# Appendix: Bluetooth BR&EDR

# Contents

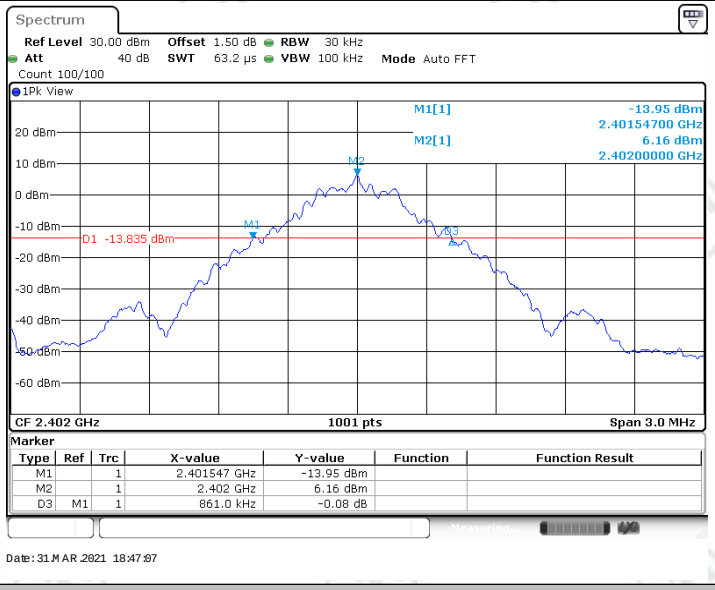
Appendix A: 20dB Emission Bandwidth.....
Test Result.....
Test Graphs.....
Appendix B: Occupied Channel Bandwidth.....
Test Result.....
Test Graphs.....
Appendix C: Maximum conducted output power.....
Test Result.....
Test Graphs.....
Appendix D: Carrier frequency separation.....
Test Result.....
Test Graphs.....
Appendix E: Time of occupancy.....
Test Result.....
Test Graphs.....
Appendix F: Number of hopping channels.....
Test Result.....
Test Graphs.....
Appendix G: Band edge measurements.....
Test Result.....
Test Graphs.....
Appendix H: Conducted Spurious Emission.....
Test Result.....
Test Graphs.....
Appendix I: Duty Cycle.....
Test Result.....
Test Graphs.....

# Appendix A: 20dB Emission Bandwidth

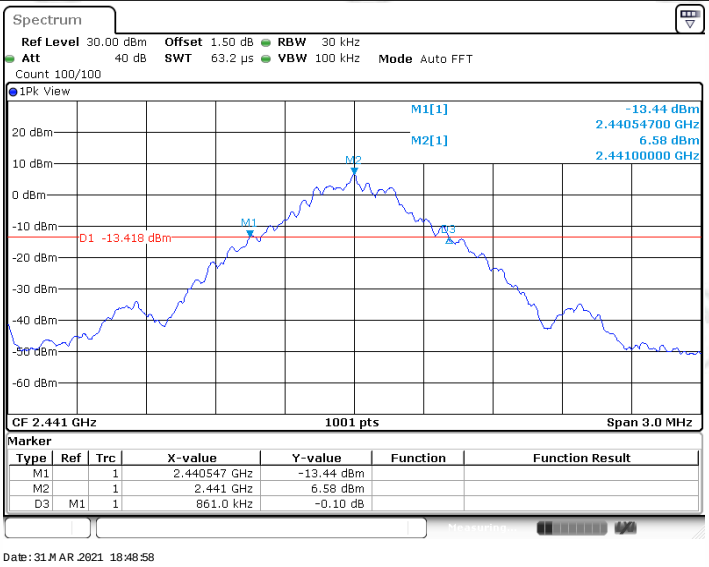
## Test Result

| Test Mode | Antenna | Channel | 20db EBW[MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|---|---|
| DH5 | Ant1 | 2402 | 0.861 | 2401.547 | 2402.408 | --- | PASS |
| | | 2441 | 0.861 | 2440.547 | 2441.408 | --- | PASS |
| | | 2480 | 0.864 | 2479.544 | 2480.408 | --- | PASS |
| 2DH5 | Ant1 | 2402 | 1.230 | 2401.376 | 2402.606 | --- | PASS |
| | | 2441 | 1.230 | 2440.376 | 2441.606 | --- | PASS |
| | | 2480 | 1.233 | 2479.376 | 2480.609 | --- | PASS |

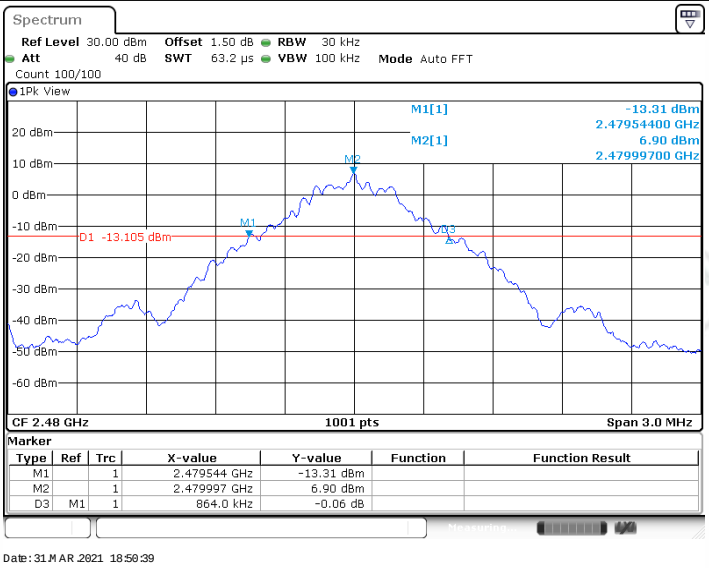
## Test Graphs



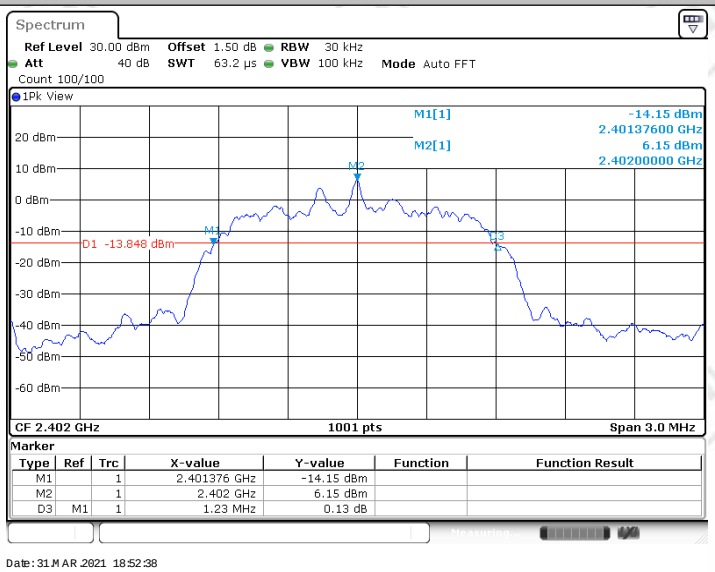

DH5_Ant1_2402



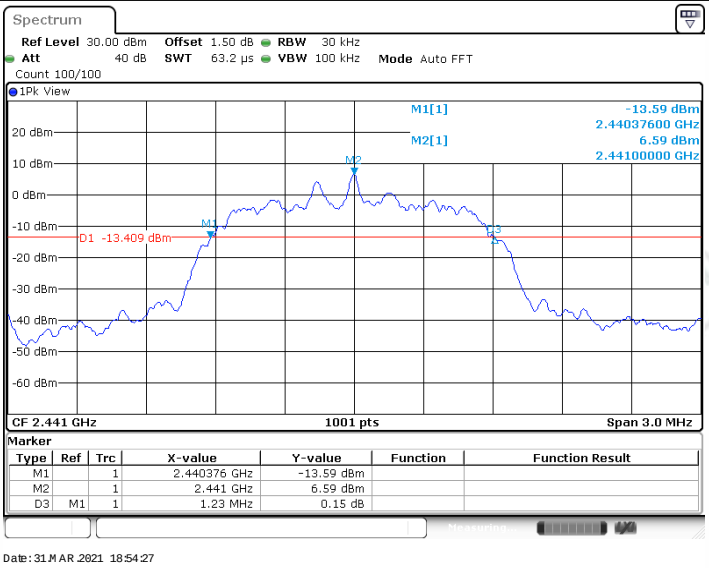

DH5_Ant1_2441



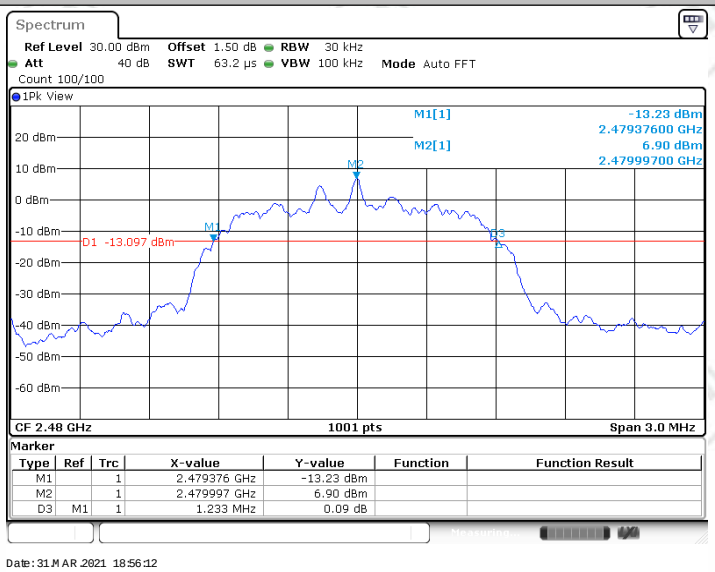

DH5_Ant1_2480




2DH5_Ant1_2402




2DH5_Ant1_2441



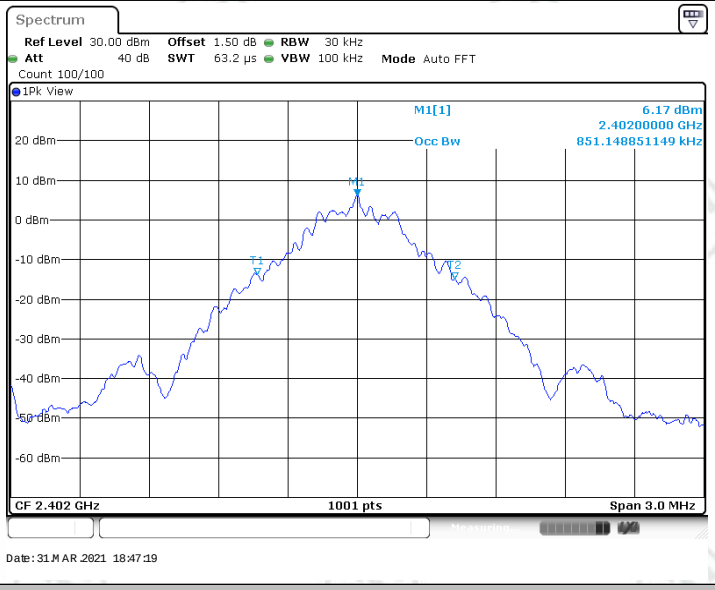

2DH5_Ant1_2480

# Appendix B: Occupied Channel Bandwidth

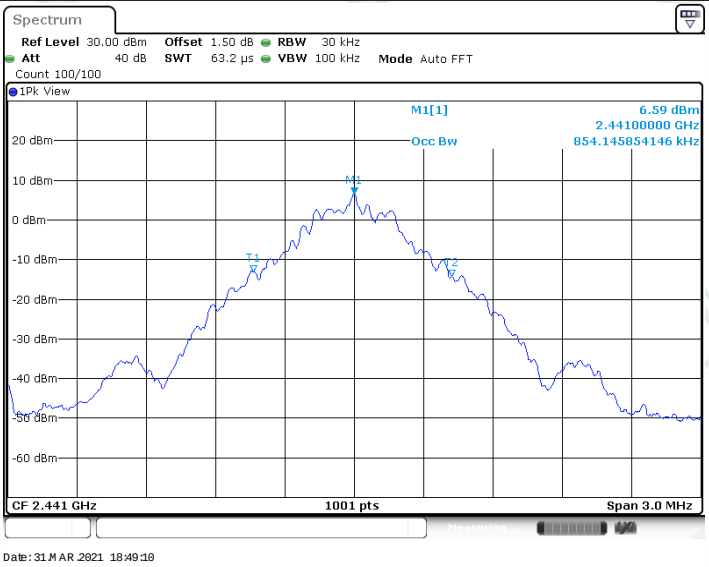
## Test Result

| Test Mode | Antenna | Channel | OCB [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|---|---|
| DH5 | Ant1 | 2402 | 0.851 | 2401.568 | 2402.420 | --- | PASS |
| | | 2441 | 0.854 | 2440.565 | 2441.420 | --- | PASS |
| | | 2480 | 0.854 | 2479.565 | 2480.420 | --- | PASS |
| 2DH5 | Ant1 | 2402 | 1.166 | 2401.413 | 2402.578 | --- | PASS |
| | | 2441 | 1.169 | 2440.410 | 2441.578 | --- | PASS |
| | | 2480 | 1.172 | 2479.410 | 2480.581 | --- | PASS |

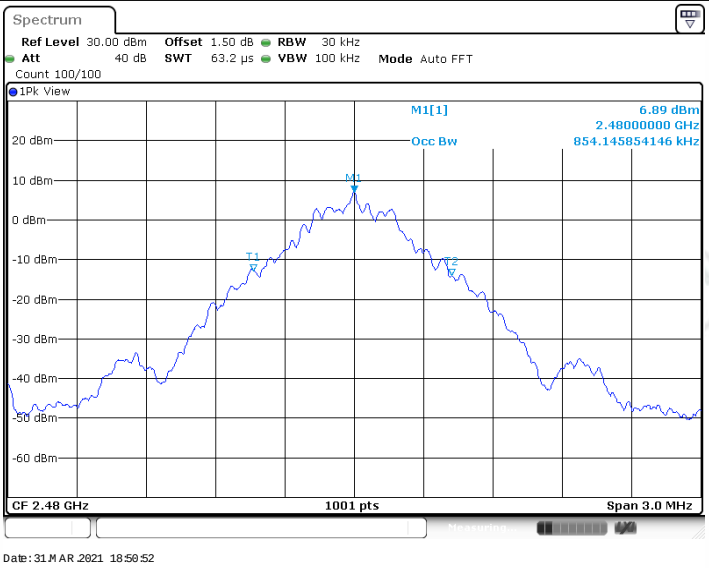
## Test Graphs



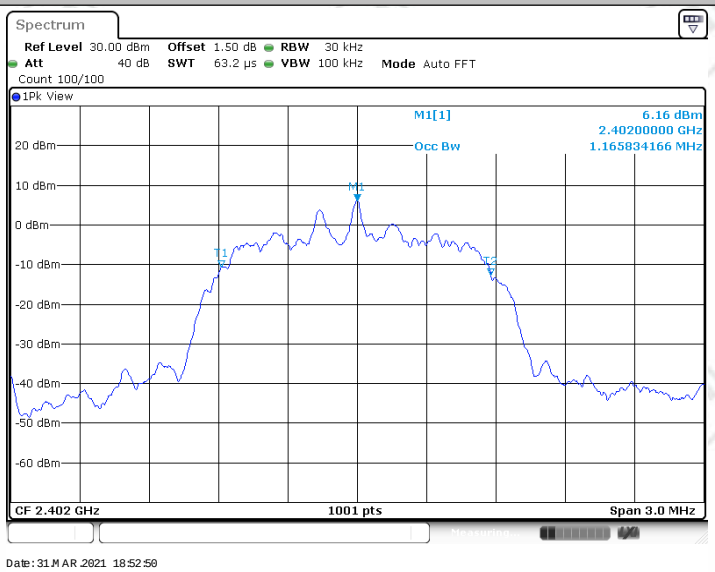

DH5_Ant1_2402



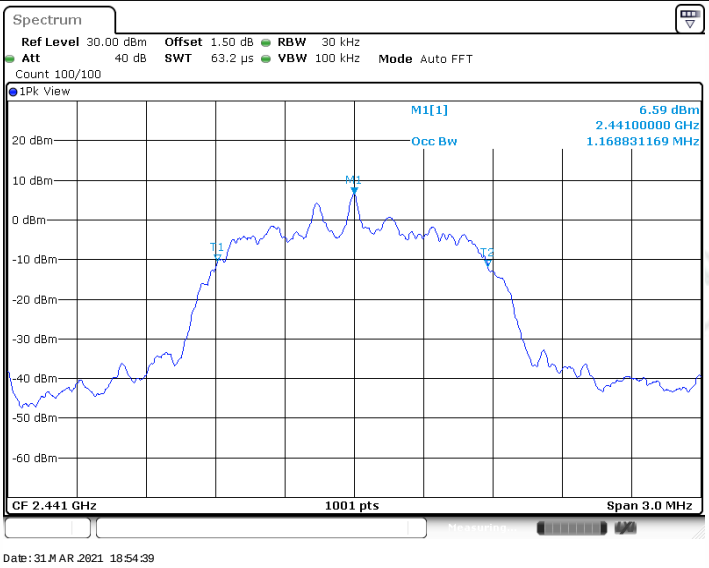

DH5_Ant1_2441



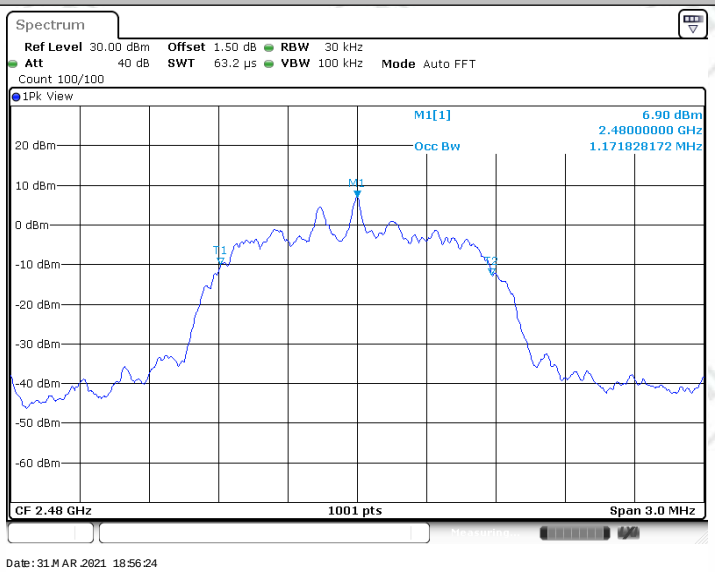

DH5_Ant1_2480




2DH5_Ant1_2402




2DH5_Ant1_2441



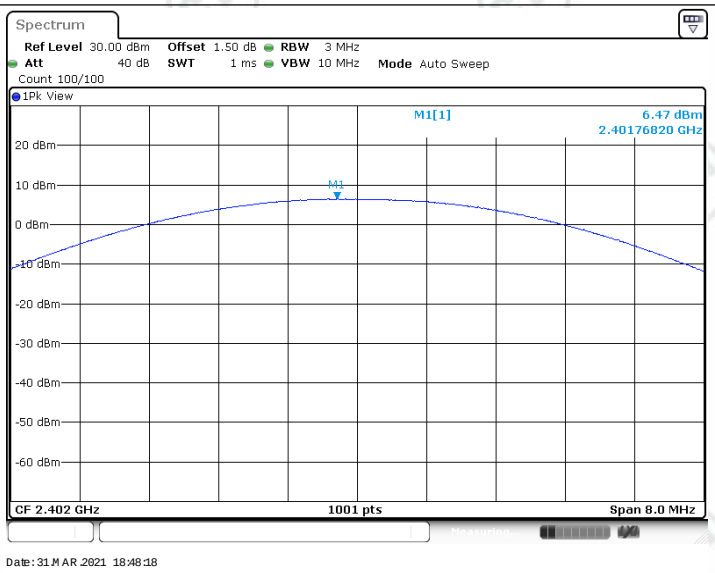

2DH5_Ant1_2480

# Appendix C: Maximum conducted output power

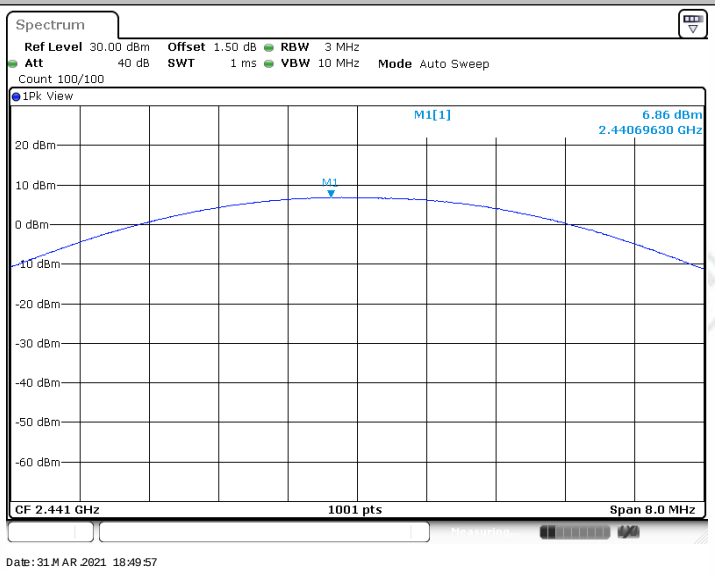
## Test Result

| Test Mode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|---|---|---|---|---|---|
| DH5 | Ant1 | 2402 | 6.47 | <=20.97 | PASS |
| | | 2441 | 6.86 | <=20.97 | PASS |
| | | 2480 | 7.17 | <=20.97 | PASS |
| 2DH5 | Ant1 | 2402 | 7.31 | <=20.97 | PASS |
| | | 2441 | 7.64 | <=20.97 | PASS |
| | | 2480 | 7.95 | <=20.97 | PASS |

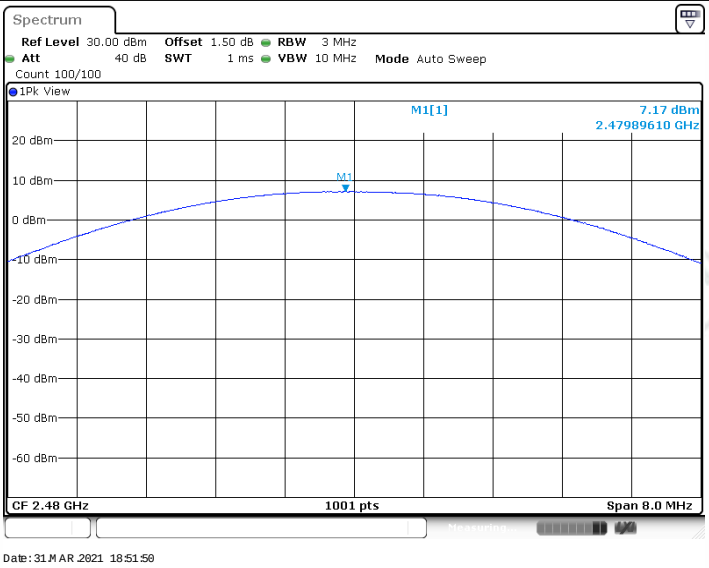
## Test Graphs



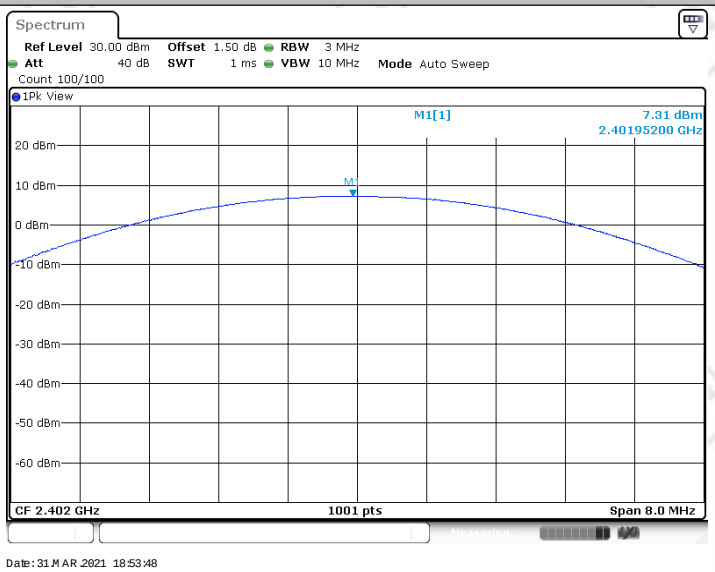

DH5_Ant1_2402



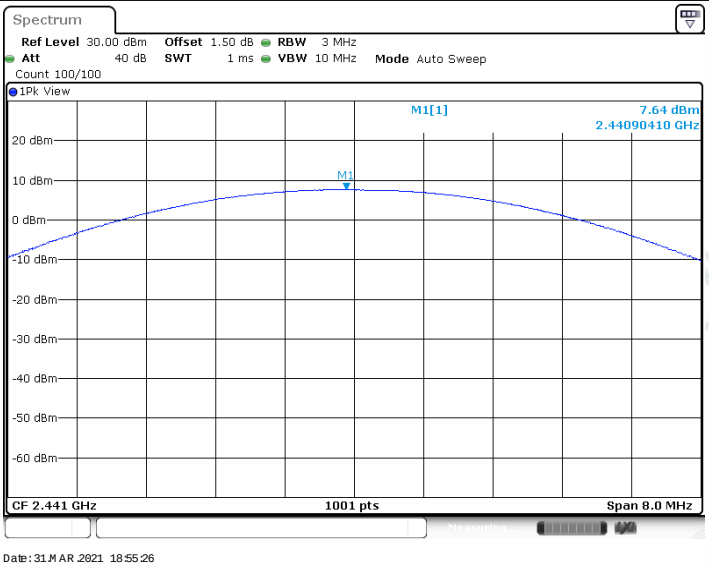

DH5_Ant1_2441



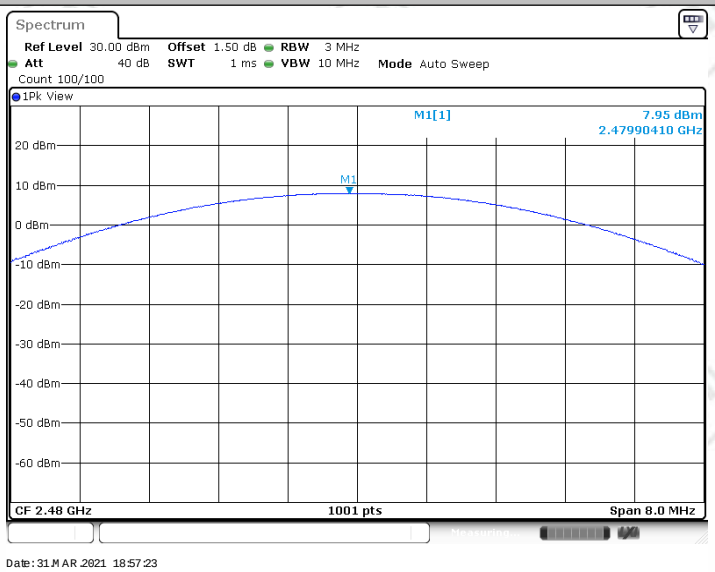

DH5_Ant1_2480




2DH5_Ant1_2402




2DH5_Ant1_2441



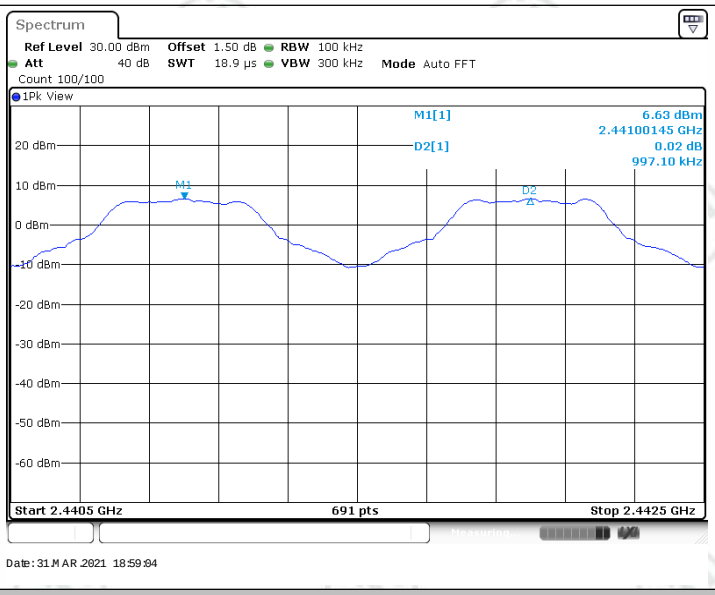

2DH5_Ant1_2480

# Appendix D: Carrier frequency separation

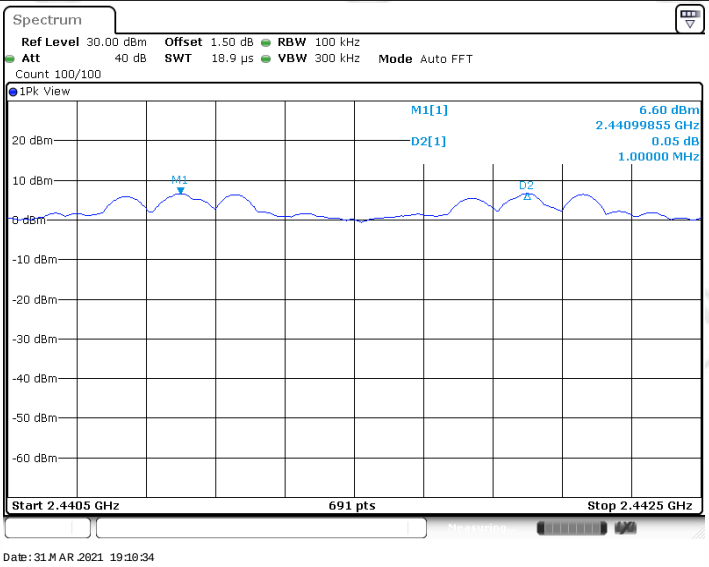
## Test Result

| Test Mode | Antenna | Channel | Result[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|
| DH5 | Ant1 | Hop | 0.997 | >=0.864 | PASS |
| 2DH5 | Ant1 | Hop | 1 | >=0.822 | PASS |

## Test Graphs




DH5_Ant1_Hop



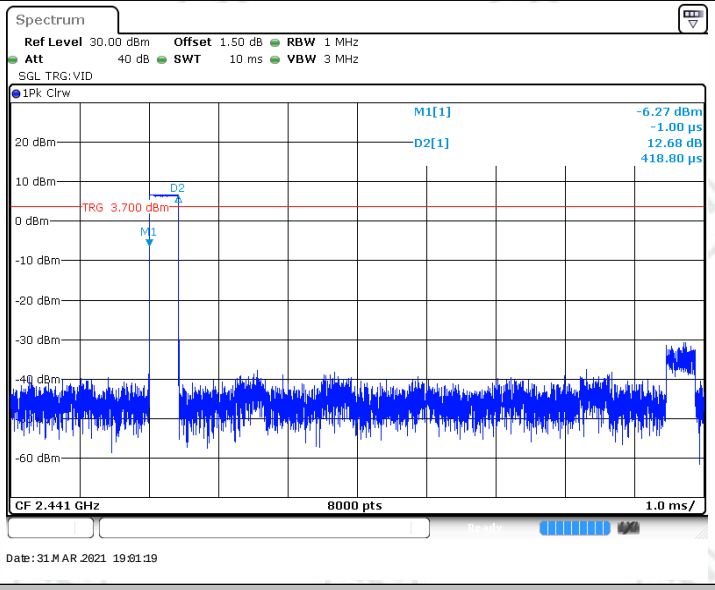

2DH5_Ant1_Hop

# Appendix E: Time of occupancy

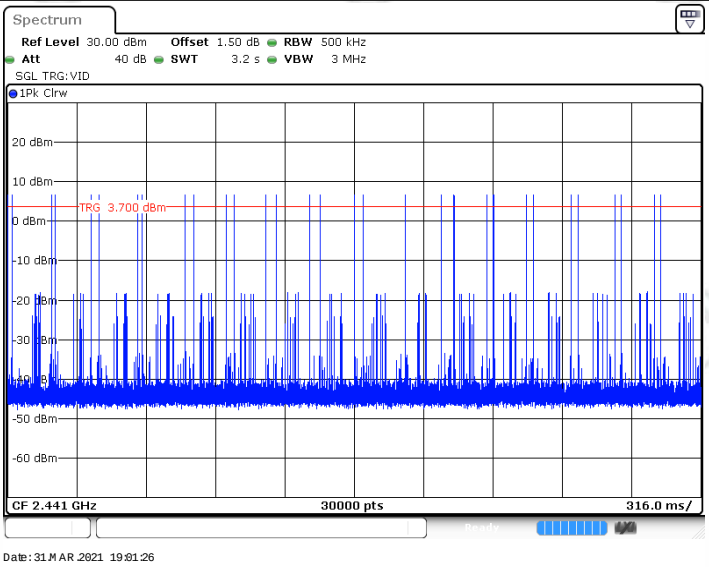
## Test Result

| Test Mode | Antenna | Channel | Burst Width [ms] | Total Hops [Num] | Result[s] | Limit[s] | Verdict |
|---|---|---|---|---|---|---|---|
| DH1 | Ant1 | Hop | 0.42 | 320 | 0.134 | <=0.4 | PASS |
| DH3 | Ant1 | Hop | 1.67 | 170 | 0.283 | <=0.4 | PASS |
| DH5 | Ant1 | Hop | 2.91 | 120 | 0.349 | <=0.4 | PASS |
| 2DH1 | Ant1 | Hop | 0.43 | 320 | 0.137 | <=0.4 | PASS |
| 2DH3 | Ant1 | Hop | 1.67 | 130 | 0.217 | <=0.4 | PASS |
| 2DH5 | Ant1 | Hop | 2.91 | 100 | 0.291 | <=0.4 | PASS |

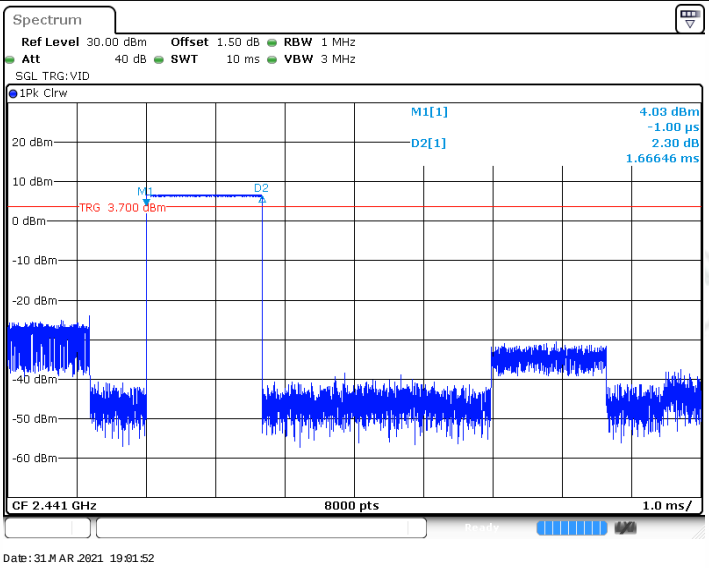
## Test Graphs



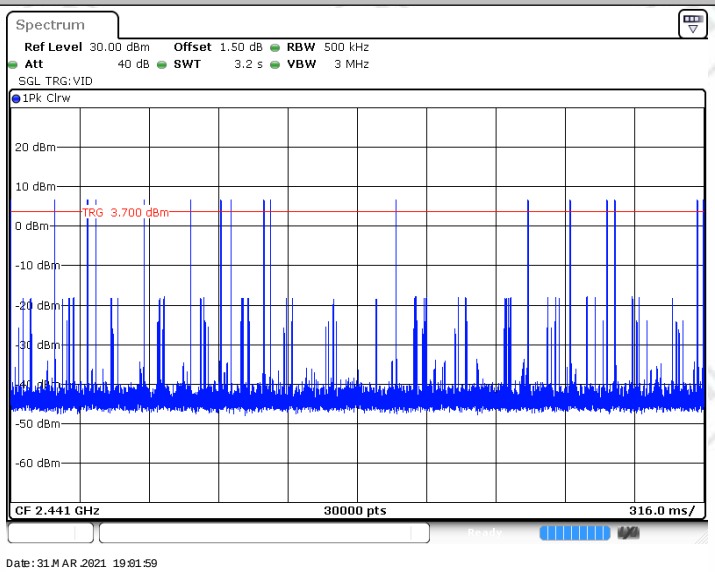

DH1_Ant1_Hop



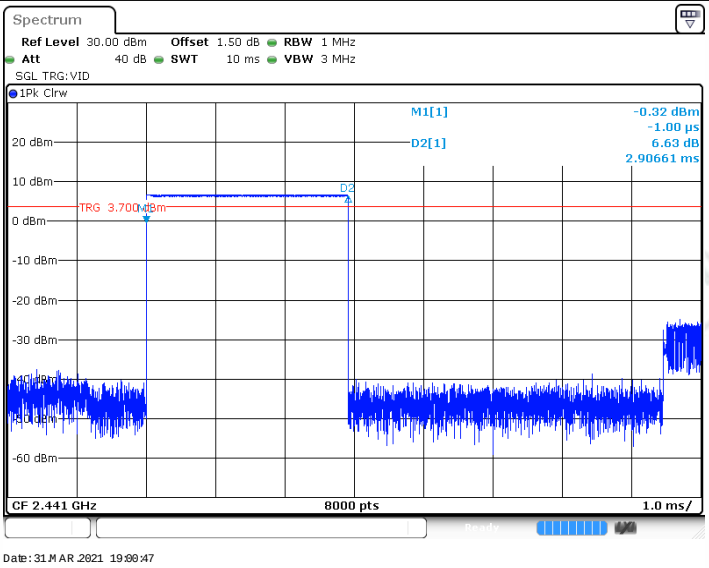

DH1_Ant1_Hop



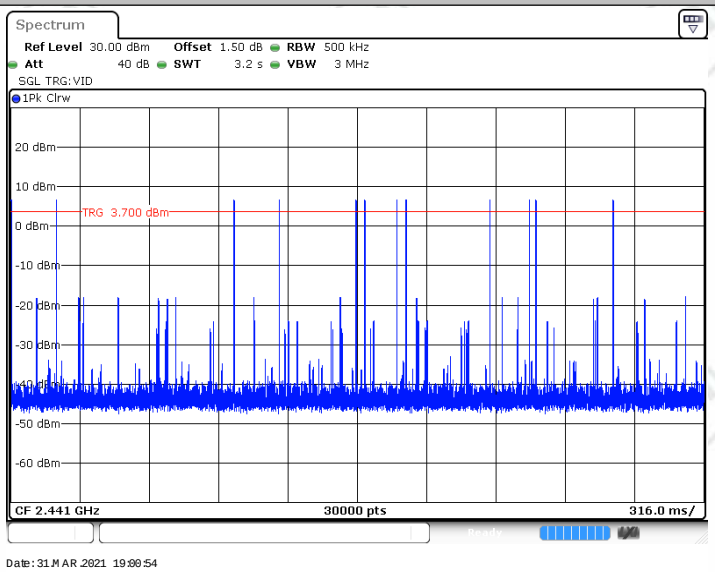

DH3_Ant1_Hop



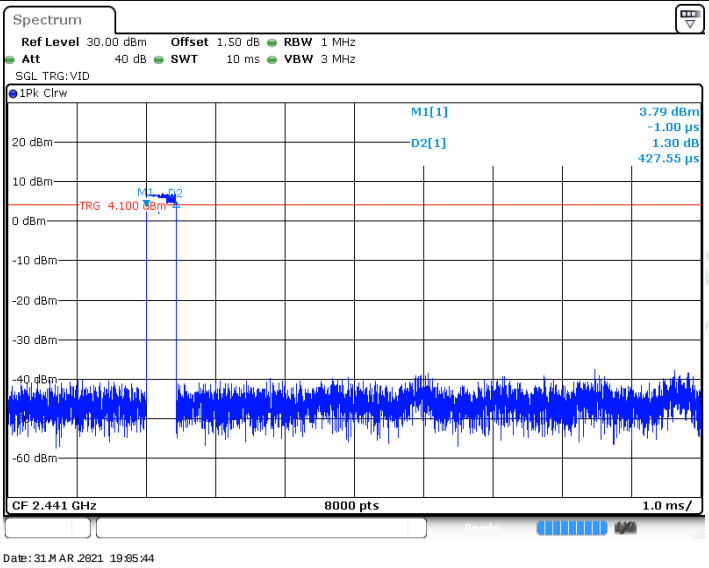

DH3_Ant1_Hop



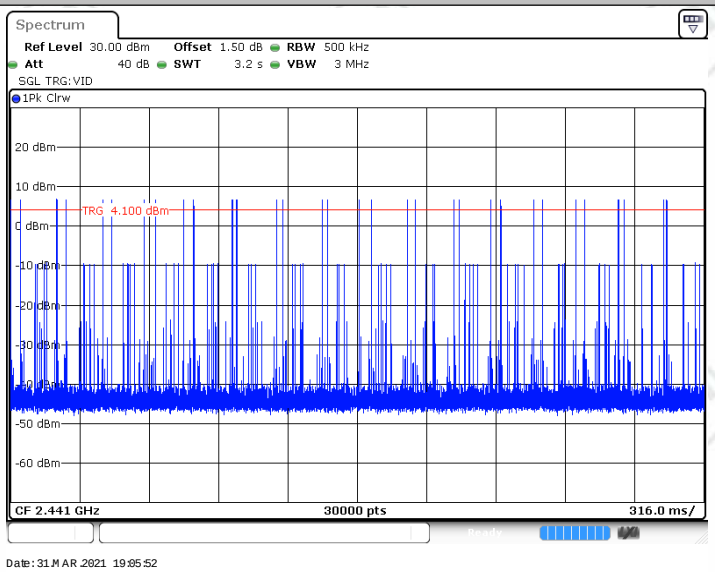

DH5_Ant1_Hop



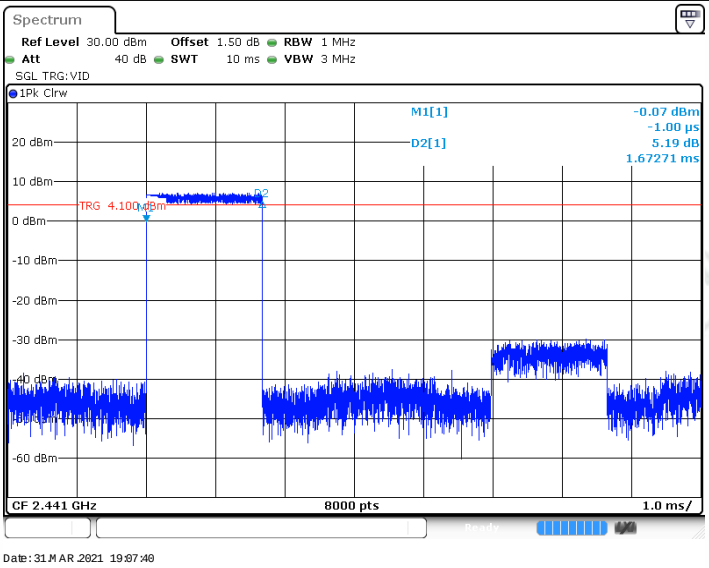

DH5_Ant1_Hop



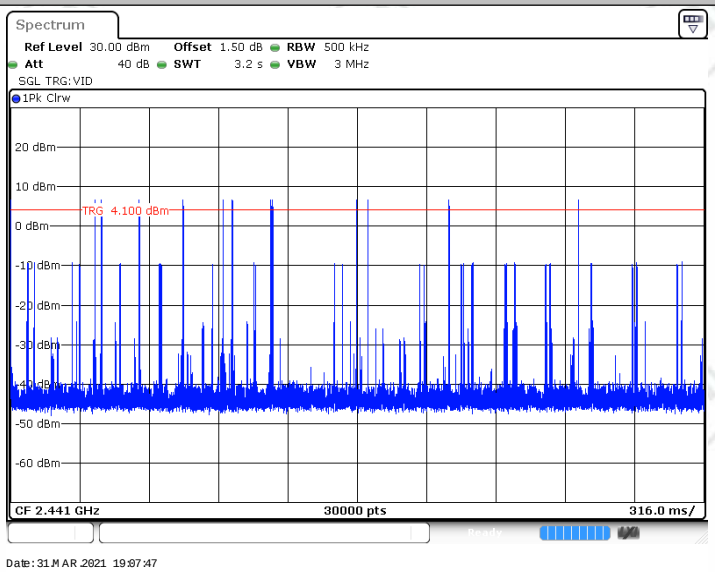

2DH1_Ant1_Hop



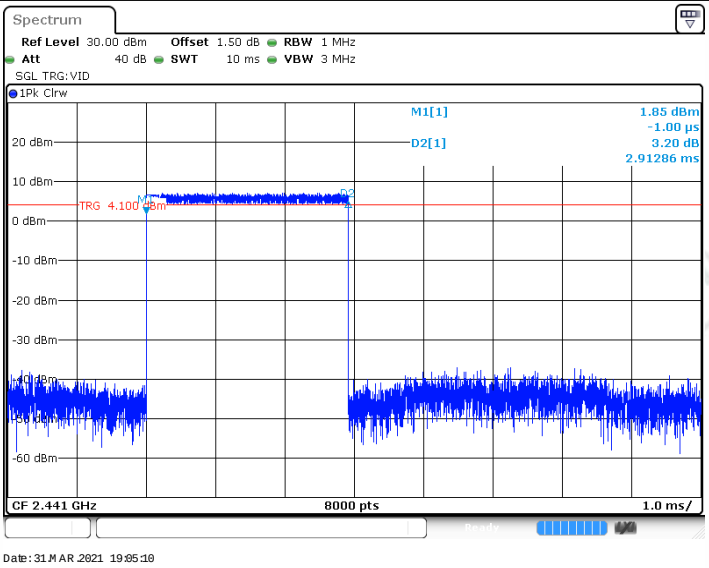

2DH1_Ant1_Hop



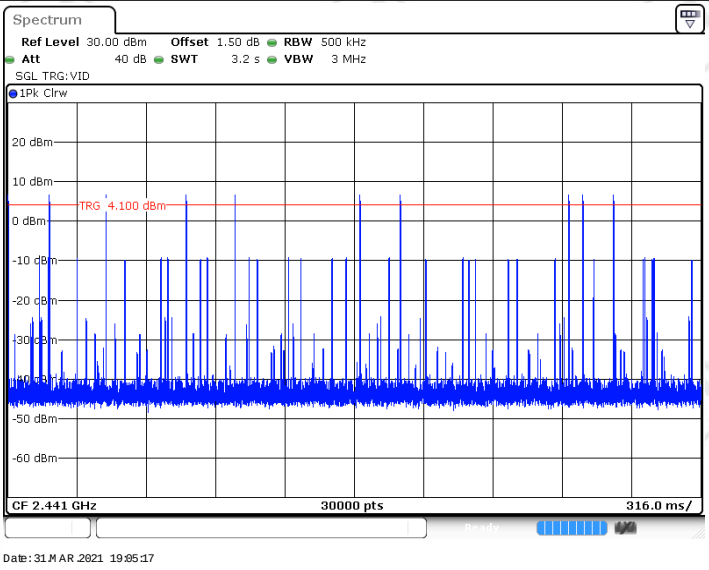

2DH3_Ant1_Hop




2DH3_Ant1_Hop




2DH5_Ant1_Hop



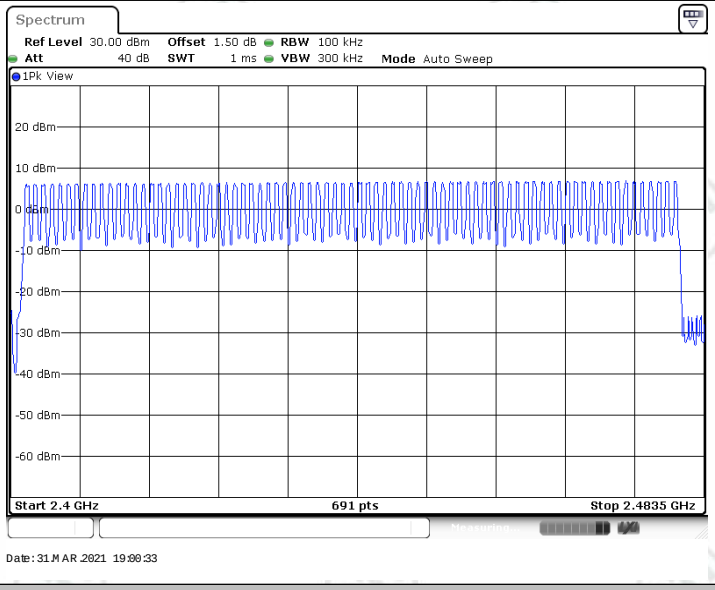

2DH5_Ant1_Hop

# Appendix F: Number of hopping channels

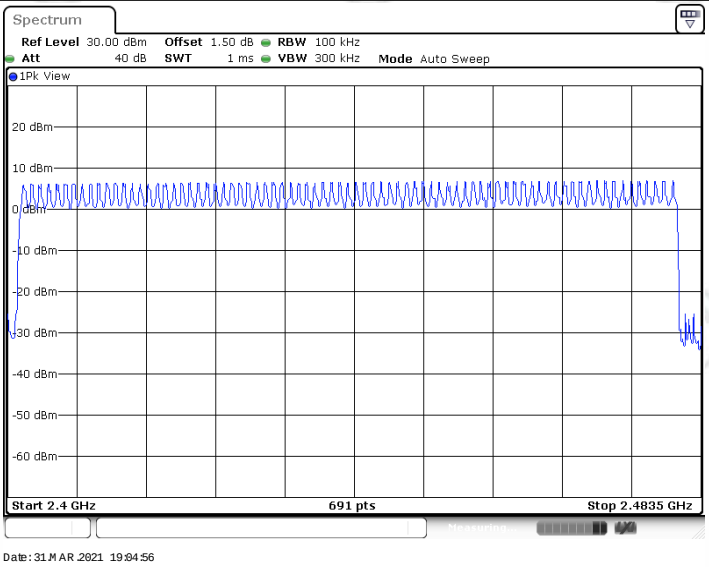
## Test Result

| Test Mode | Antenna | Channel | Result[Num] | Limit[Num] | Verdict |
|---|---|---|---|---|---|
| DH5 | Ant1 | Hop | 79 | >=15 | PASS |
| 2DH5 | Ant1 | Hop | 79 | >=15 | PASS |

## Test Graphs




DH5_Ant1_Hop



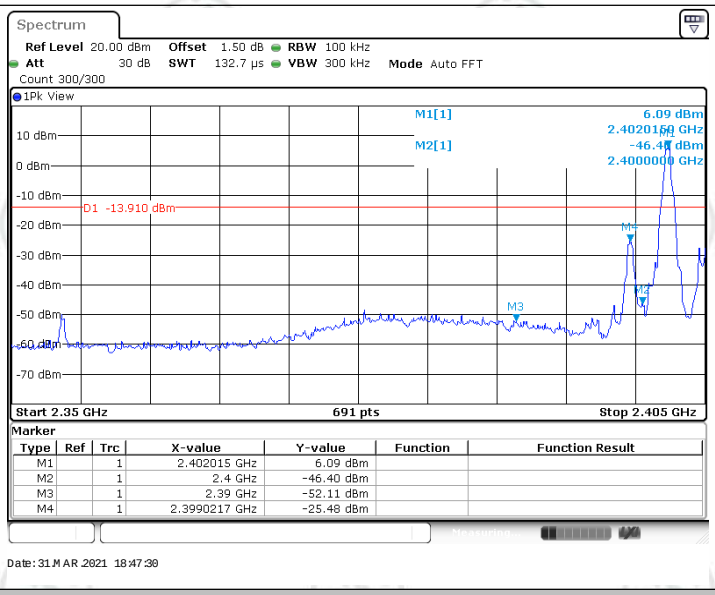

2DH5_Ant1_Hop

# Appendix G: Band edge measurements

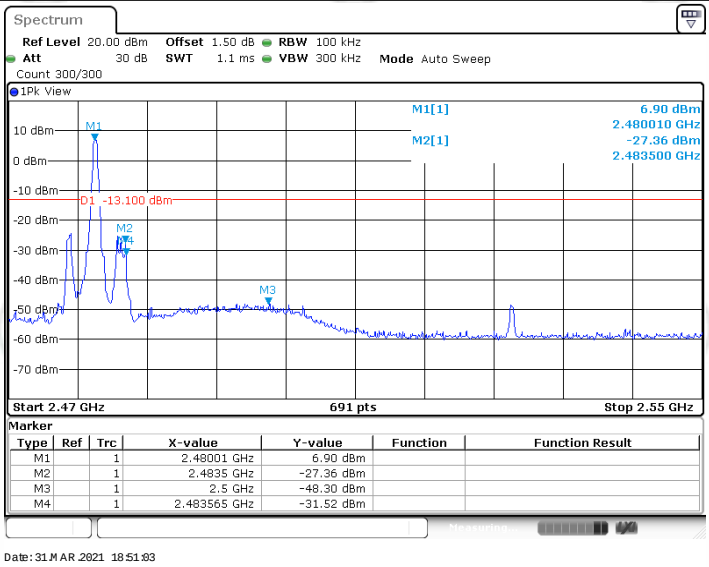
## Test Result

| Test Mode | Antenna | Ch Name | Channel | Ref Level [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|---|---|---|
| DH5 | Ant1 | Low | 2402 | 6.09 | -25.48 | <=-13.91 | PASS |
| | | High | 2480 | 6.90 | -31.52 | <=-13.1 | PASS |
| | | Low | Hop_2402 | 6.14 | -50.05 | <=-13.86 | PASS |
| | | High | Hop_2480 | 6.91 | -48.75 | <=-13.09 | PASS |
| 2DH5 | Ant1 | Low | 2402 | 6.13 | -24.77 | <=-13.87 | PASS |
| | | High | 2480 | 6.92 | -31.78 | <=-13.08 | PASS |
| | | Low | Hop_2402 | 6.16 | -50.46 | <=-13.84 | PASS |
| | | High | Hop_2480 | 6.86 | -49.24 | <=-13.14 | PASS |

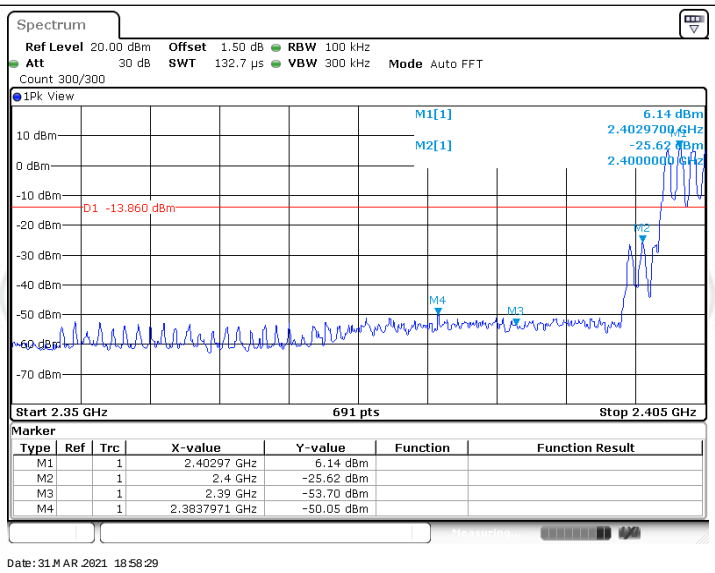
## Test Graphs



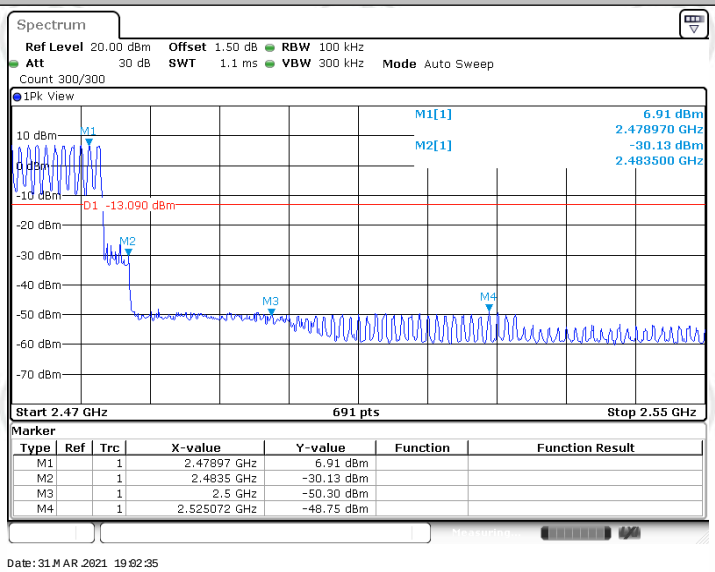

DH5_Ant1_Low_2402



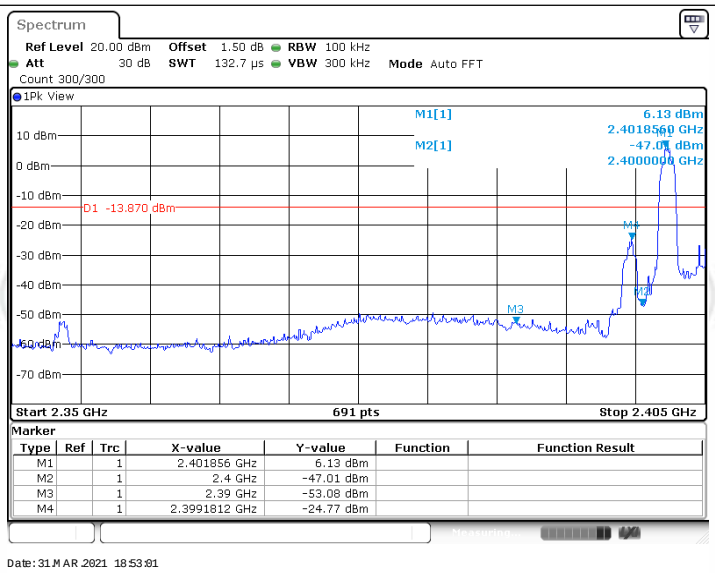

DH5_Ant1_High_2480



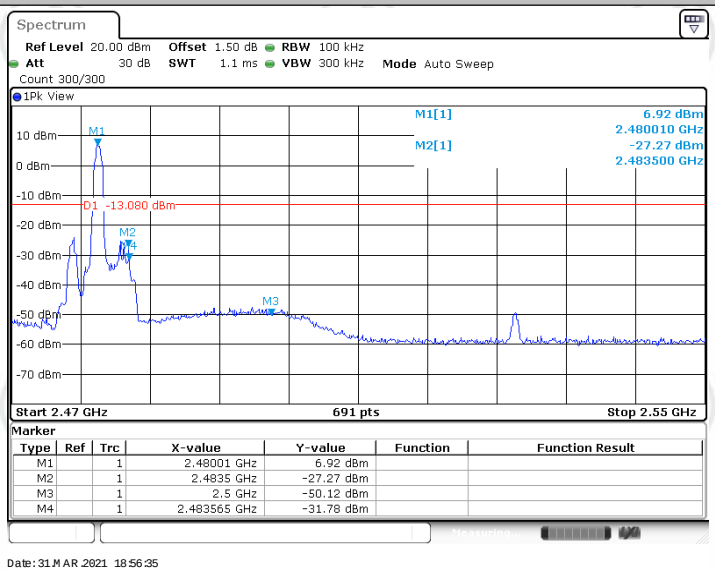

DH5_Ant1_Low_Hop_2402



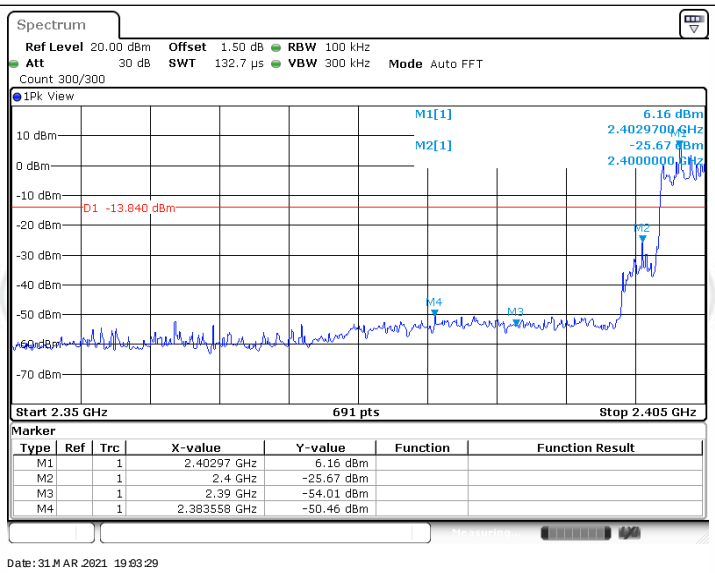

DH5_Ant1_High_Hop_2480



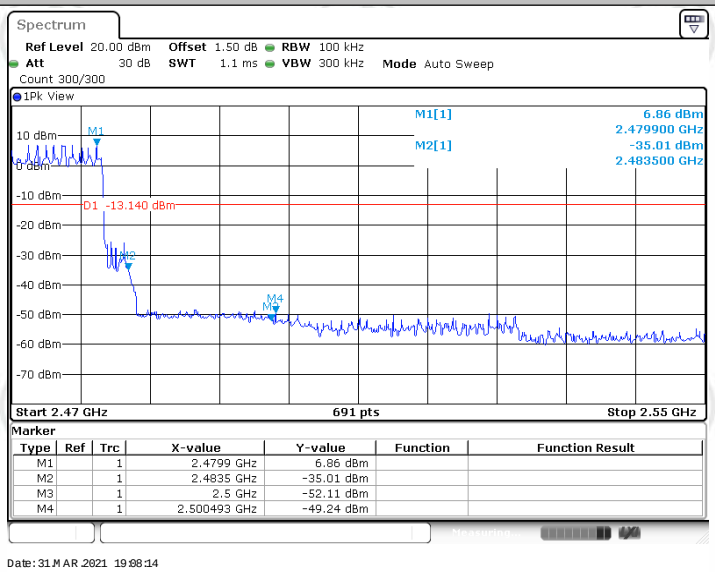

2DH5_Ant1_Low_2402




2DH5_Ant1_High_2480




2DH5_Ant1_Low_Hop_2402



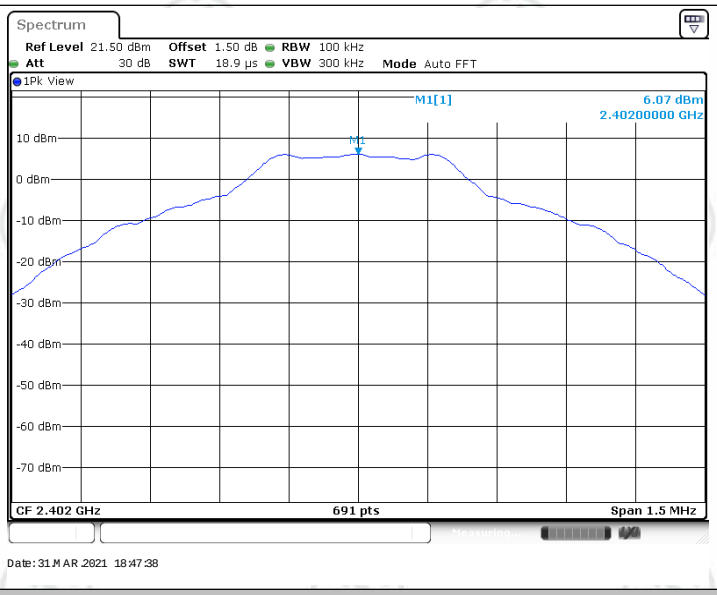

2DH5_Ant1_High_Hop_2480

# Appendix H: Conducted Spurious Emission

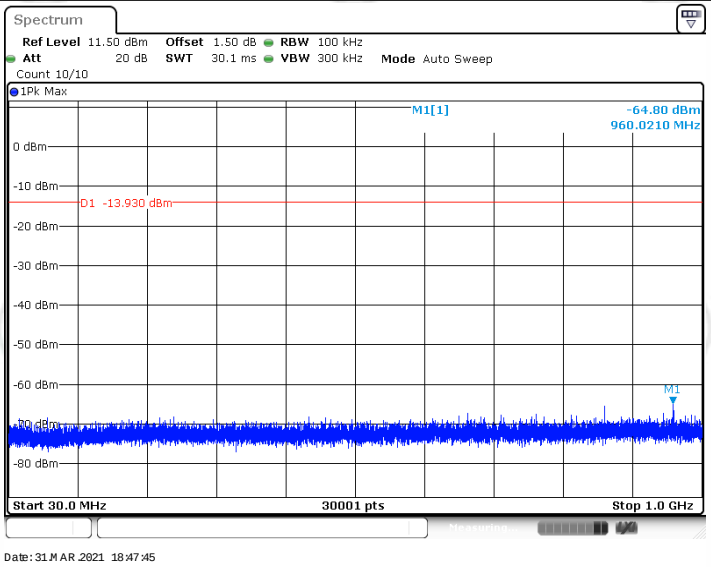
## Test Result

| Test Mode | Antenna | Channel | Freq Range [MHz] | Ref Level [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|---|---|---|
| DH5 | Ant1 | 2402 | Reference | 6.07 | 6.07 | --- | PASS |
| | | | 30~1000 | 6.07 | -64.8 | <=-13.93 | PASS |
| | | | 1000~26500 | 6.07 | -44.88 | <=-13.93 | PASS |
| | | 2441 | Reference | 6.48 | 6.48 | --- | PASS |
| | | | 30~1000 | 6.48 | -64.97 | <=-13.52 | PASS |
| | | | 1000~26500 | 6.48 | -40.7 | <=-13.52 | PASS |
| | | 2480 | Reference | 6.90 | 6.90 | --- | PASS |
| | | | 30~1000 | 6.90 | -64.91 | <=-13.1 | PASS |
| | | | 1000~26500 | 6.90 | -43.22 | <=-13.1 | PASS |
| 2DH5 | Ant1 | 2402 | Reference | 6.09 | 6.09 | --- | PASS |
| | | | 30~1000 | 6.09 | -62.12 | <=-13.91 | PASS |
| | | | 1000~26500 | 6.09 | -43.56 | <=-13.91 | PASS |
| | | 2441 | Reference | 6.52 | 6.52 | --- | PASS |
| | | | 30~1000 | 6.52 | -58.94 | <=-13.48 | PASS |
| | | | 1000~26500 | 6.52 | -45.74 | <=-13.48 | PASS |
| | | 2480 | Reference | 6.95 | 6.95 | --- | PASS |
| | | | 30~1000 | 6.95 | -63.21 | <=-13.05 | PASS |
| | | | 1000~26500 | 6.95 | -47.2 | <=-13.05 | PASS |

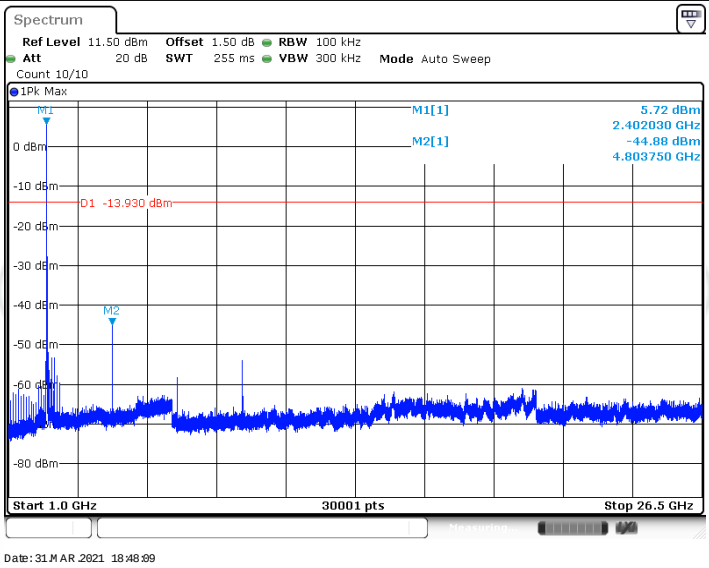
## Test Graphs



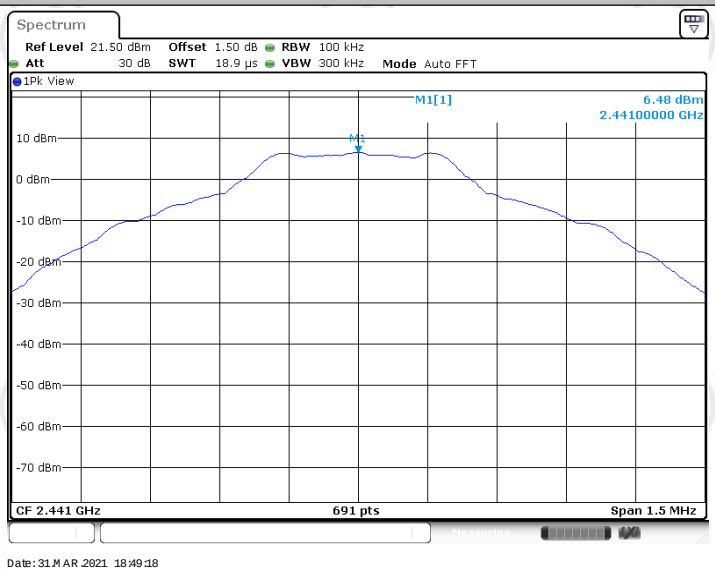

DH5_Ant1_2402_0~Reference



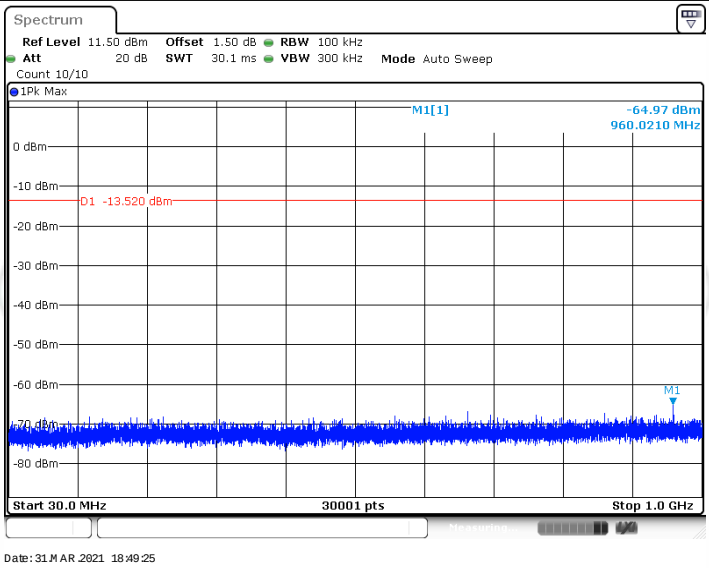

DH5_Ant1_2402_30~1000



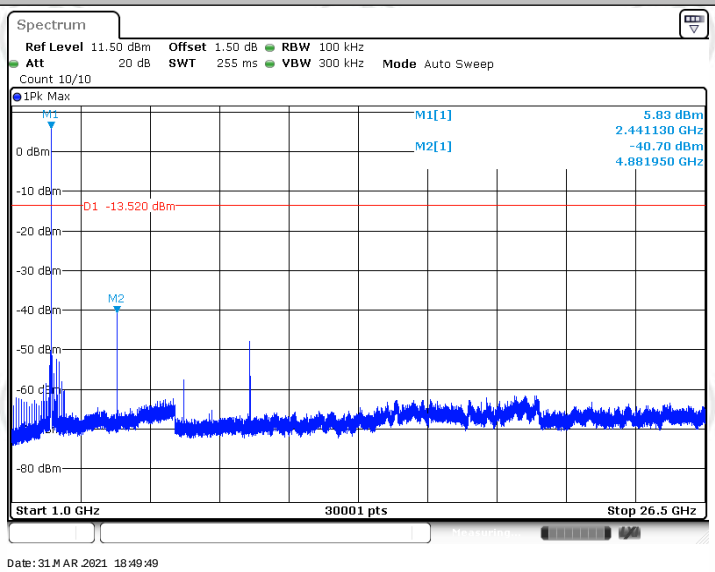

DH5_Ant1_2402_1000~26500



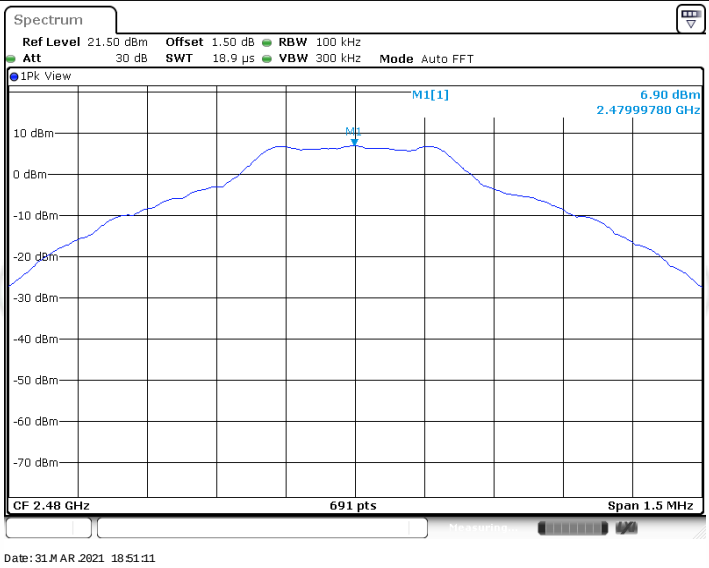

DH5_Ant1_2441_0~Reference



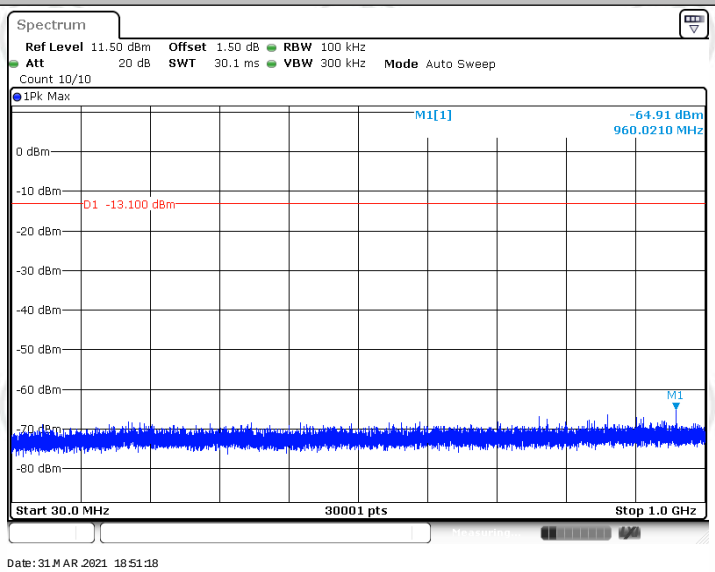

DH5_Ant1_2441_30~1000



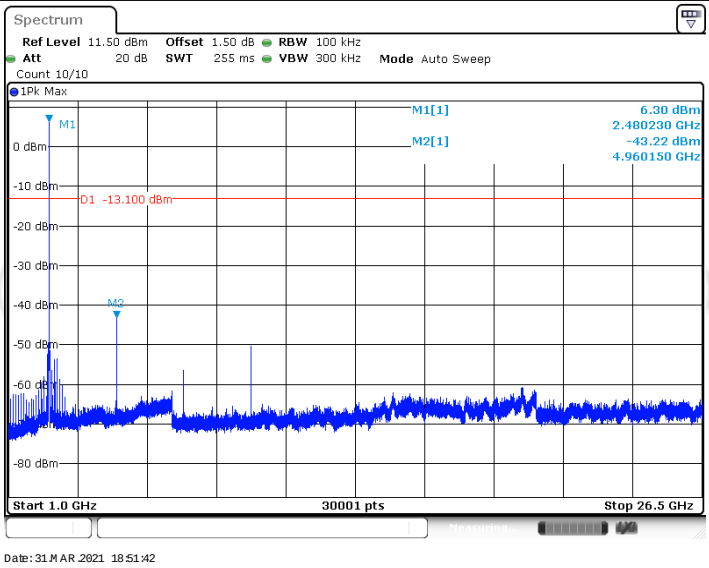

DH5_Ant1_2441_1000~26500



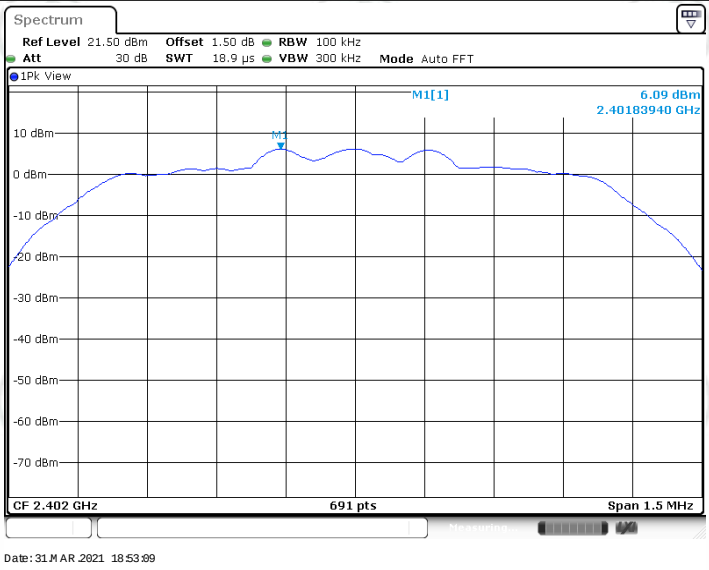

DH5_Ant1_2480_0~Reference



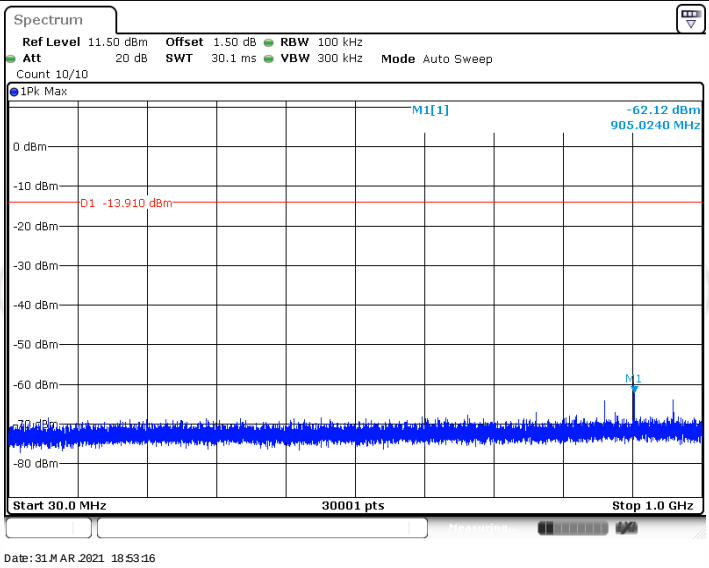

DH5_Ant1_2480_30~1000



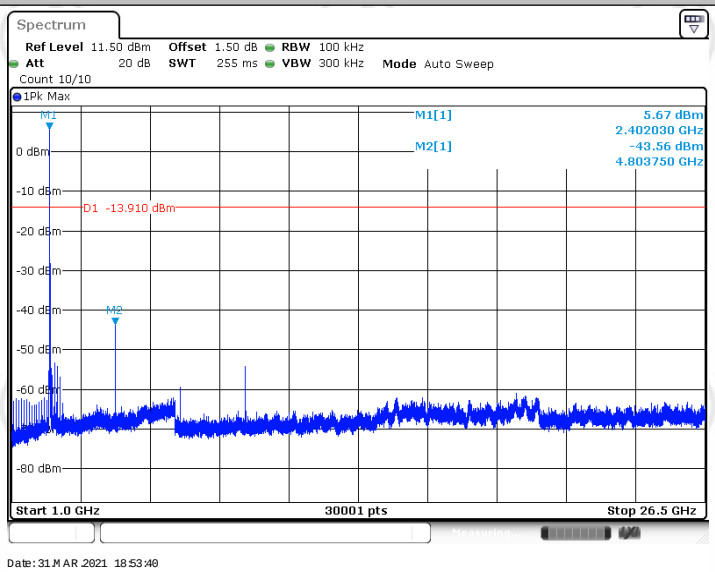

DH5_Ant1_2480_1000~26500



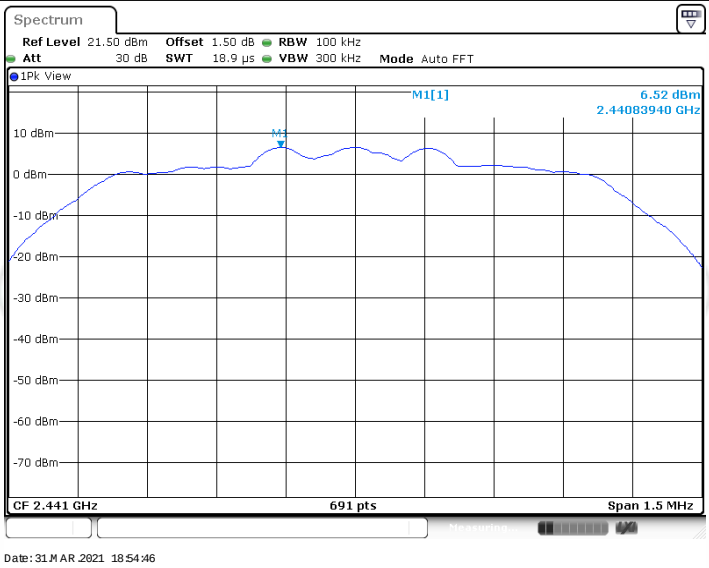

2DH5_Ant1_2402_0~Reference



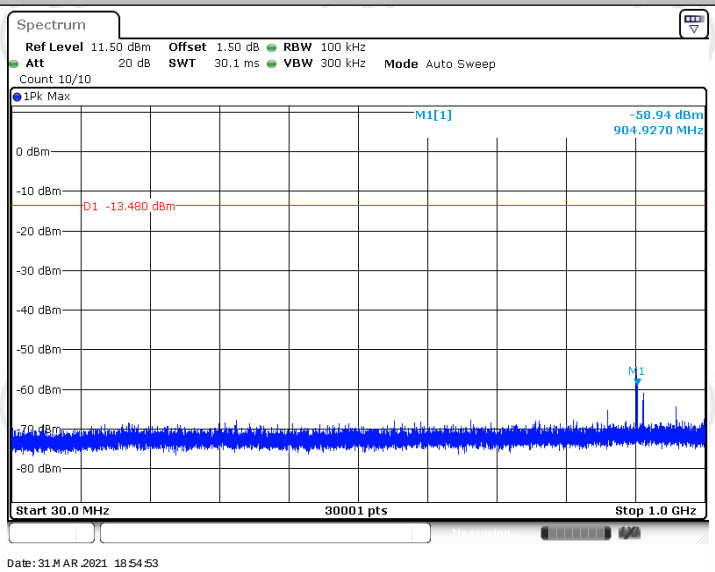

2DH5_Ant1_2402_30~1000



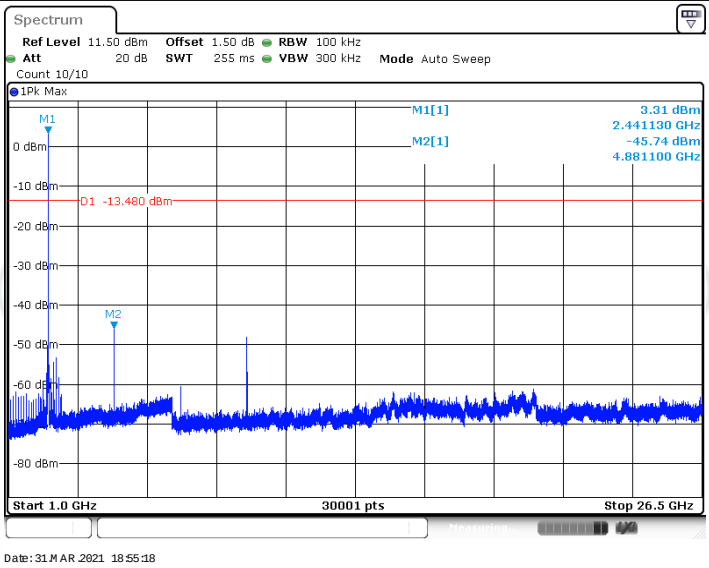

2DH5_Ant1_2402_1000~26500



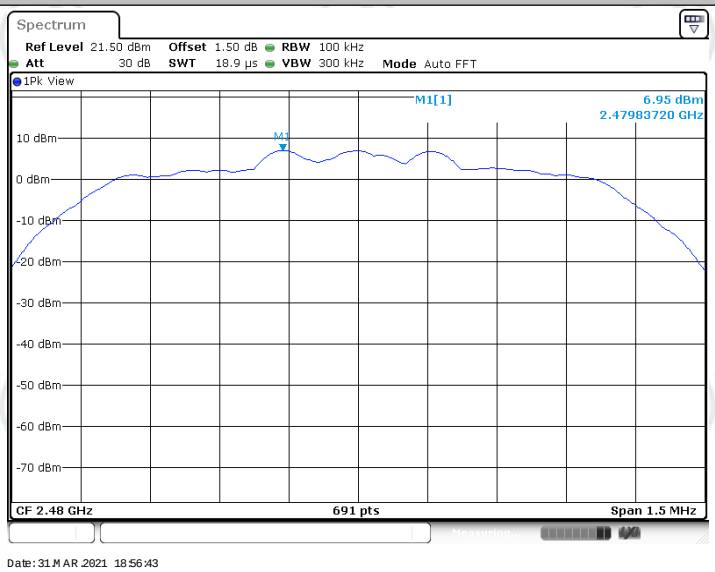

2DH5_Ant1_2441_0~Reference



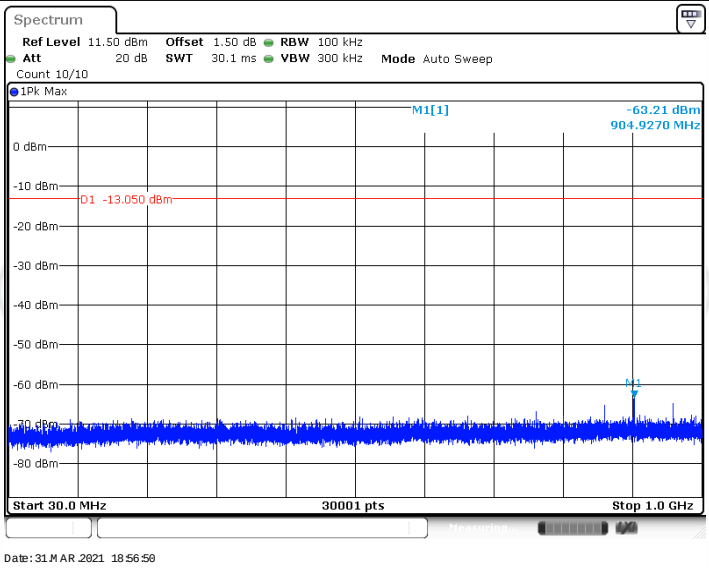

2DH5_Ant1_2441_30~1000



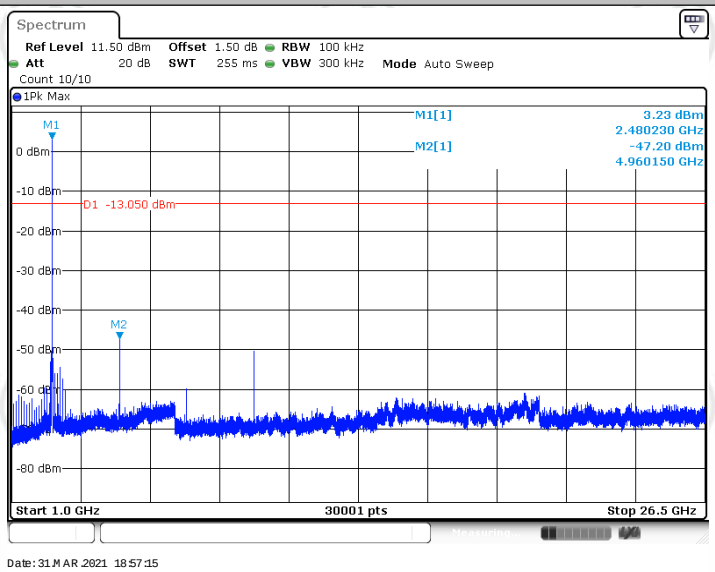

2DH5_Ant1_2441_1000~26500




2DH5_Ant1_2480_0~Reference




2DH5_Ant1_2480_30~1000



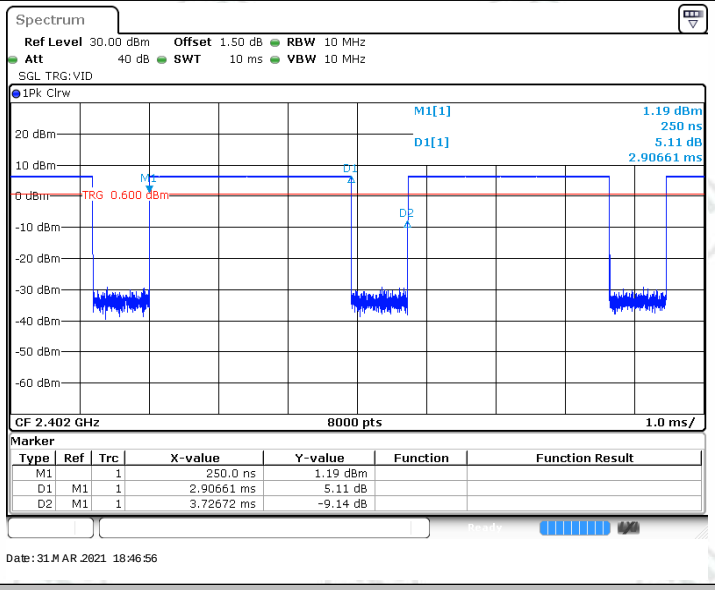

2DH5_Ant1_2480_1000~26500

# Appendix I: Duty Cycle

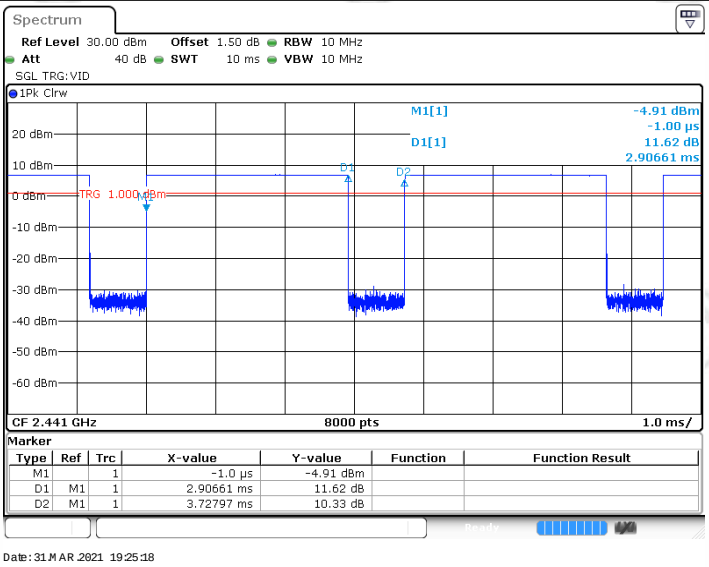
## Test Result

| Test Mode | Antenna | Channel | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] | Limit | Verdict |
|---|---|---|---|---|---|---|---|
| DH5 | Ant1 | 2402 | 2.91 | 3.73 | 78.02 | --- | PASS |
| | | 2441 | 2.91 | 3.73 | 78.02 | --- | PASS |
| | | 2480 | 2.91 | 3.73 | 78.02 | --- | PASS |
| 2DH5 | Ant1 | 2402 | 2.91 | 3.73 | 78.02 | --- | PASS |
| | | 2441 | 2.91 | 3.73 | 78.02 | --- | PASS |
| | | 2480 | 2.91 | 3.73 | 78.02 | --- | PASS |

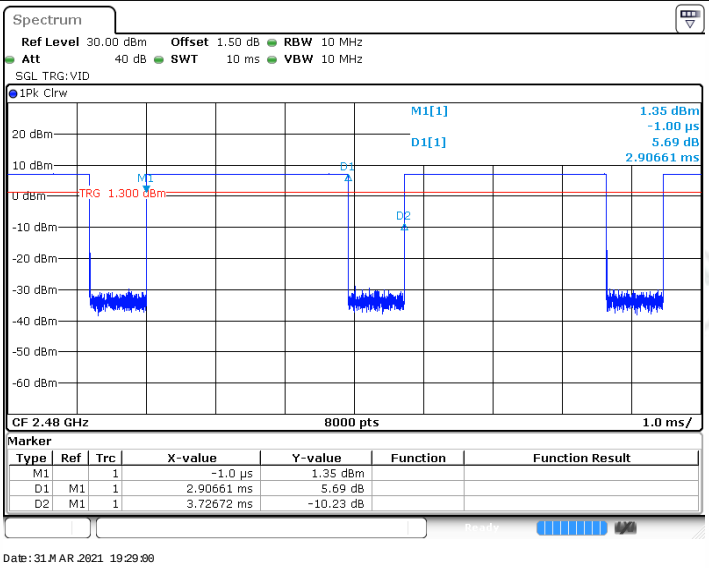
## Test Graphs



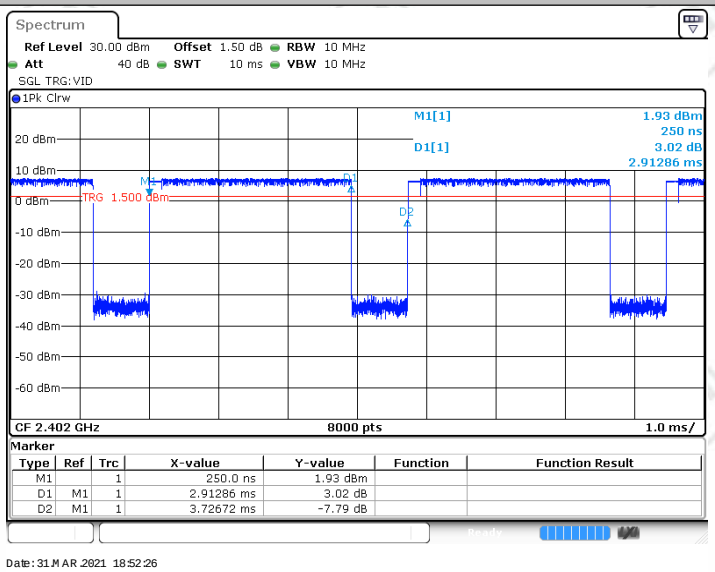

DH5_Ant1_2402



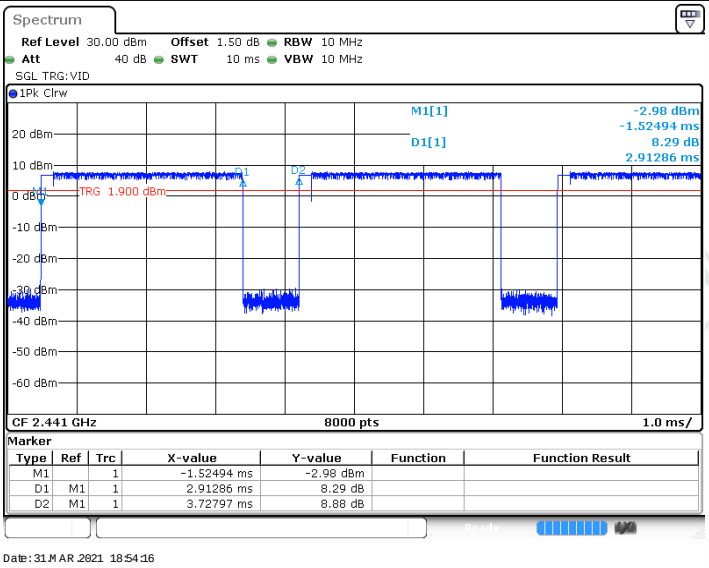

DH5_Ant1_2441



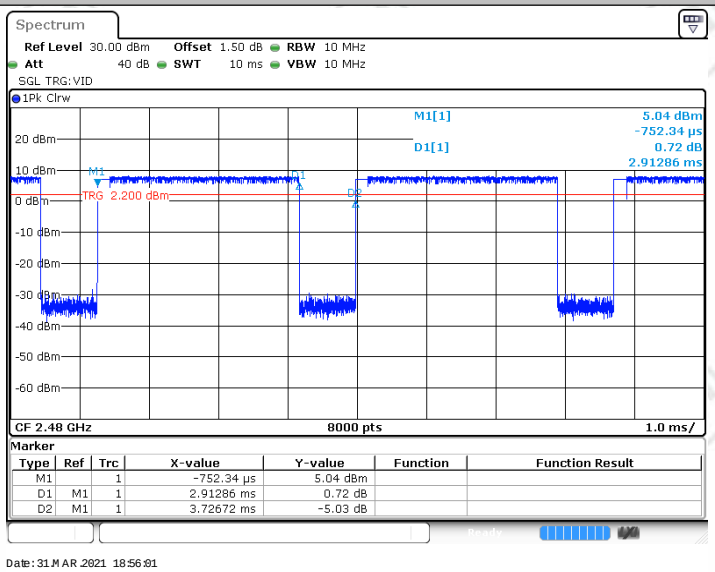

DH5_Ant1_2480




2DH5_Ant1_2402




2DH5_Ant1_2441




2DH5_Ant1_2480

*** End of Report ***