

Appendix RF Test Data for BLE

FCC ID : 2A2EP-DC24K

Company : Shenzhen Kangsai Technology Co., Ltd.

EUT : Car Diagnostic tool

Model Number : DC24K

Report No. : CTA25072801301

Reviewed By : Eric Wang

Appendix A: DTS Bandwidth

Test Result

| TestMode | Antenna | Freq(MHz) | DTS BW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|----------|---------|-----------|--------------|----------|----------|------------|---------|
| BLE_1M | Ant1 | 2402 | 0.644 | 2401.692 | 2402.336 | 0.5 | PASS |
| | | 2440 | 0.640 | 2439.696 | 2440.336 | 0.5 | PASS |
| | | 2480 | 0.648 | 2479.684 | 2480.332 | 0.5 | PASS |

Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

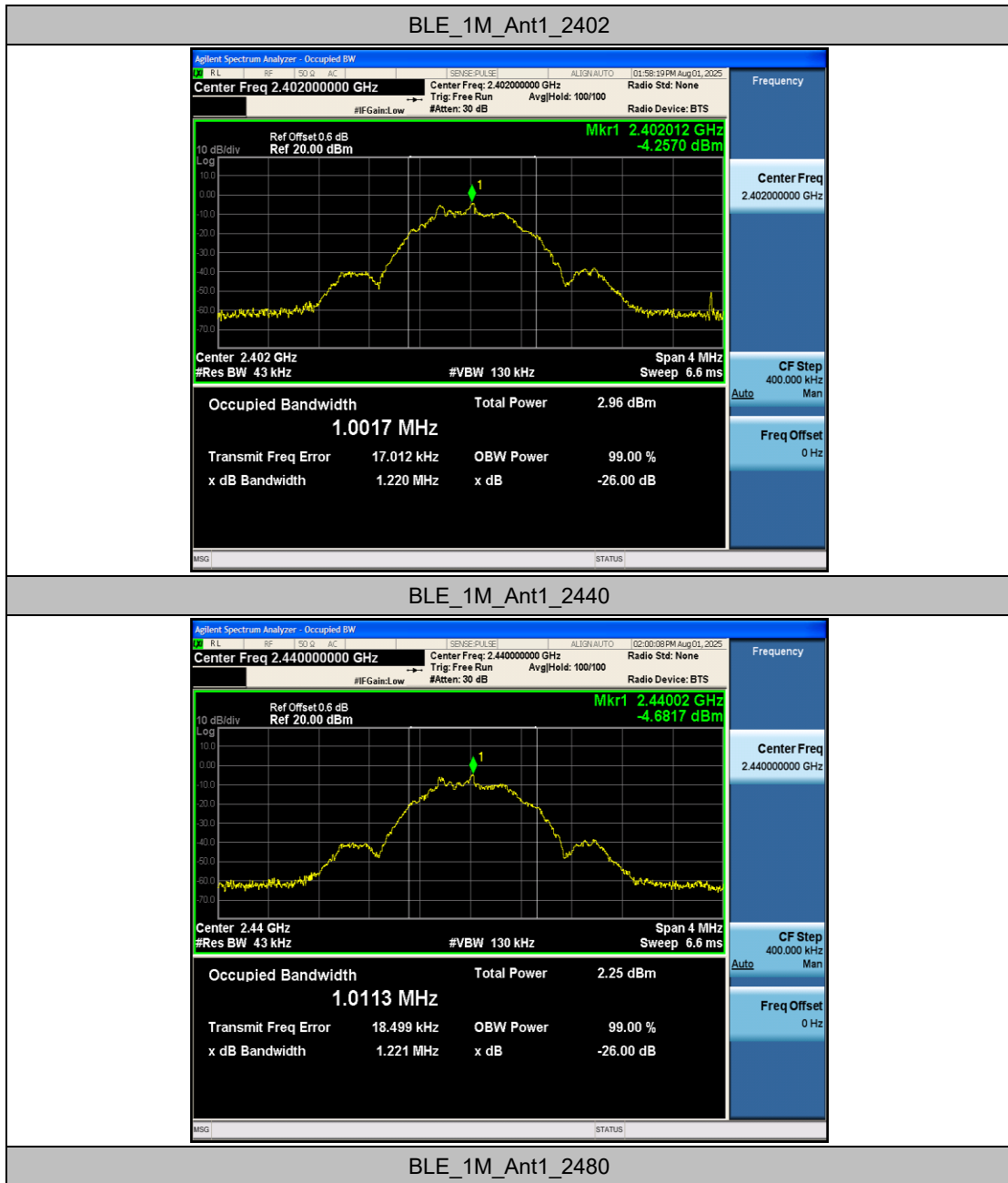


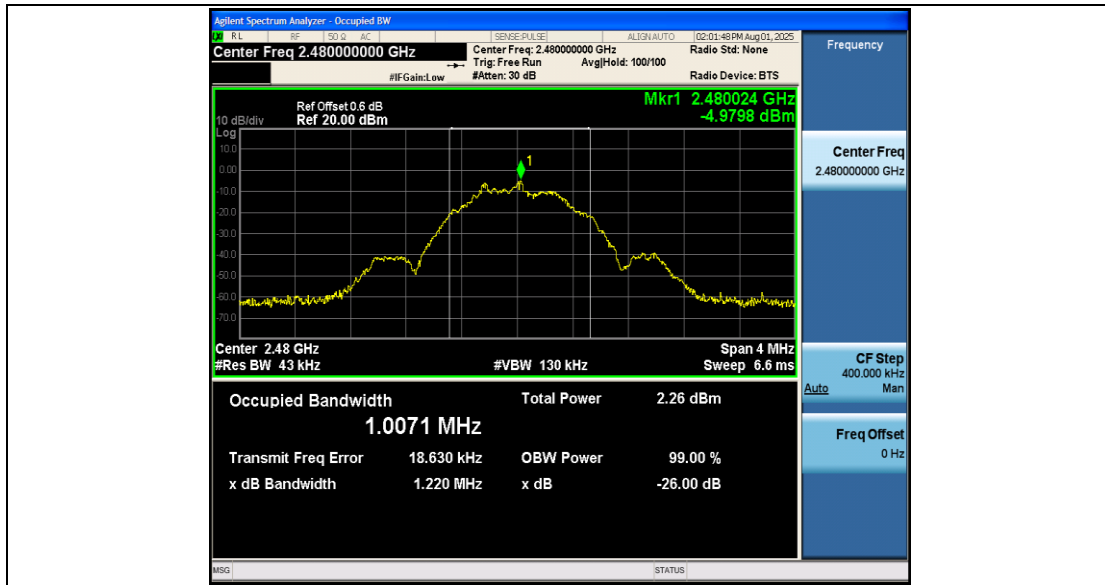
Appendix B: Occupied Channel Bandwidth

Test Result

| TestMode | Antenna | Freq(MHz) | OCB [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|----------|---------|-----------|-----------|-----------|-----------|------------|---------|
| BLE_1M | Ant1 | 2402 | 1.0017 | 2401.5162 | 2402.5179 | --- | --- |
| | | 2440 | 1.0113 | 2439.5129 | 2440.5242 | --- | --- |
| | | 2480 | 1.0071 | 2479.5151 | 2480.5222 | --- | --- |

Test Graphs





Appendix C: Maximum conducted output power

Test Result Peak

| TestMode | Antenna | Freq(MHz) | Conducted Peak Power[dBm] | Conducted Limit[dBm] | Verdict |
|----------|---------|-----------|---------------------------|----------------------|---------|
| BLE_1M | Ant1 | 2402 | -3.12 | ≤30 | PASS |
| | | 2440 | -3.60 | ≤30 | PASS |
| | | 2480 | -3.80 | ≤30 | PASS |

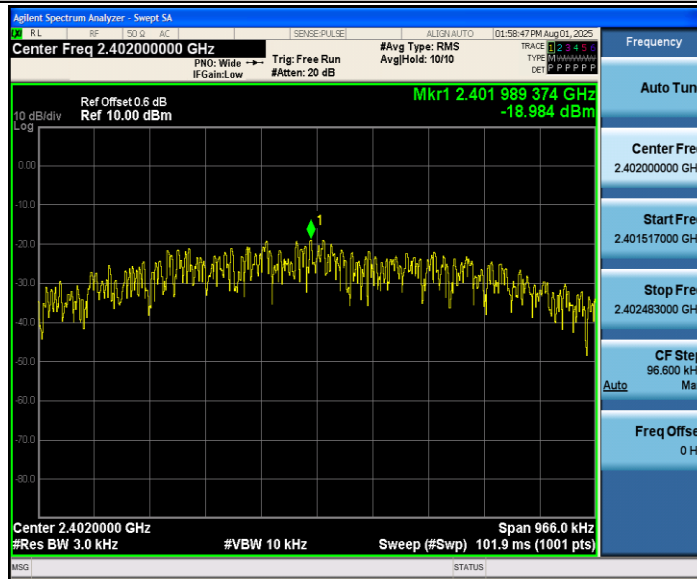
Appendix D: Maximum power spectral density

Test Result

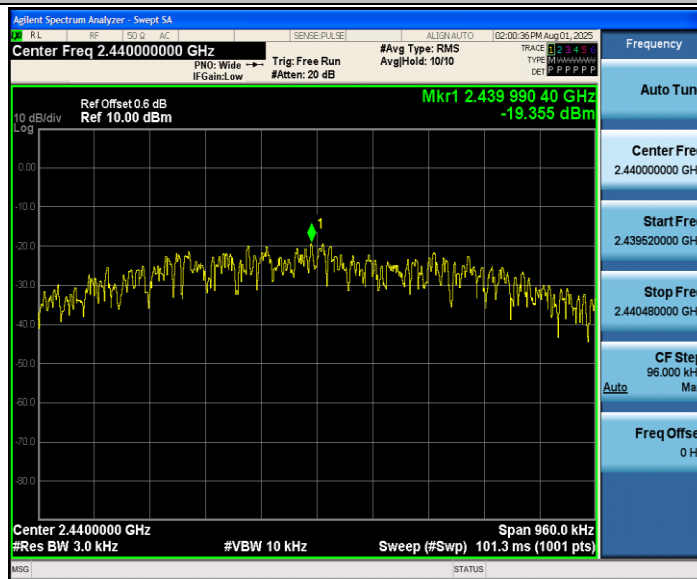
| TestMode | Antenna | Freq(MHz) | Result[dBm/3kHz] | Limit[dBm/3kHz] | Verdict |
|----------|---------|-----------|------------------|-----------------|---------|
| BLE_1M | Ant1 | 2402 | -18.98 | ≤8.00 | PASS |
| | | 2440 | -19.36 | ≤8.00 | PASS |
| | | 2480 | -19.52 | ≤8.00 | PASS |

Test Graphs

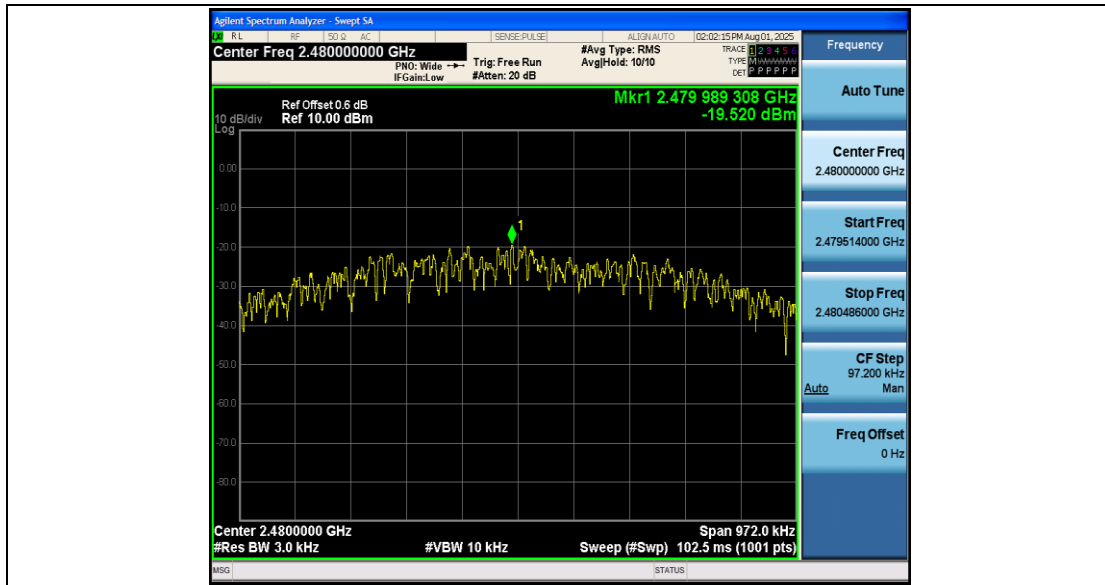
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

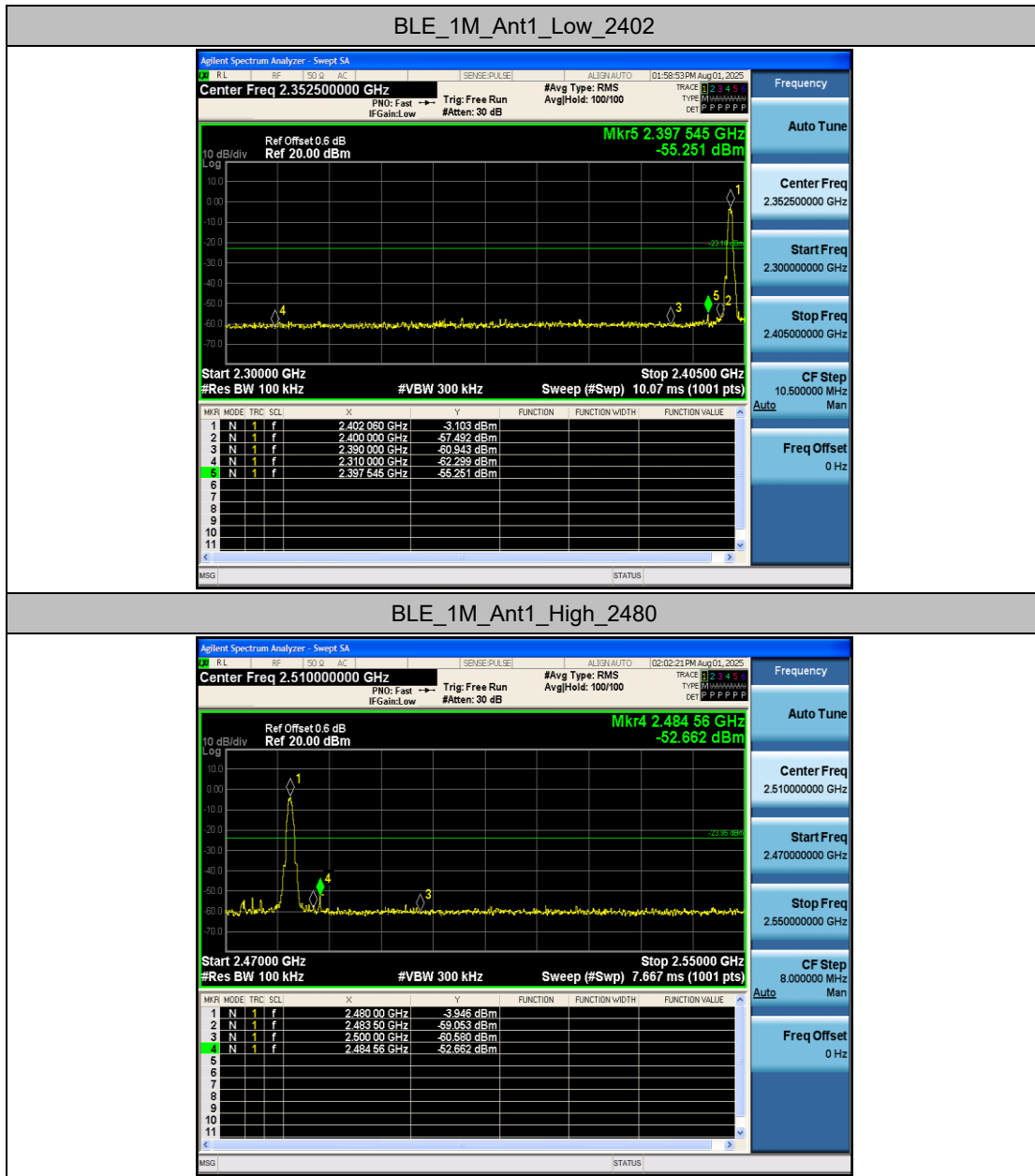


Appendix E: Band edge measurements

Test Result

| TestMode | Antenna | Channel | Freq(MHz) | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|-----------|---------------|-------------|------------|---------|
| BLE_1M | Ant1 | Low | 2402 | -3.10 | -55.25 | ≤-23.1 | PASS |
| | | High | 2480 | -3.95 | -52.66 | ≤-23.95 | PASS |

Test Graphs


BLE_1M_Ant1_High_2480

Appendix F: Conducted Spurious Emission

Test Result

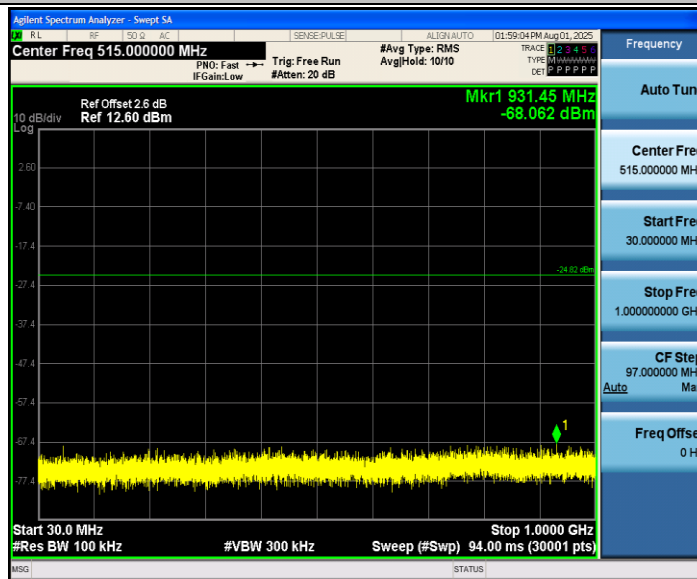
| TestMode | Antenna | Freq(MHz) | FreqRange [MHz] | RefLevel [dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|-----------|-----------------|----------------|-------------|------------|---------|
| BLE_1M | Ant1 | 2402 | Reference | -4.82 | -4.82 | --- | PASS |
| | | | 30~1000 | -4.82 | -68.06 | ≤-24.82 | PASS |
| | | | 1000~26500 | -4.82 | -44.65 | ≤-24.82 | PASS |
| | | 2440 | Reference | -5.15 | -5.15 | --- | PASS |
| | | | 30~1000 | -5.15 | -55.7 | ≤-25.15 | PASS |
| | | | 1000~26500 | -5.15 | -49.25 | ≤-25.15 | PASS |
| | | 2480 | Reference | -4.20 | -4.20 | --- | PASS |
| | | | 30~1000 | -4.20 | -61.85 | ≤-24.2 | PASS |
| | | | 1000~26500 | -4.20 | -45.4 | ≤-24.2 | PASS |

Test Graphs

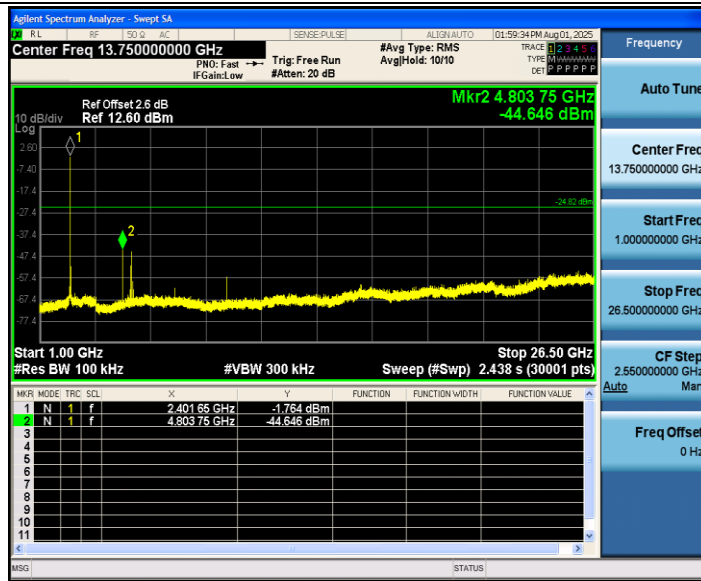
BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



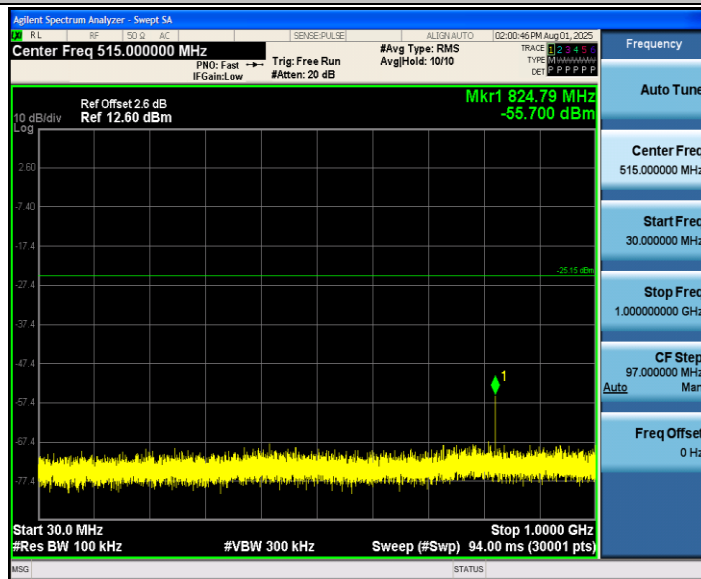
BLE_1M_Ant1_2402_1000~26500



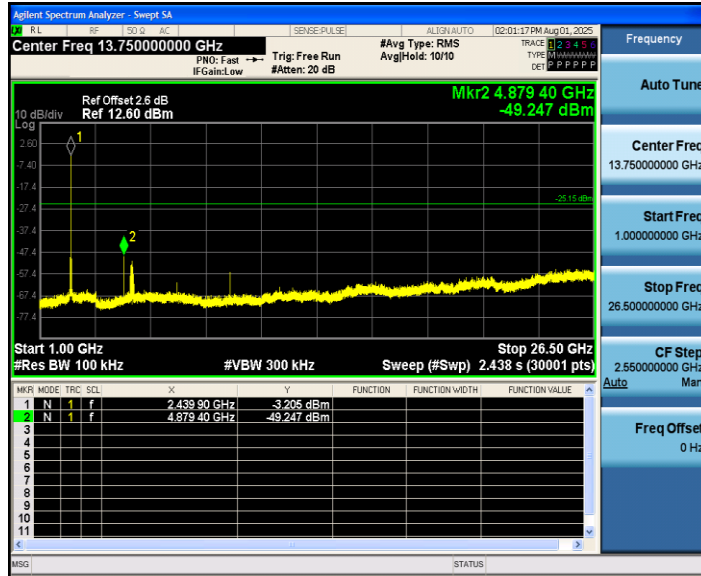
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



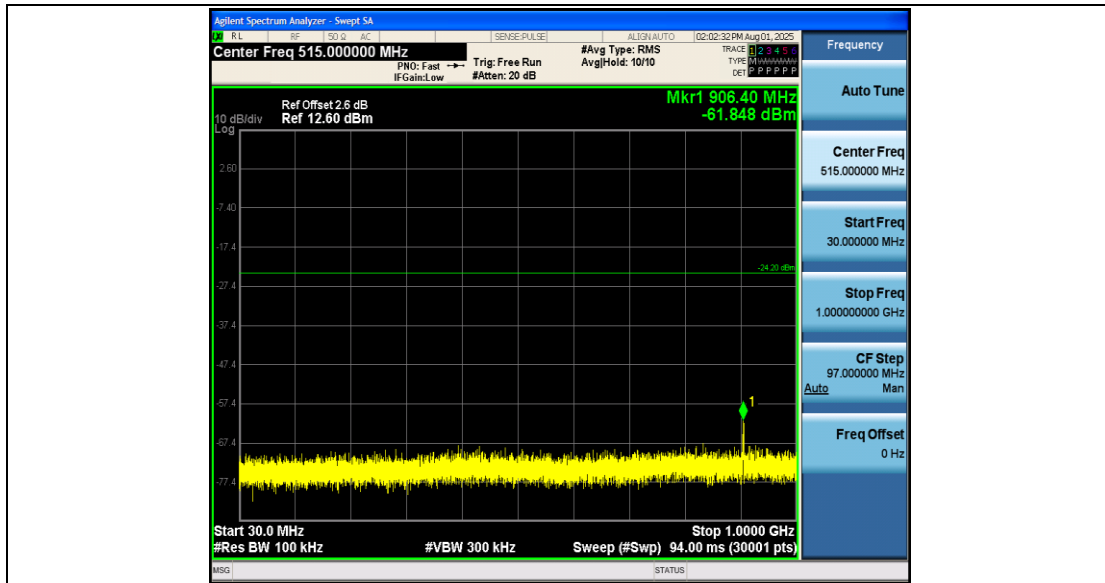
BLE_1M_Ant1_2440_1000~26500



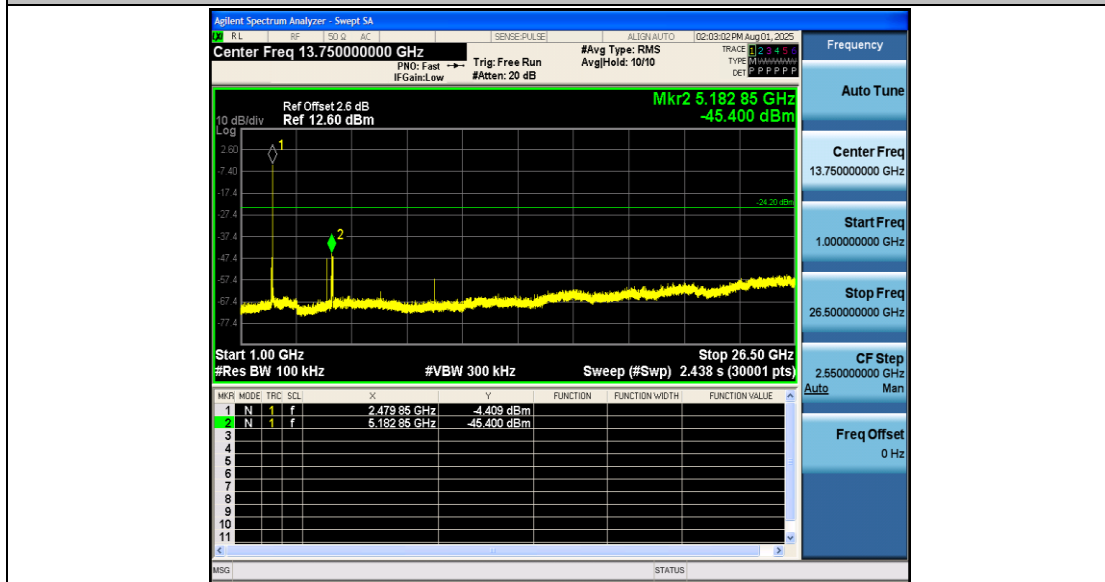
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



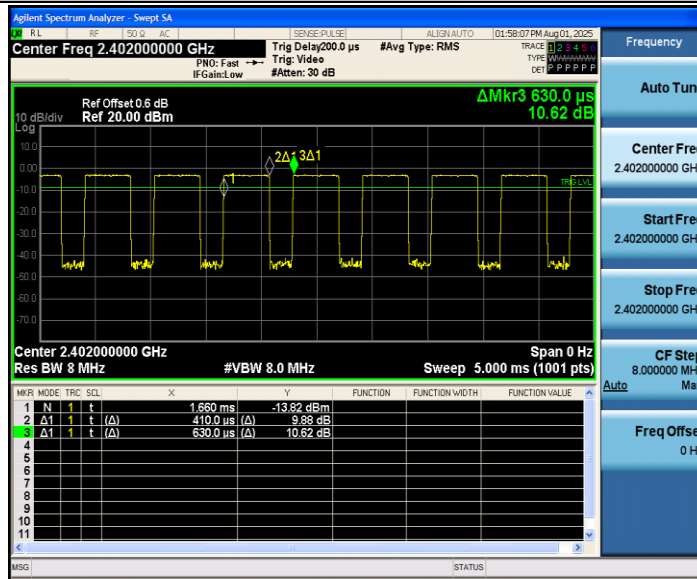
Appendix G: Duty Cycle

Test Result

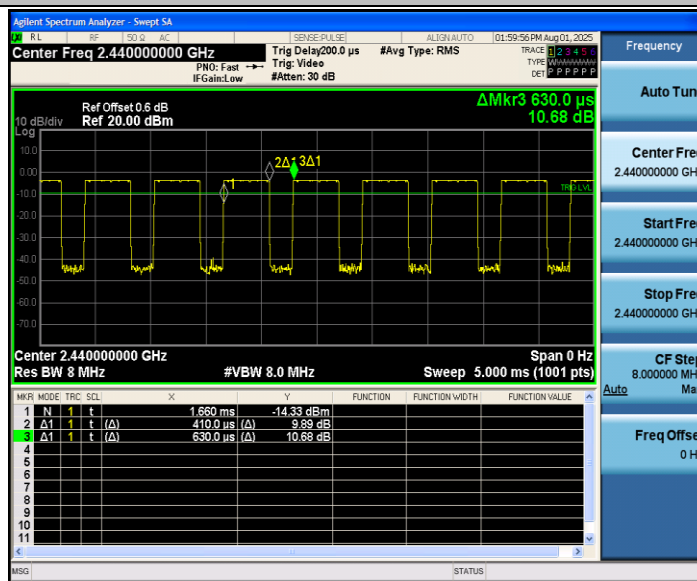
| TestMode | Antenna | Freq(MHz) | ON Time [ms] | Period [ms] | X | DC [%] | xFactor | Limit | Verdict |
|----------|---------|-----------|--------------|-------------|--------|--------|---------|-------|---------|
| BLE_1M | Ant1 | 2402 | 0.41 | 0.63 | 0.6508 | 65.08 | 1.87 | --- | --- |
| | | 2440 | 0.41 | 0.63 | 0.6508 | 65.08 | 1.87 | --- | --- |
| | | 2480 | 0.41 | 0.63 | 0.6508 | 65.08 | 1.87 | --- | --- |

Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

