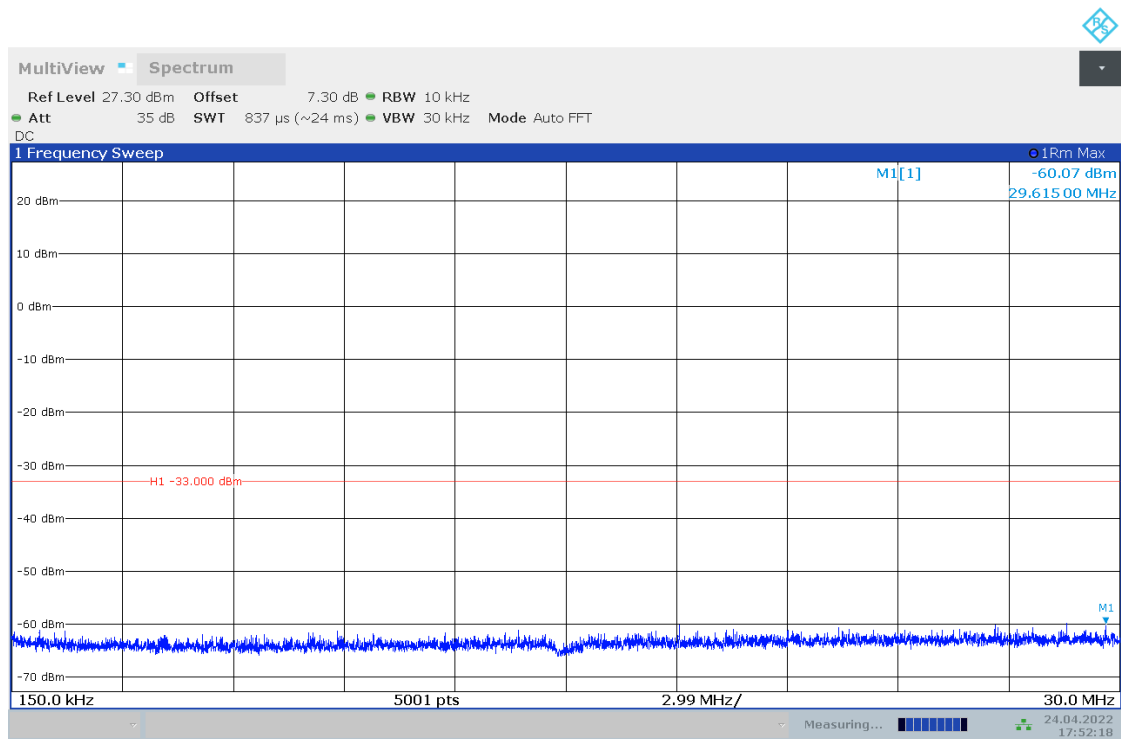


17:51:50 24.04.2022

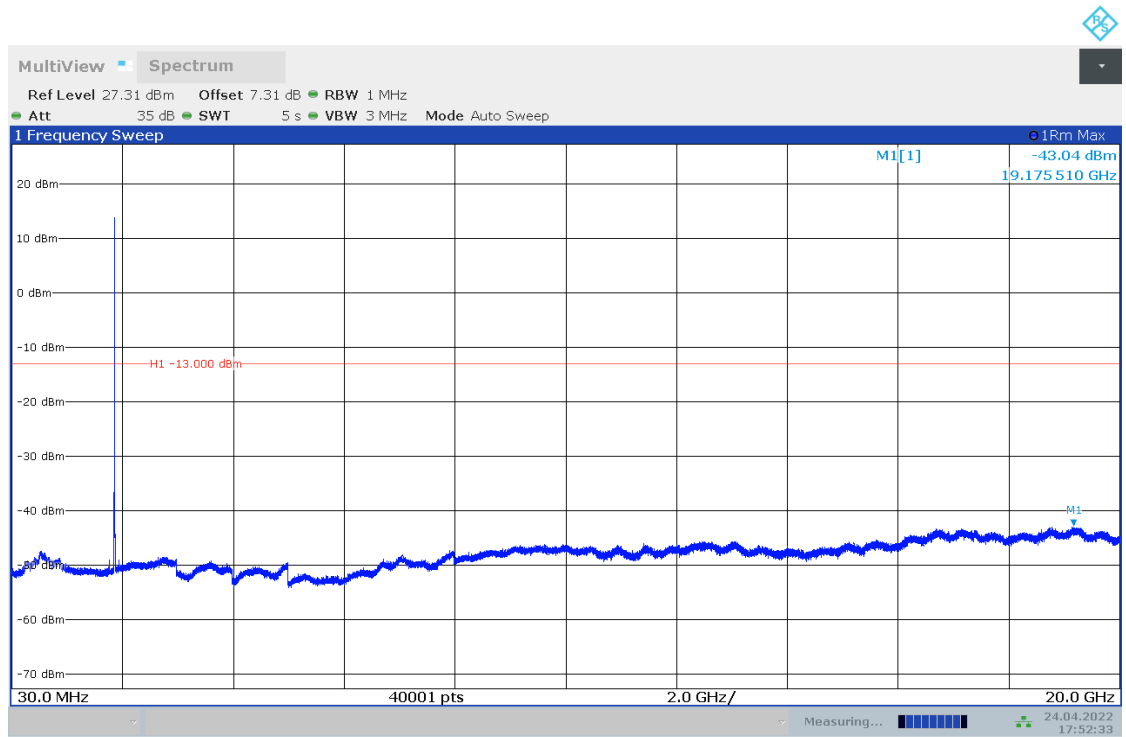
Band 2_TM1_MCH



17:52:06 24.04.2022

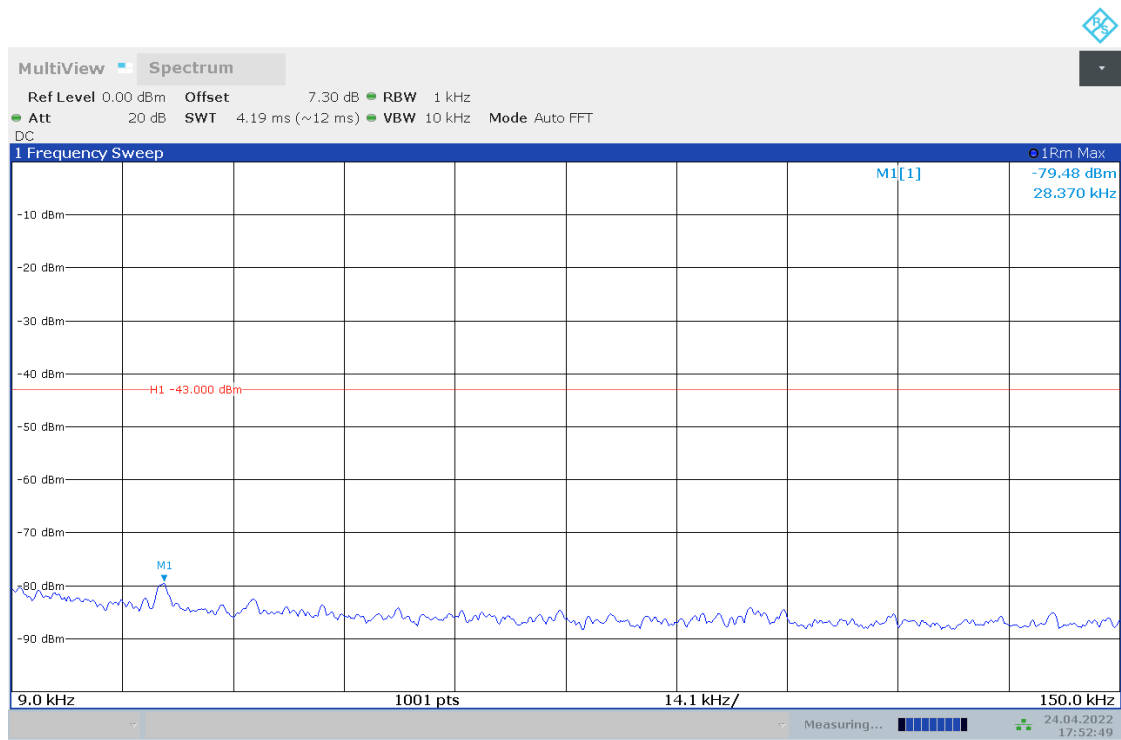


17:52:19 24.04.2022

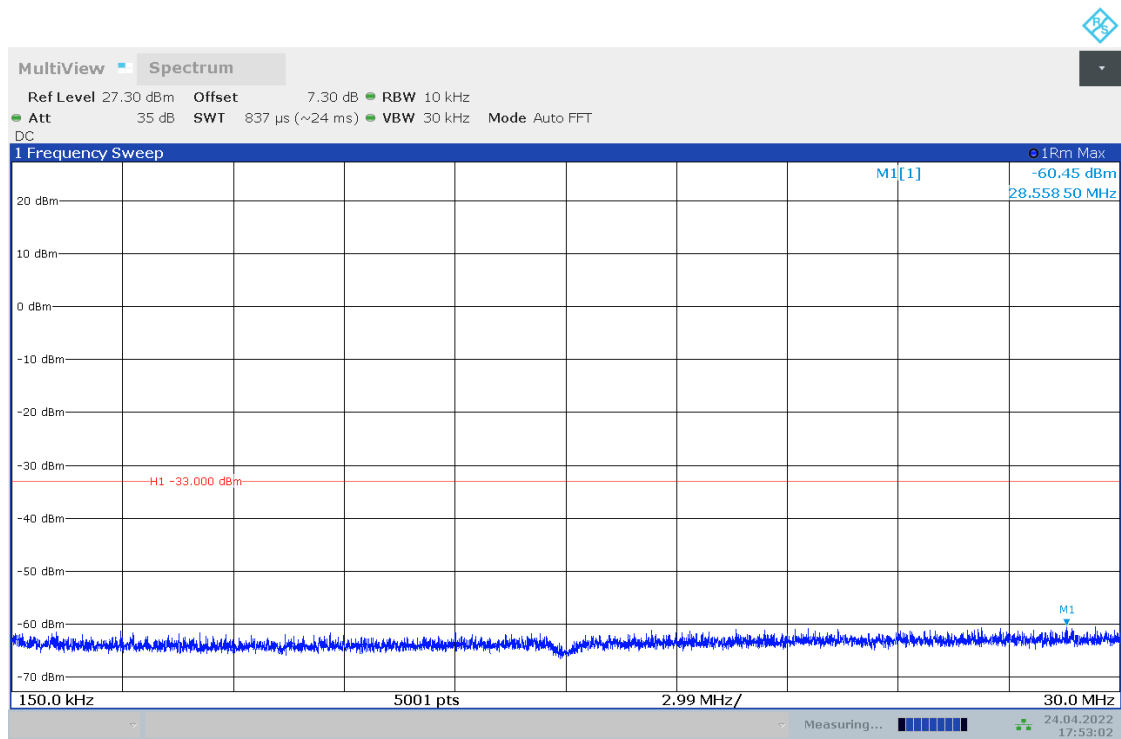


17:52:33 24.04.2022

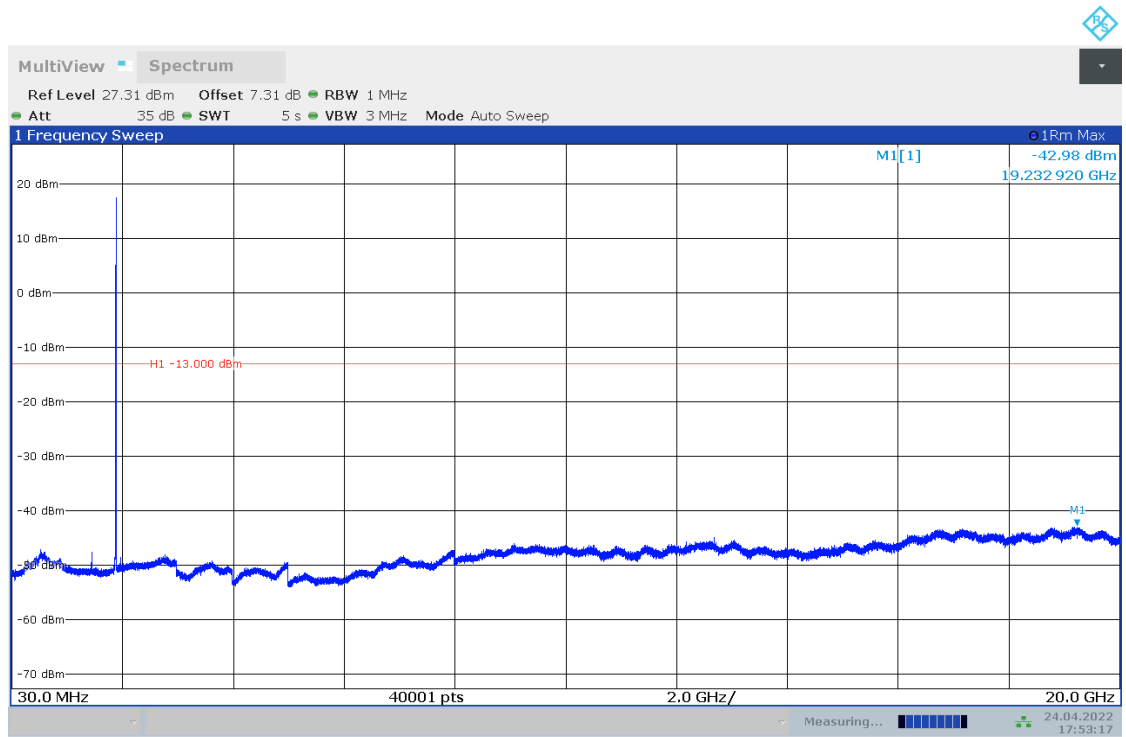
Band 2_TM1_HCH



17:52:50 24.04.2022



17:53:03 24.04.2022



17:53:17 24.04.2022

7 Appendix_G: Frequency Stability

7.1 Test Results

Frequency Error vs. Voltage

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Verdict |
|-----------|-----------|--------------|------------|------------|------------------|-----------------------|---------|
| 2 | TM1 | LCH | TN | VH | 3.44 | 0.0 | PASS |
| | | | TN | VN | 3.14 | 0.0 | PASS |
| | | | TN | VL | 2.19 | 0.0 | PASS |
| | | MCH | TN | VH | -1.52 | -0.0 | PASS |
| | | | TN | VN | -0.88 | -0.0 | PASS |
| | | | TN | VL | -0.58 | -0.0 | PASS |
| | | HCH | TN | VH | -1.81 | -0.0 | PASS |
| | | | TN | VN | -1.67 | -0.0 | PASS |
| | | | TN | VL | -1.47 | -0.0 | PASS |

Frequency Error vs. Temperature

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Verdict |
|-----------|-----------|--------------|------------|------------|------------------|-----------------------|---------|
| 2 | TM1 | LCH | VN | -30 | 2.30 | 0.0 | PASS |
| | | | VN | -20 | 2.35 | 0.0 | PASS |
| | | | VN | -10 | 2.67 | 0.0 | PASS |
| | | | VN | 0 | 2.10 | 0.0 | PASS |
| | | | VN | 10 | 0.89 | 0.0 | PASS |
| | | | VN | 20 | -0.93 | -0.0 | PASS |
| | | | VN | 30 | 1.10 | 0.0 | PASS |
| | | | VN | 40 | 0.87 | 0.0 | PASS |
| | | | VN | 50 | -0.50 | -0.0 | PASS |
| | | MCH | VN | -30 | -0.63 | -0.0 | PASS |
| | | | VN | -20 | -0.94 | -0.0 | PASS |
| | | | VN | -10 | 0.01 | 0.0 | PASS |
| | | | VN | 0 | -0.99 | -0.0 | PASS |
| | | | VN | 10 | -0.63 | -0.0 | PASS |
| | | | VN | 20 | -0.26 | -0.0 | PASS |
| | | | VN | 30 | -0.70 | -0.0 | PASS |
| | | | VN | 40 | 0.61 | 0.0 | PASS |
| | | | VN | 50 | 0.77 | 0.0 | PASS |
| | | HCH | VN | -30 | -0.70 | -0.0 | PASS |
| | | | VN | -20 | -1.79 | -0.0 | PASS |
| | | | VN | -10 | -1.44 | -0.0 | PASS |
| | | | VN | 0 | -2.23 | -0.0 | PASS |
| | | | VN | 10 | -1.89 | -0.0 | PASS |
| | | | VN | 20 | -2.68 | -0.0 | PASS |
| | | | VN | 30 | -1.81 | -0.0 | PASS |
| | | | VN | 40 | -2.55 | -0.0 | PASS |
| | | | VN | 50 | -2.02 | -0.0 | PASS |

End of Test Report