

Appendix: Bluetooth LE

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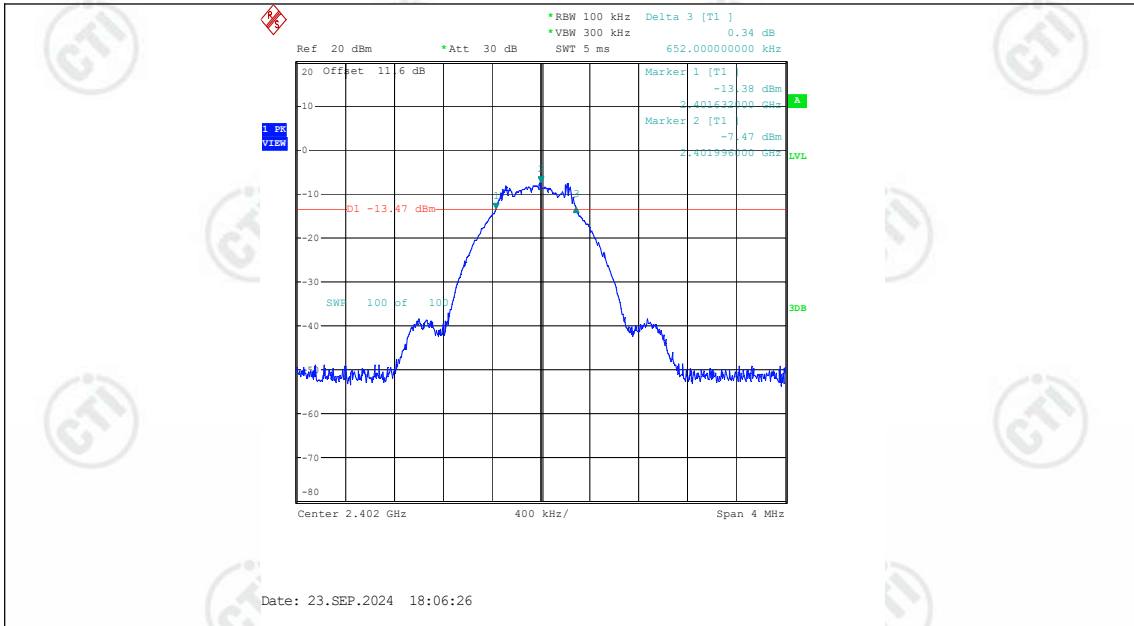
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Appendix A: DTS Bandwidth

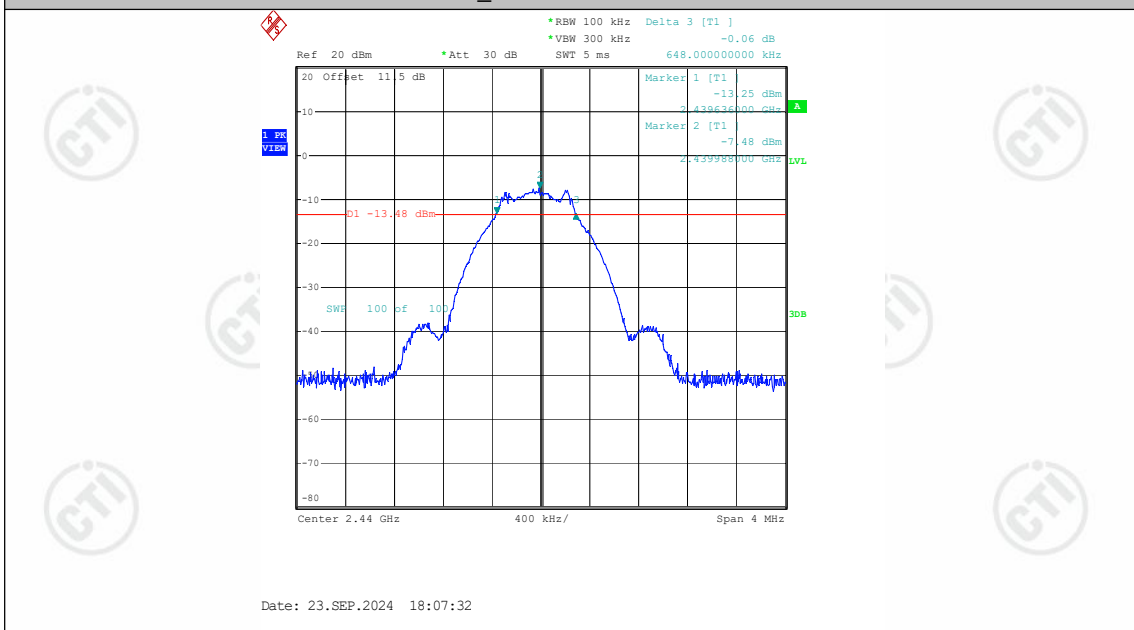
Test Result

| TestMode | Antenna | Frequency[MHz] | DTS BW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|----------|---------|----------------|--------------|---------|---------|------------|---------|
| BLE_1M | Ant1 | 2402 | 0.65 | 2401.63 | 2402.28 | 0.5 | PASS |
| BLE_1M | Ant1 | 2440 | 0.65 | 2439.64 | 2440.28 | 0.5 | PASS |
| BLE_1M | Ant1 | 2480 | 0.64 | 2479.64 | 2480.28 | 0.5 | PASS |

Test Graphs



BLE_1M-Ant1-2402-PASS



BLE_1M-Ant1-2440-PASS

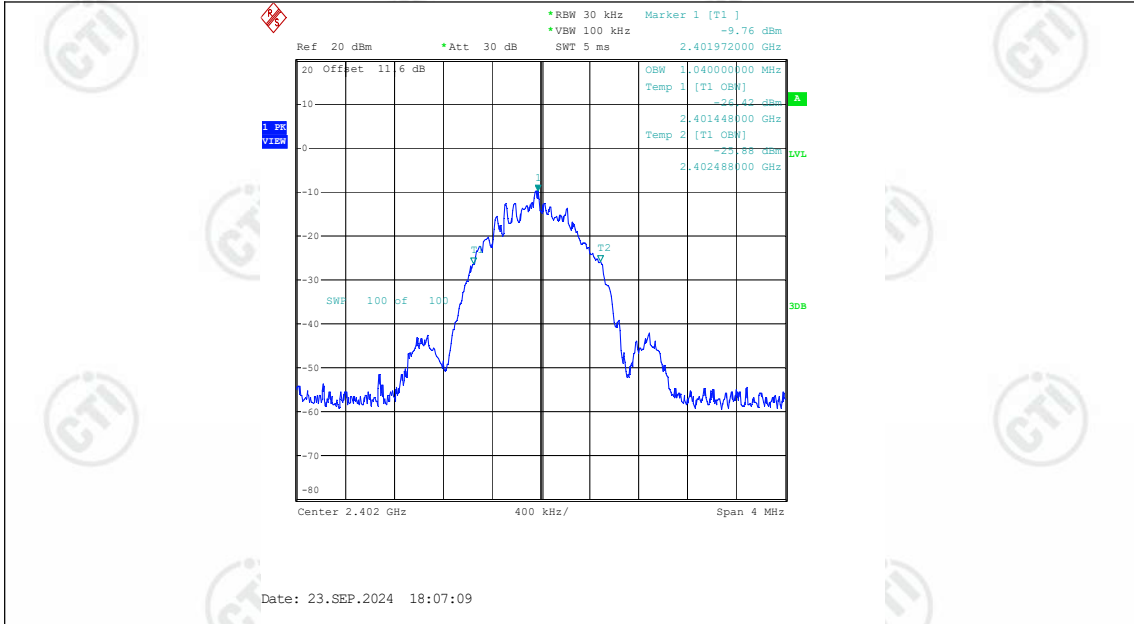


Appendix B: Occupied Channel Bandwidth

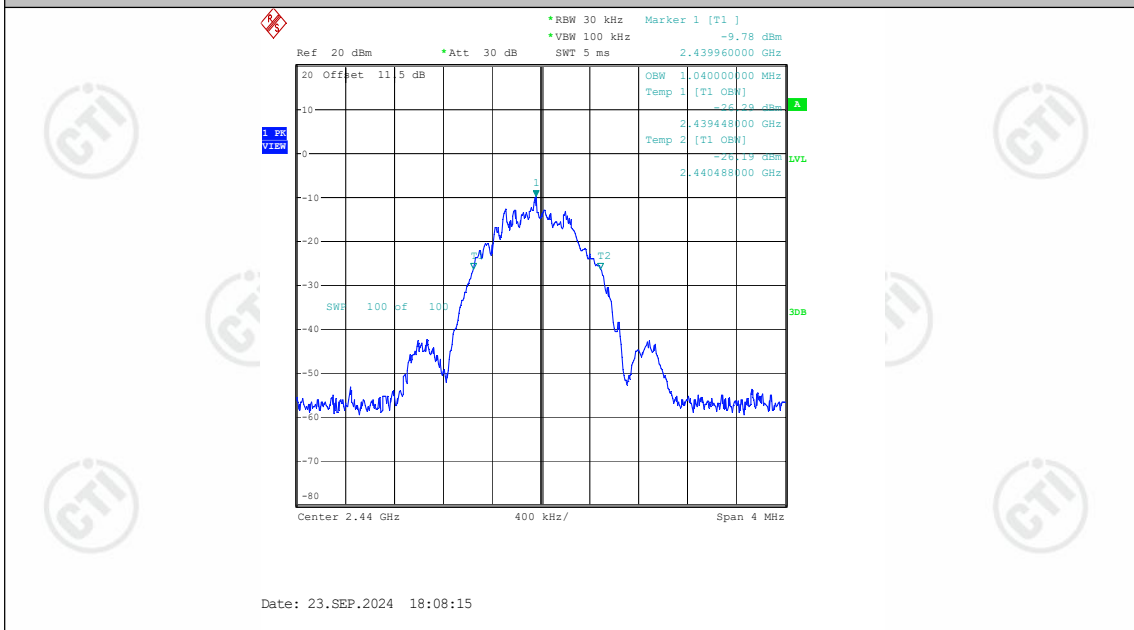
Test Result

| TestMode | Antenna | Frequency[MHz] | OCB [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|----------|---------|----------------|-----------|---------|---------|------------|---------|
| BLE_1M | Ant1 | 2402 | 1.04 | 0.0000 | 0.0000 | --- | --- |
| BLE_1M | Ant1 | 2440 | 1.04 | 0.0000 | 0.0000 | --- | --- |
| BLE_1M | Ant1 | 2480 | 1.036 | 0.0000 | 0.0000 | --- | --- |

Test Graphs



BLE_1M-Ant1-2402



BLE_1M-Ant1-2440

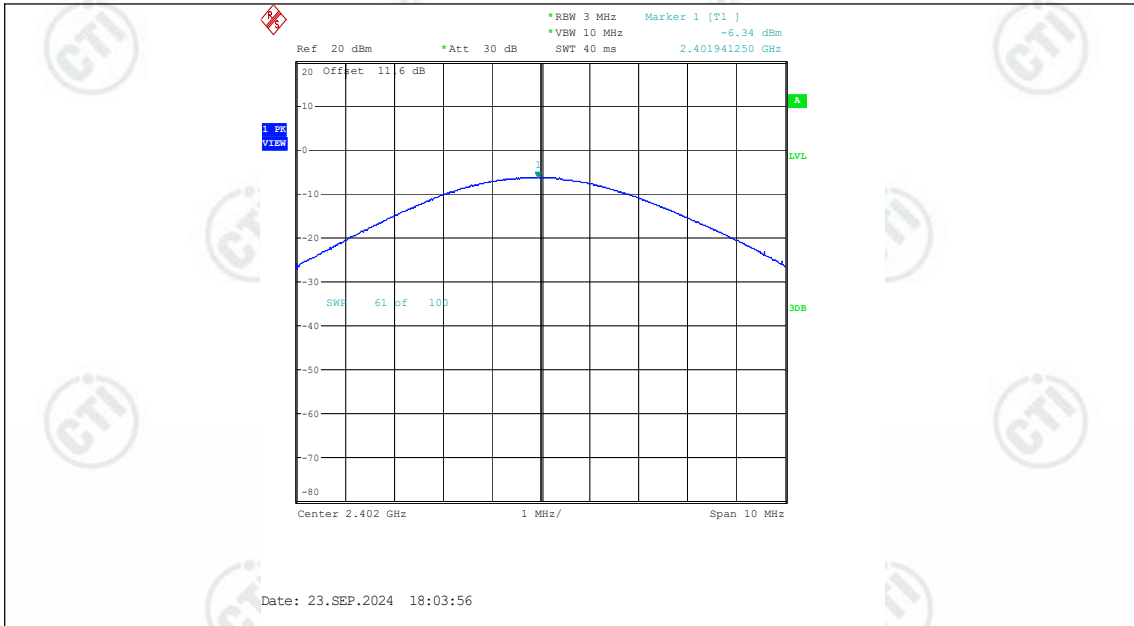


Appendix C: Maximum conducted output power

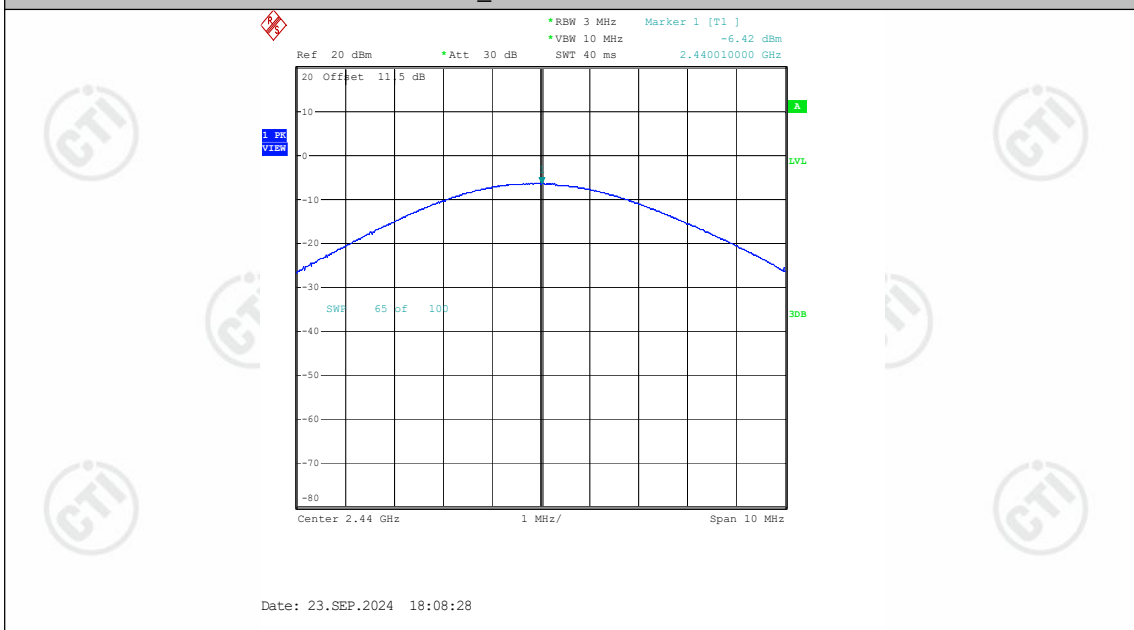
Test Result Peak

| TestMode | Antenna | Frequency[MHz] | Conducted Peak Power[dBm] | Conducted Limit[dBm] | Verdict |
|----------|---------|----------------|---------------------------|----------------------|---------|
| BLE_1M | Ant1 | 2402 | -6.34 | ≤30 | PASS |
| BLE_1M | Ant1 | 2440 | -6.42 | ≤30 | PASS |
| BLE_1M | Ant1 | 2480 | -6.41 | ≤30 | PASS |

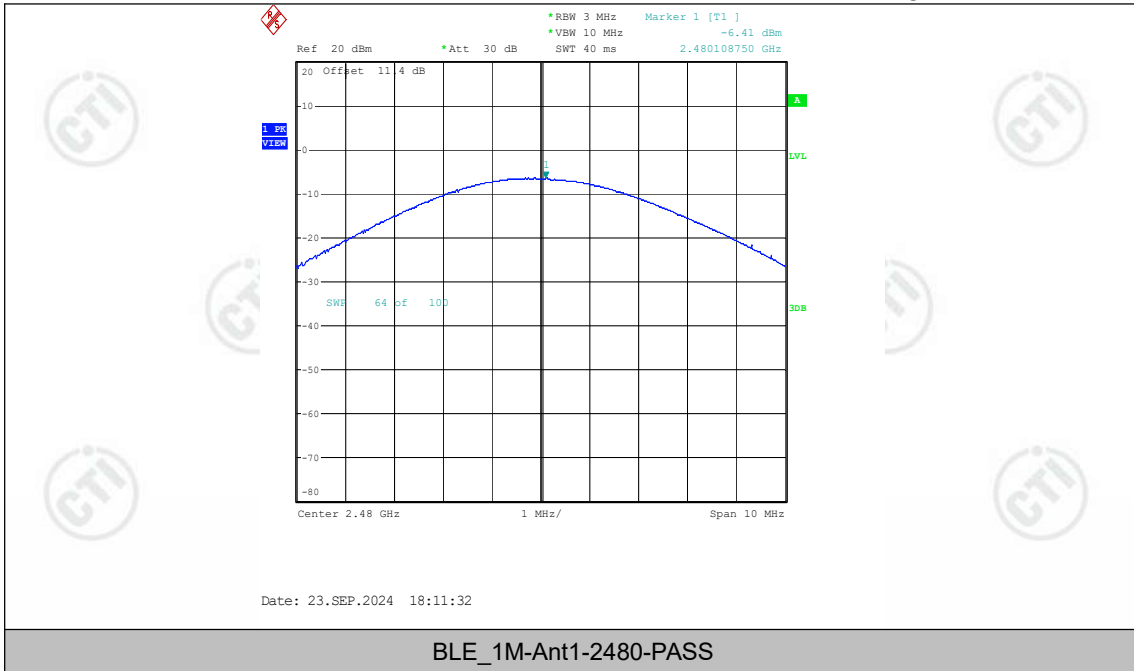
Test Graphs Peak



BLE_1M-Ant1-2402-PASS



BLE_1M-Ant1-2440-PASS

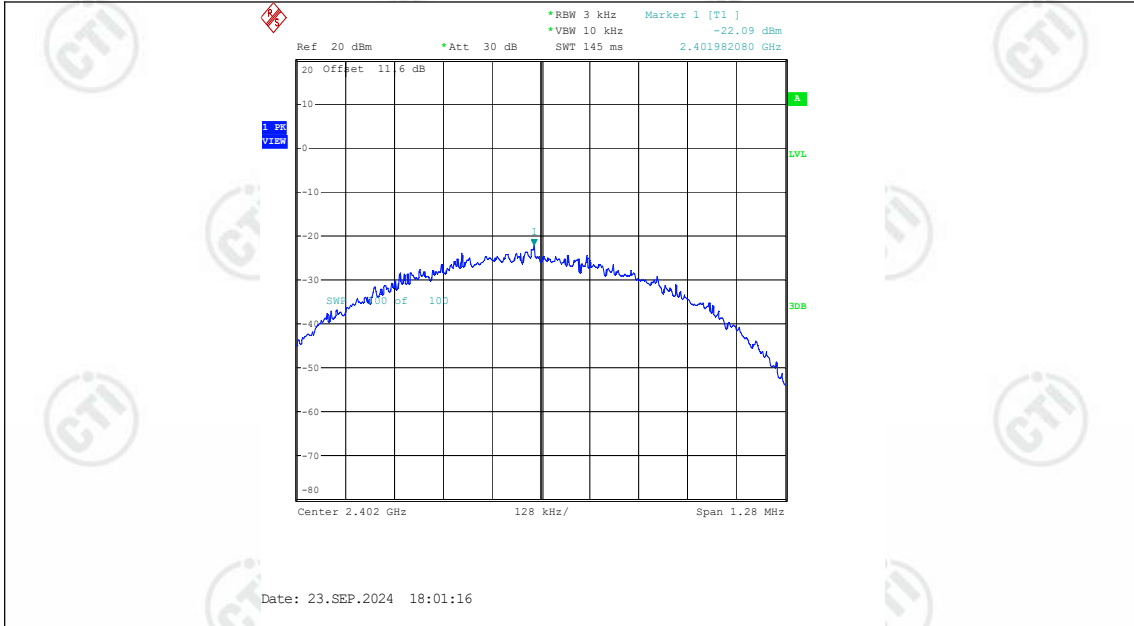


Appendix D: Maximum power spectral density

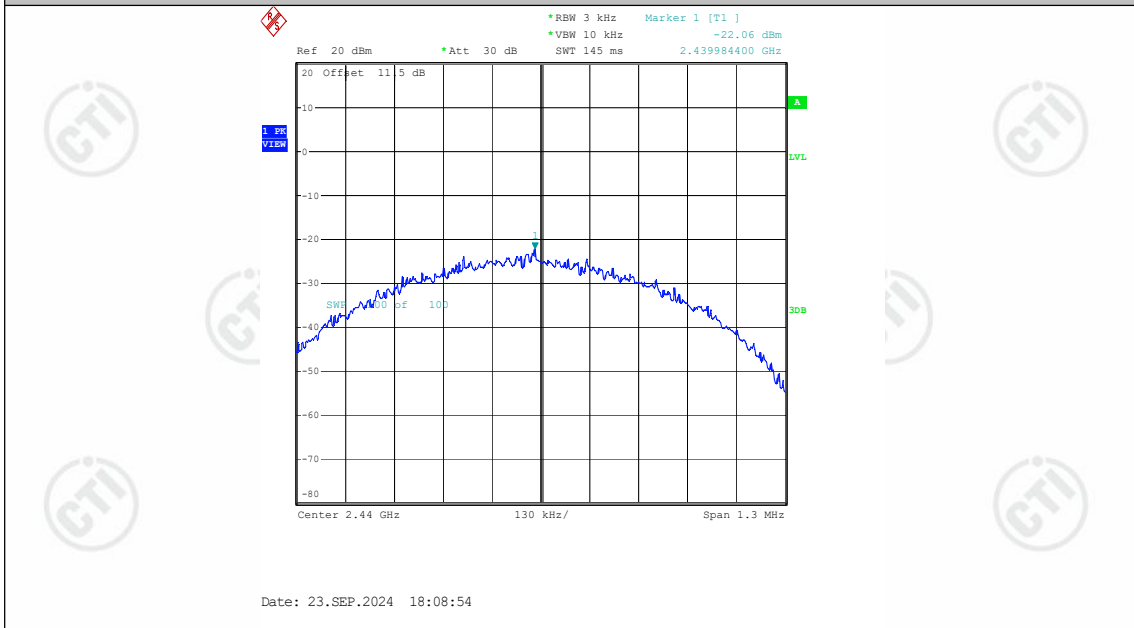
Test Result

| TestMode | Antenna | Frequency[MHz] | Result[dBm/3kHz] | Limit[dBm/3kHz] | Verdict |
|----------|---------|----------------|------------------|-----------------|---------|
| BLE_1M | Ant1 | 2402 | -22.09 | ≤8.00 | PASS |
| BLE_1M | Ant1 | 2440 | -22.06 | ≤8.00 | PASS |
| BLE_1M | Ant1 | 2480 | -22.12 | ≤8.00 | PASS |

Test Graphs



BLE_1M-Ant1-2402-PASS



BLE_1M-Ant1-2440-PASS

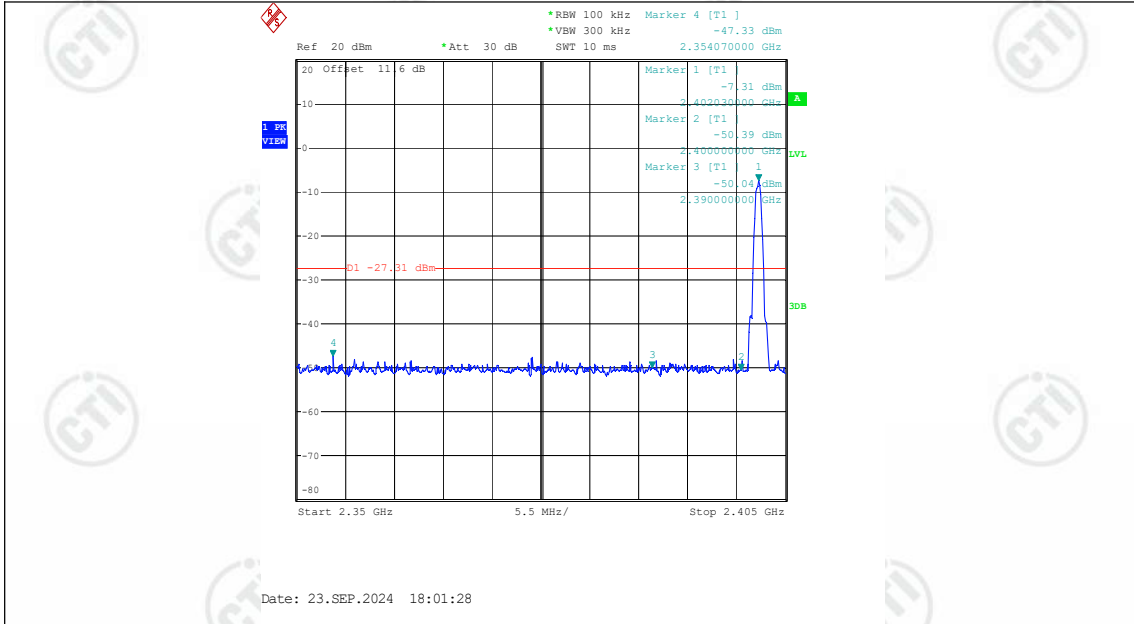


Appendix E: Band edge measurements

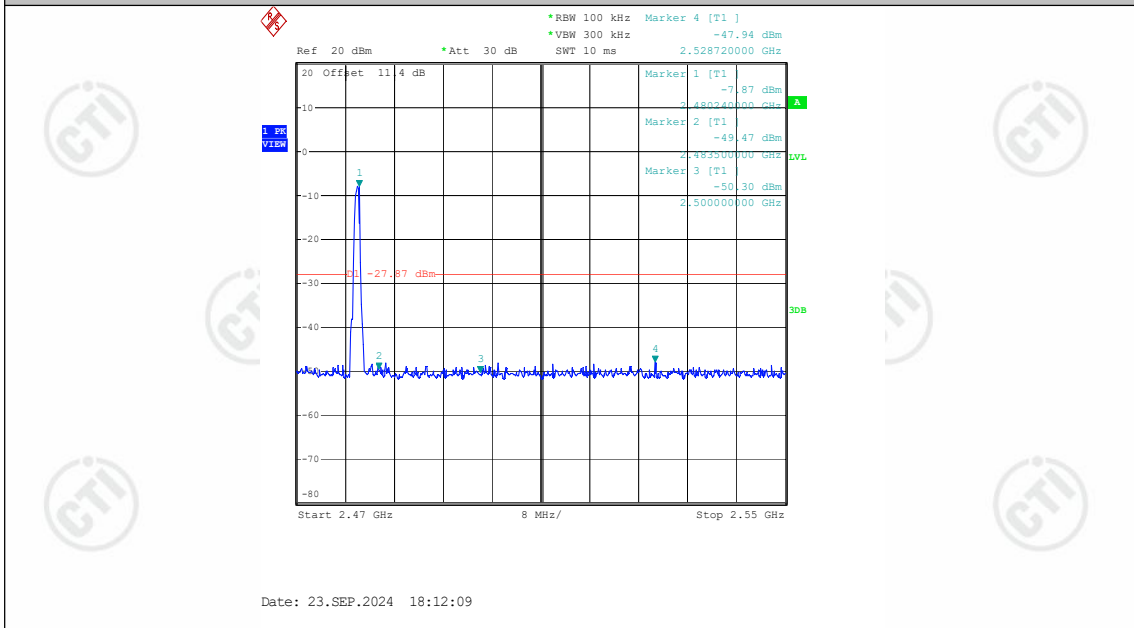
Test Result

| TestMode | Antenna | ChName | Frequency[MHz] | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|--------|----------------|---------------|-------------|------------|---------|
| BLE_1M | Ant1 | Low | 2402 | -7.31 | -47.33 | ≤-27.31 | PASS |
| BLE_1M | Ant1 | High | 2480 | -7.87 | -47.94 | ≤-27.87 | PASS |

Test Graphs



BLE_1M-Ant1-2402-PASS

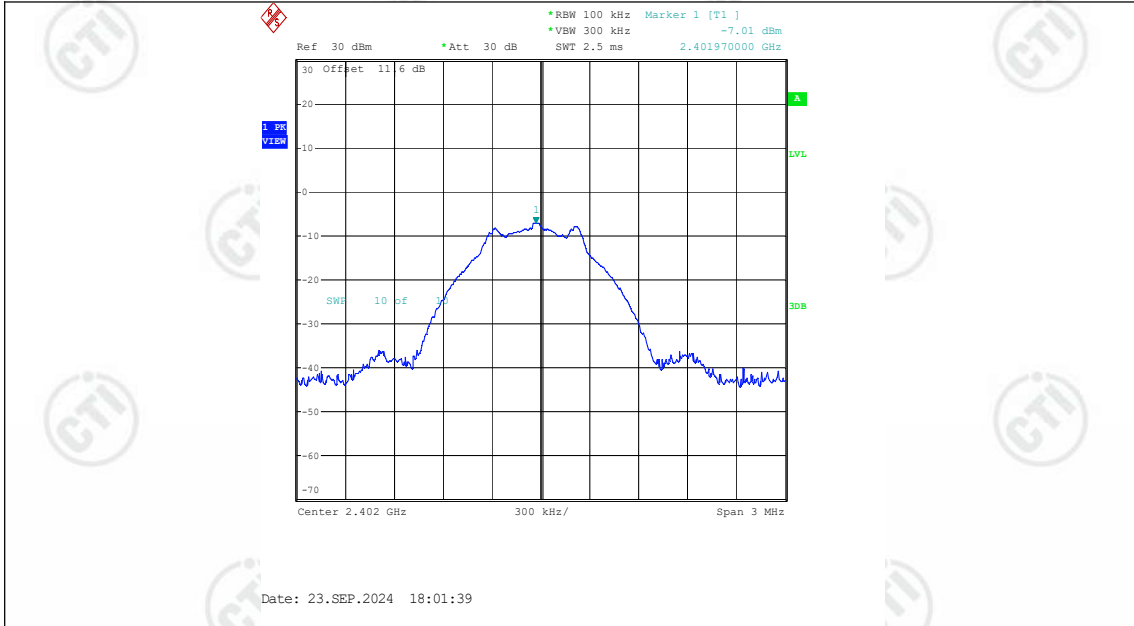


BLE_1M-Ant1-2480-PASS

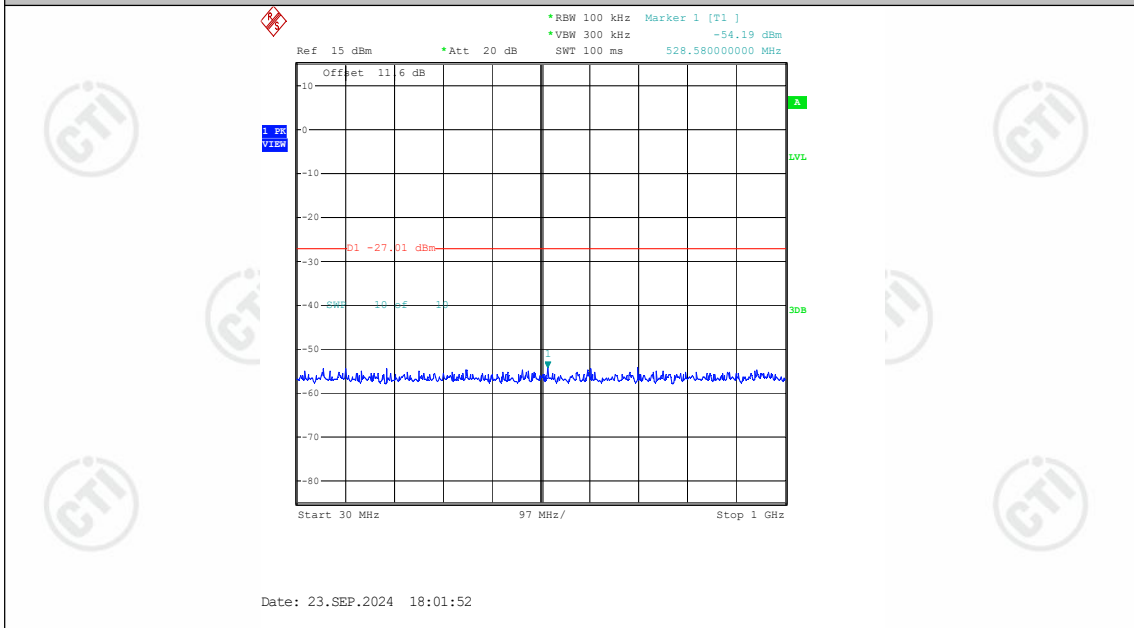
Appendix F: Conducted Spurious Emission**Test Result**

| TestMode | Antenna | Frequency [MHz] | FreqRange [MHz] | RefLevel [dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|-----------------|-----------------|----------------|-------------|------------|---------|
| BLE_1M | Ant1 | 2402 | 0~Reference | -7.01 | -7.01 | --- | PASS |
| BLE_1M | Ant1 | 2402 | 30~1000 | -7.01 | -54.19 | ≤-27.01 | PASS |
| BLE_1M | Ant1 | 2402 | 1000~26500 | -7.01 | -40.9 | ≤-27.01 | PASS |
| BLE_1M | Ant1 | 2440 | 0~Reference | -7.19 | -7.19 | --- | PASS |
| BLE_1M | Ant1 | 2440 | 30~1000 | -7.19 | -53.32 | ≤-27.19 | PASS |
| BLE_1M | Ant1 | 2440 | 1000~26500 | -7.19 | -40.86 | ≤-27.19 | PASS |
| BLE_1M | Ant1 | 2480 | 0~Reference | -7.23 | -7.23 | --- | PASS |
| BLE_1M | Ant1 | 2480 | 30~1000 | -7.23 | -53.61 | ≤-27.23 | PASS |
| BLE_1M | Ant1 | 2480 | 1000~26500 | -7.23 | -40.58 | ≤-27.23 | PASS |

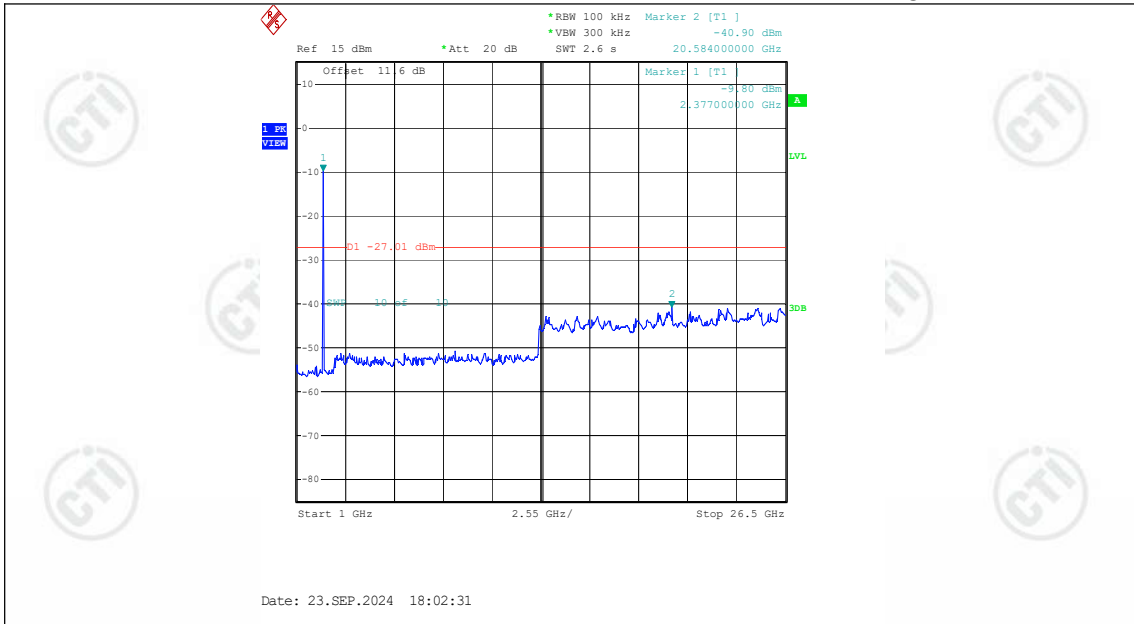
Test Graphs



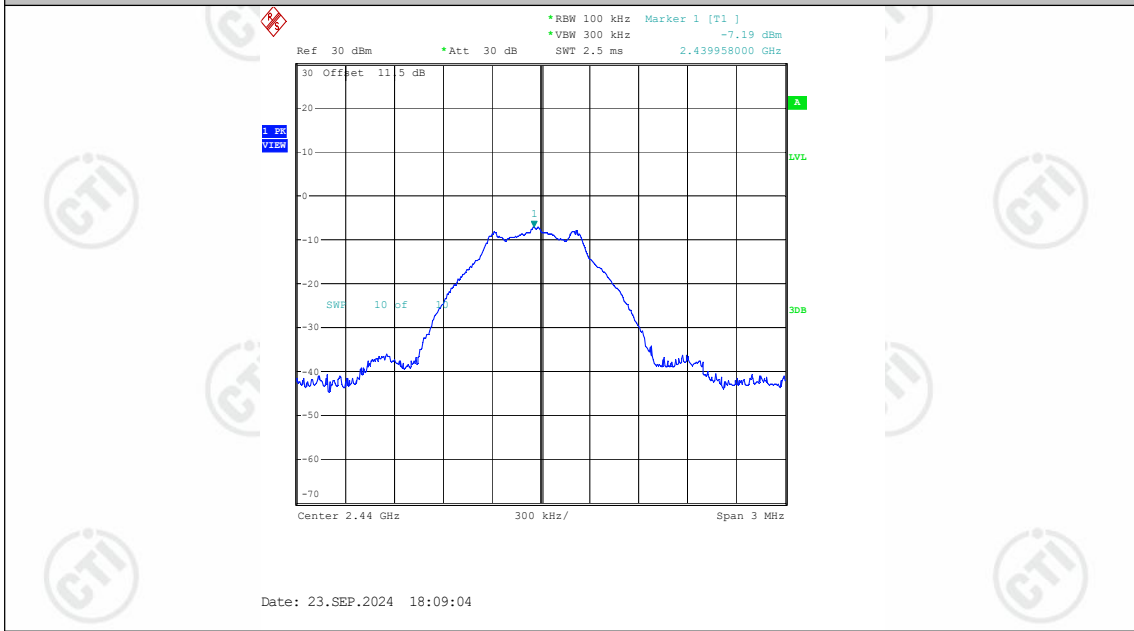
BLE_1M-Ant1-2402-0~Reference-PASS



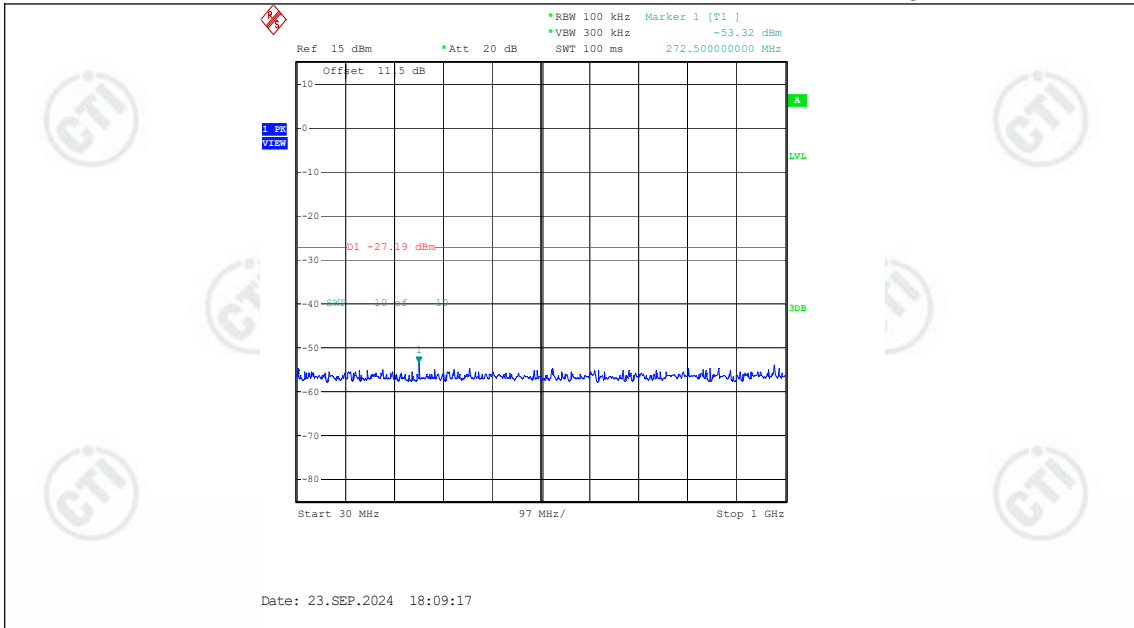
BLE_1M-Ant1-2402-30~1000-PASS



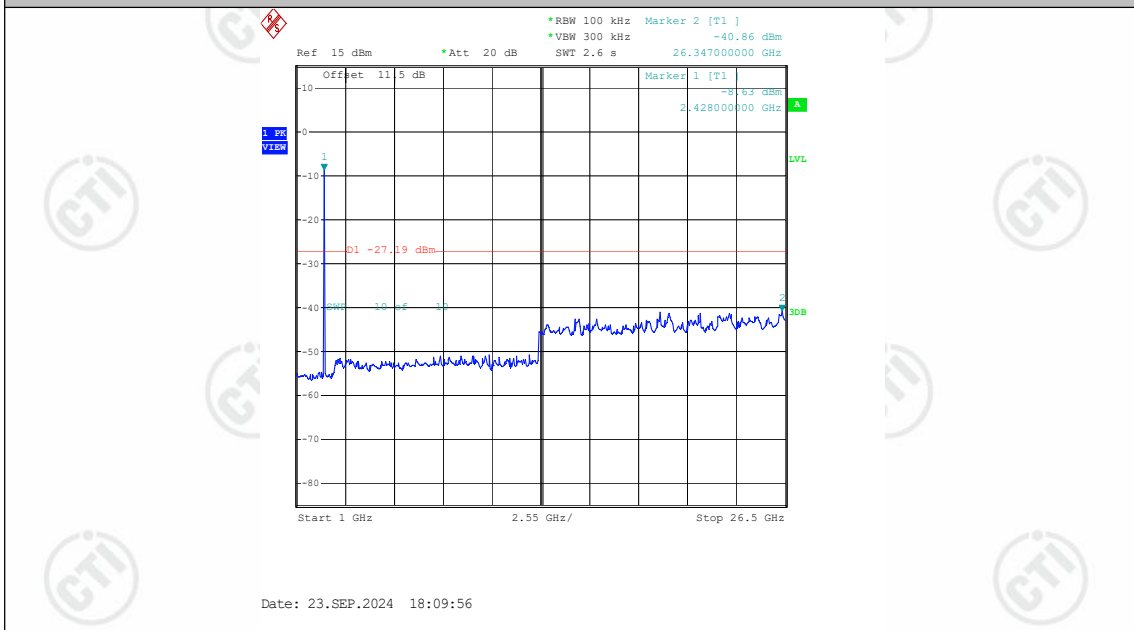
BLE_1M-Ant1-2402-1000~26500-PASS



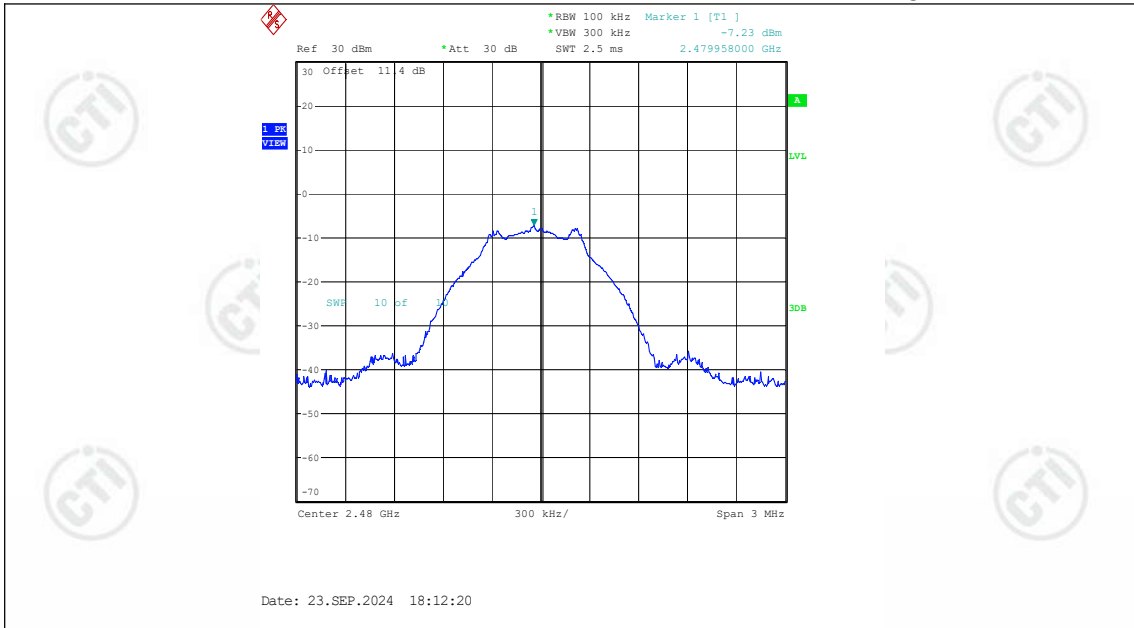
BLE_1M-Ant1-2440-0~Reference-PASS



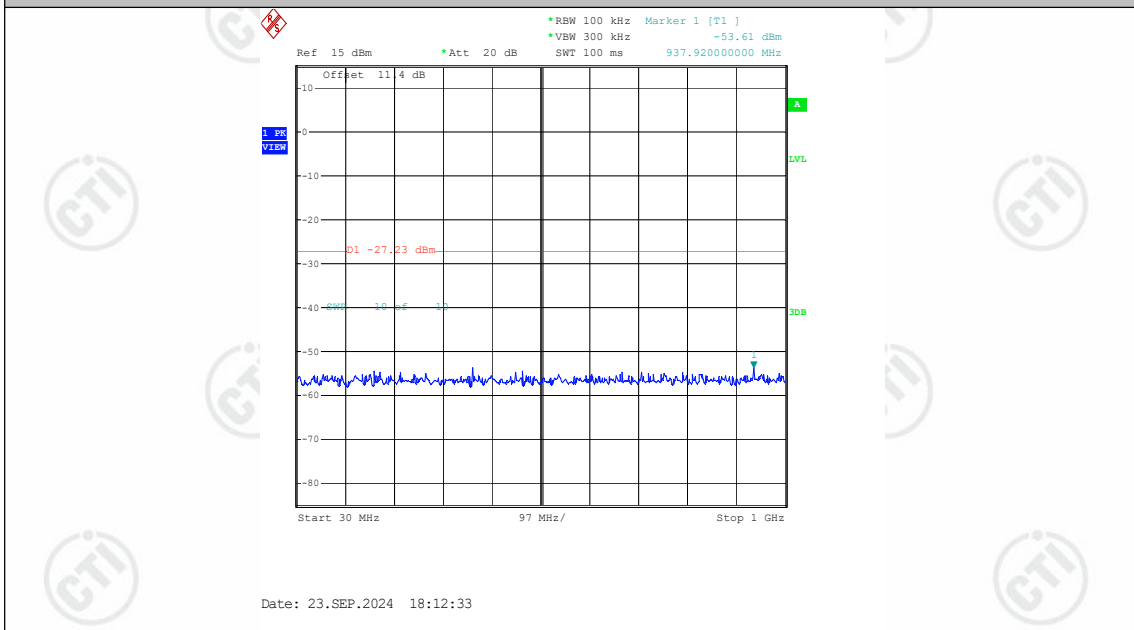
BLE_1M-Ant1-2440-30~1000-PASS



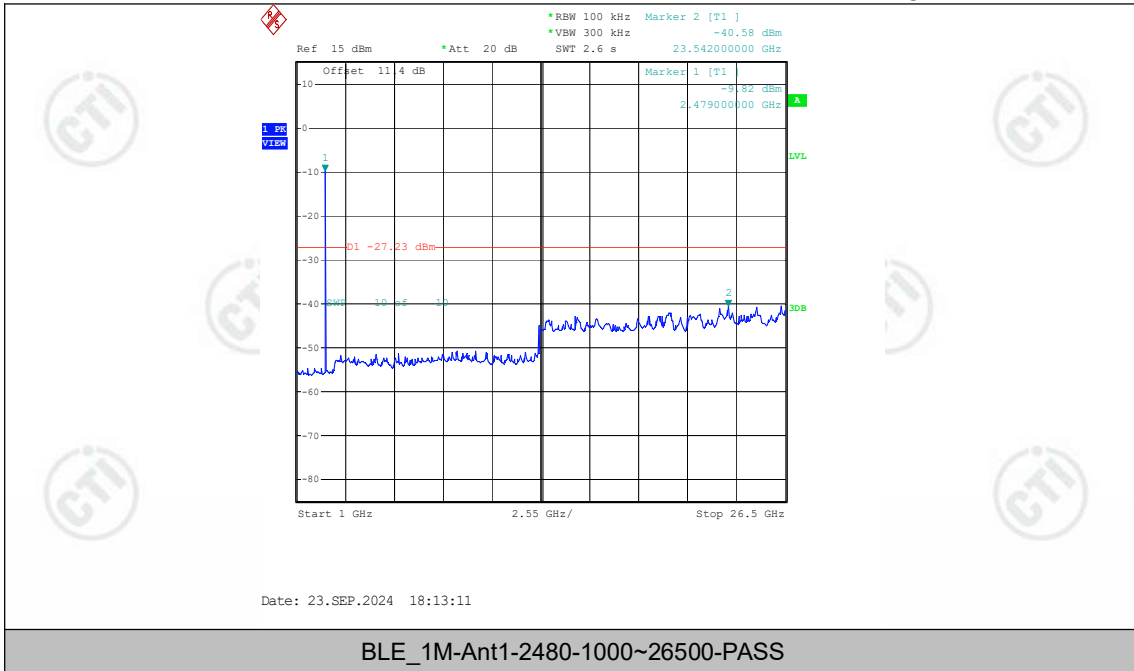
BLE_1M-Ant1-2440-1000~26500-PASS



BLE_1M-Ant1-2480-0~Reference-PASS



BLE_1M-Ant1-2480-30~1000-PASS



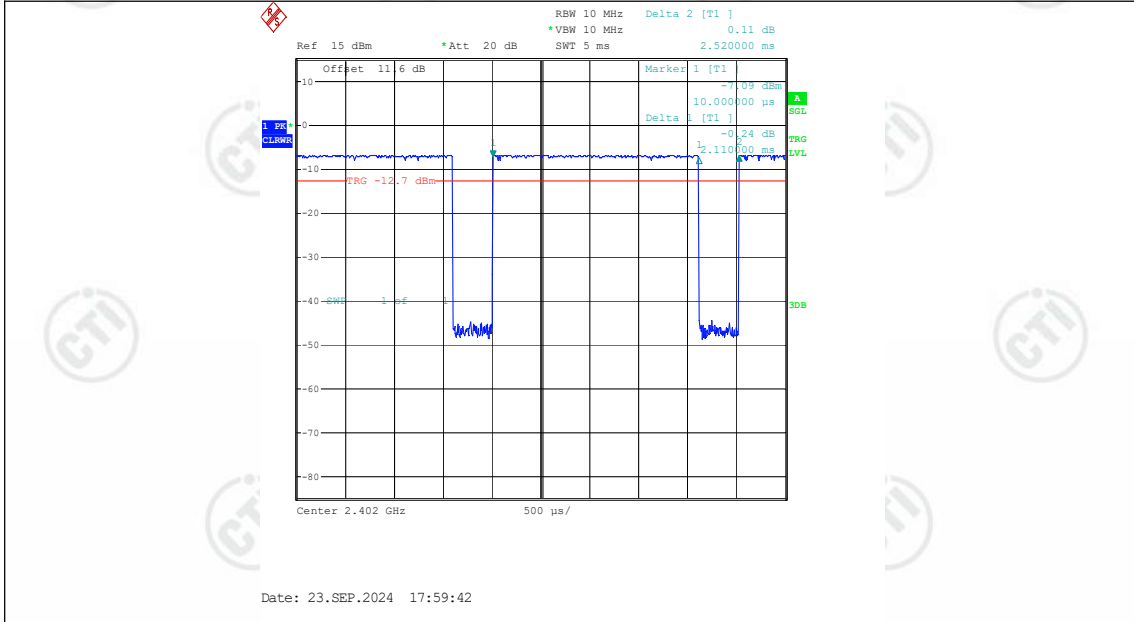
Appendix G: Duty Cycle

Test Result

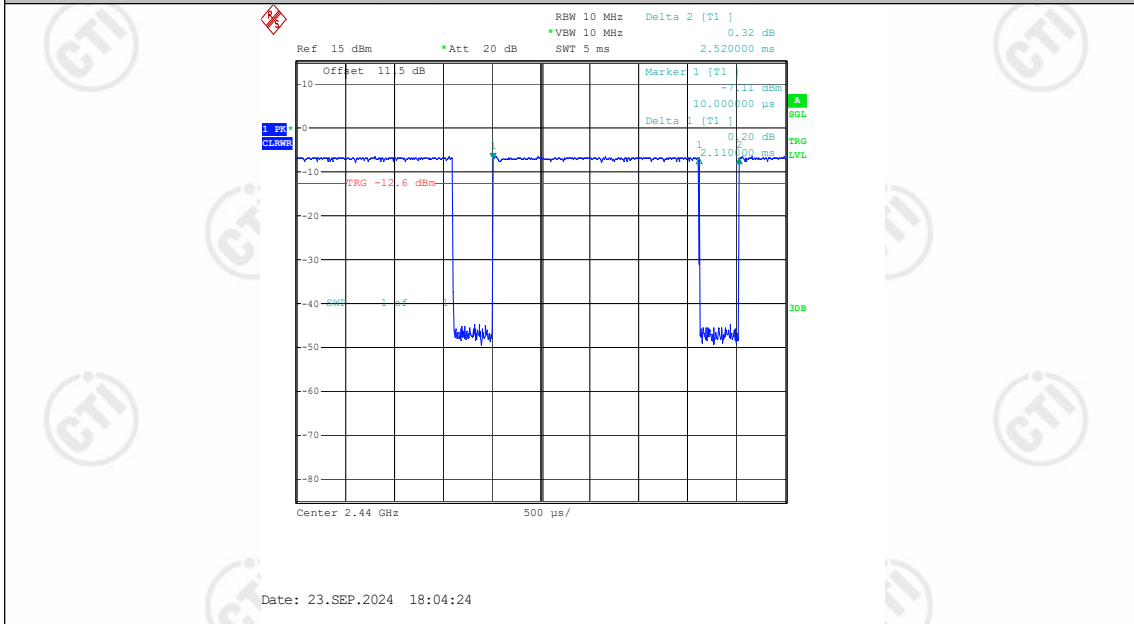
| TestMode | Antenna | Frequency[MHz] | ON Time [ms] | Period [ms] | Duty Cycle [%] | Duty Cycle Factor[dB] |
|----------|---------|----------------|--------------|-------------|----------------|-----------------------|
| BLE_1M | Ant1 | 2402 | 2.11 | 2.52 | 83.73 | 0.77 |
| BLE_1M | Ant1 | 2440 | 2.11 | 2.52 | 83.73 | 0.77 |
| BLE_1M | Ant1 | 2480 | 2.11 | 2.52 | 83.73 | 0.77 |

Note:Duty Cycle Factor[dB]=-10*Ig(Duty Cycle);

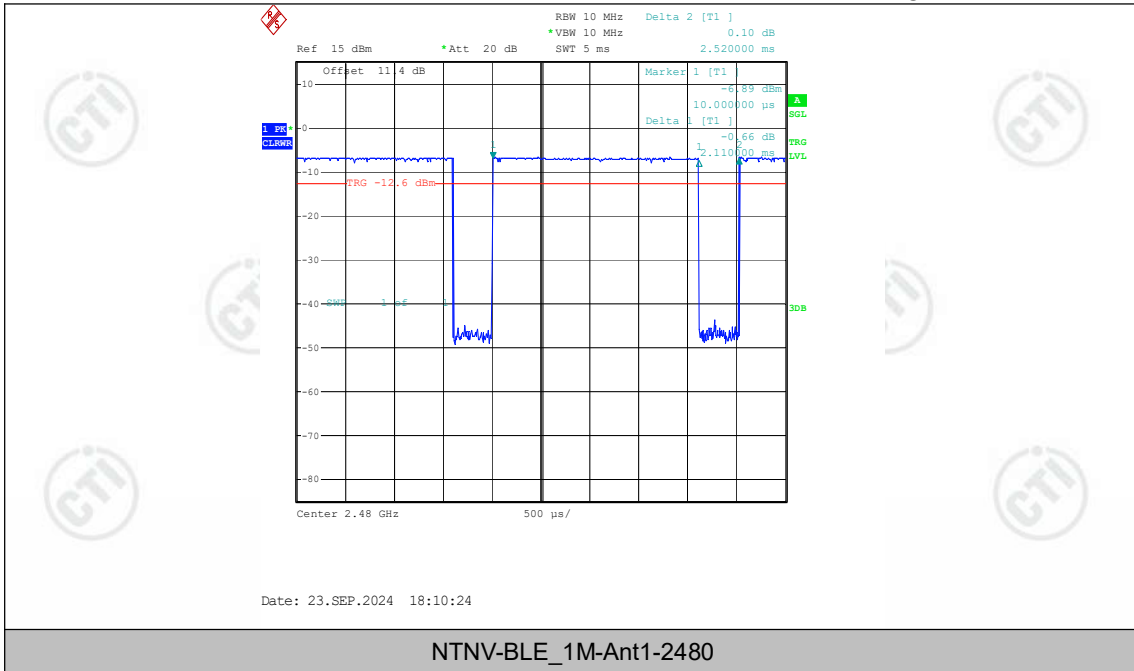
Test Graphs



NTNV-BLE_1M-Ant1-2402



NTNV-BLE_1M-Ant1-2440



END OF REPORT