

## **FCC Appendix RF Test Data for BLE**

**FCC ID** : 2BSTJ-LCD

**Company** : Shenzhen Libai Leather Goods Co., Ltd.

**EUT** : Smart AI Backpack

**Model Number** : 21.5-inch LCD Screen Casting Backpack

**Report No.** : CTA25102700501

**Reviewed By** : Eric Wang

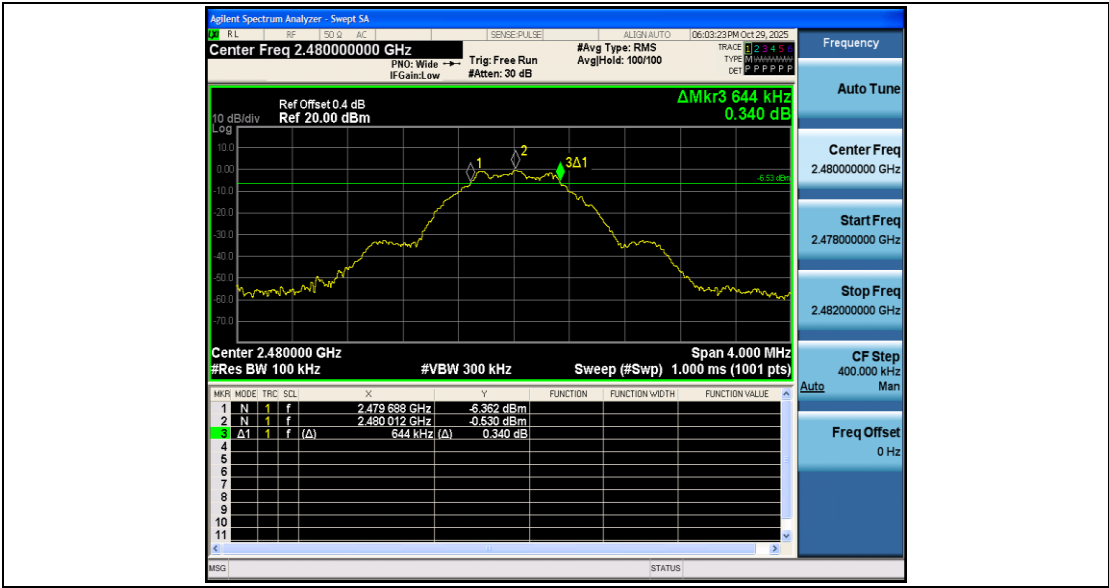
## Appendix A: DTS Bandwidth

### Test Result

| TestMode | Antenna | Freq(MHz) | DTS BW<br>[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|-----------|-----------------|----------|----------|------------|---------|
| BLE_1M   | Ant1    | 2402      | 0.644           | 2401.692 | 2402.336 | 0.5        | PASS    |
|          |         | 2440      | 0.624           | 2439.700 | 2440.324 | 0.5        | PASS    |
|          |         | 2480      | 0.644           | 2479.688 | 2480.332 | 0.5        | PASS    |

Test Graphs



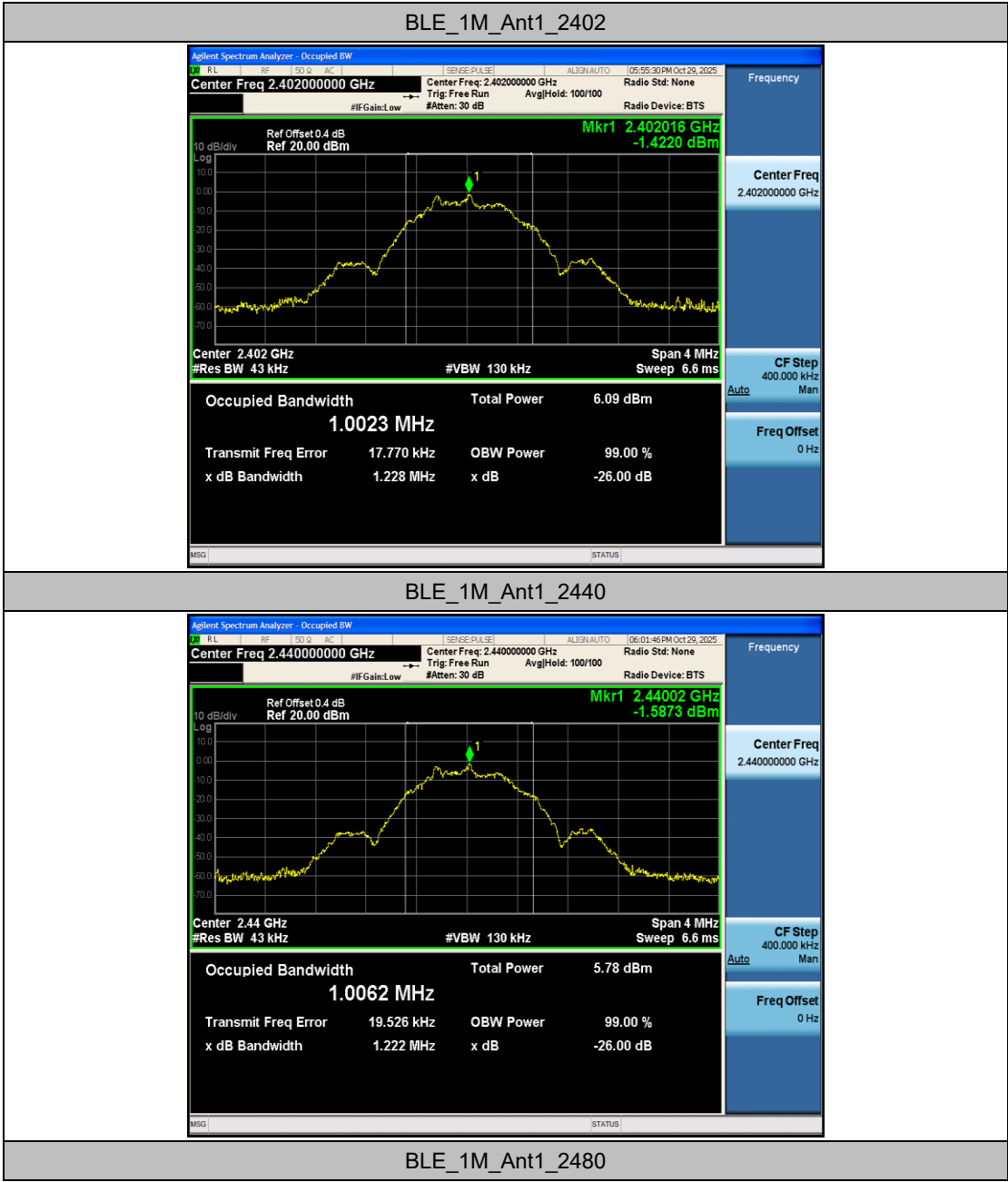


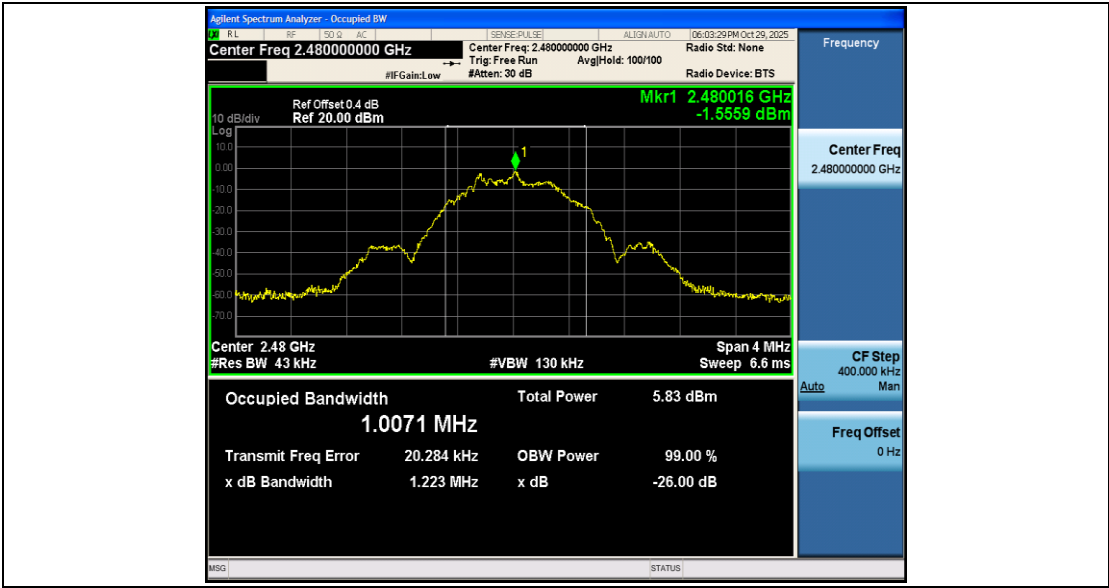
## Appendix B: Occupied Channel Bandwidth

### Test Result

| TestMode | Antenna | Freq(MHz) | OCB [MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|----------|---------|-----------|-----------|-----------|-----------|------------|---------|
| BLE_1M   | Ant1    | 2402      | 1.0023    | 2401.5166 | 2402.5189 | ---        | ---     |
|          |         | 2440      | 1.0062    | 2439.5164 | 2440.5226 | ---        | ---     |
|          |         | 2480      | 1.0071    | 2479.5167 | 2480.5238 | ---        | ---     |

Test Graphs





## Appendix C: Maximum conducted output power

### Test Result Peak

| TestMode | Antenna | Freq(MHz) | Conducted<br>Peak<br>Power[dBm] | Conducted<br>Limit[dBm] | Verdict |
|----------|---------|-----------|---------------------------------|-------------------------|---------|
| BLE_1M   | Ant1    | 2402      | -0.15                           | ≤30                     | PASS    |
|          |         | 2440      | -0.36                           | ≤30                     | PASS    |
|          |         | 2480      | -0.27                           | ≤30                     | PASS    |

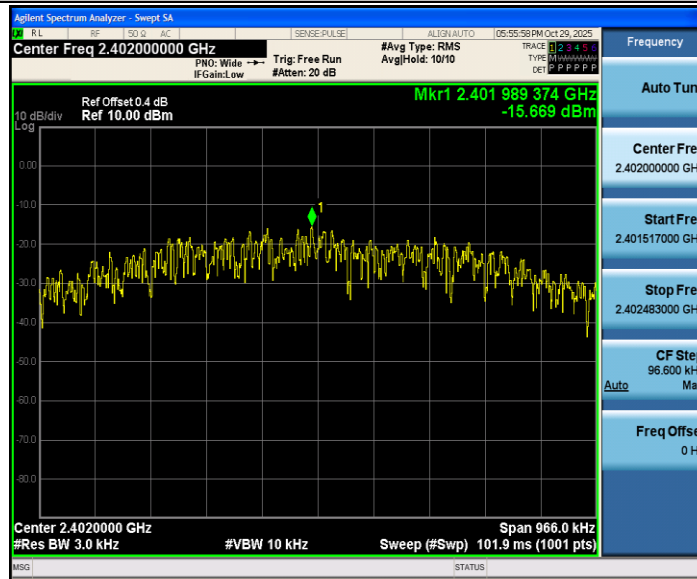
## Appendix D: Maximum power spectral density

### Test Result

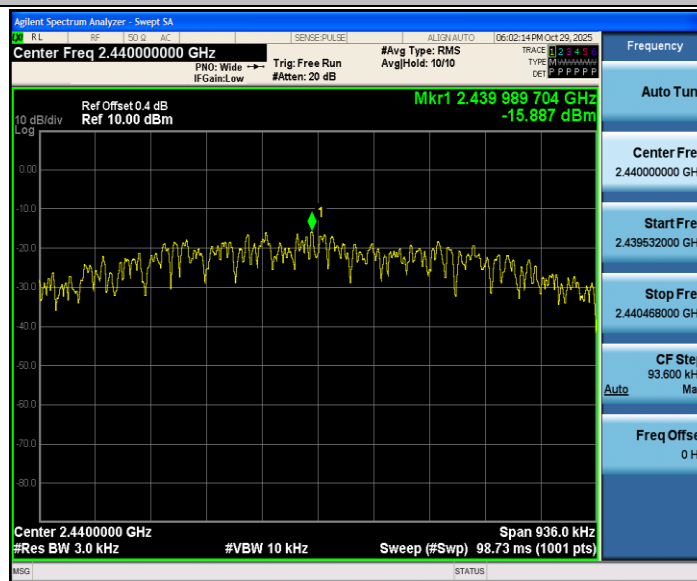
| TestMode | Antenna | Freq(MHz) | Result[dBm/3kHz] | Limit[dBm/3kHz] | Verdict |
|----------|---------|-----------|------------------|-----------------|---------|
| BLE_1M   | Ant1    | 2402      | -15.67           | ≤8.00           | PASS    |
|          |         | 2440      | -15.89           | ≤8.00           | PASS    |
|          |         | 2480      | -15.87           | ≤8.00           | PASS    |

## Test Graphs

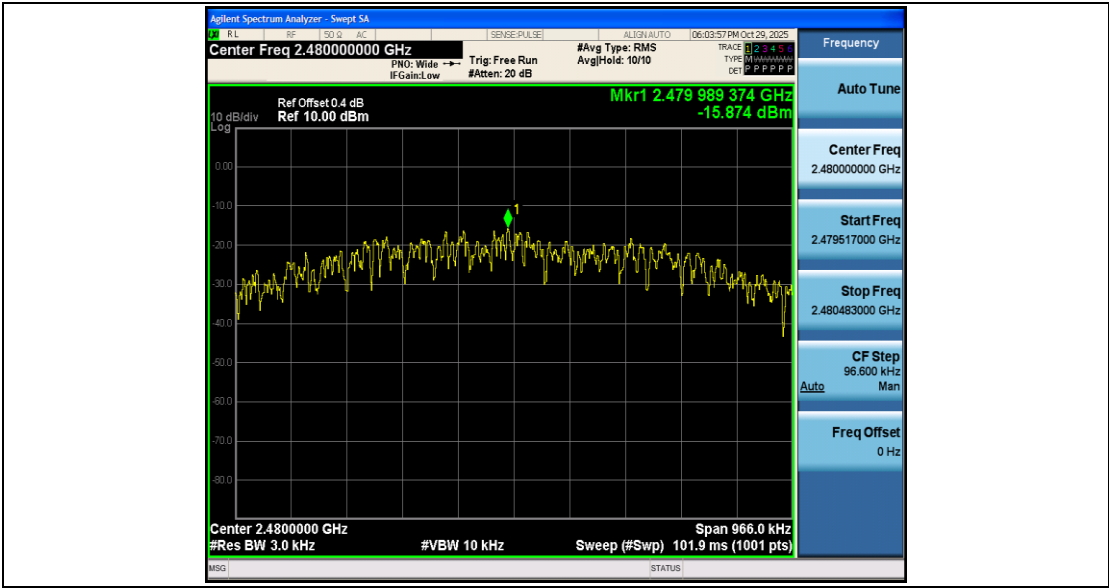
BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480

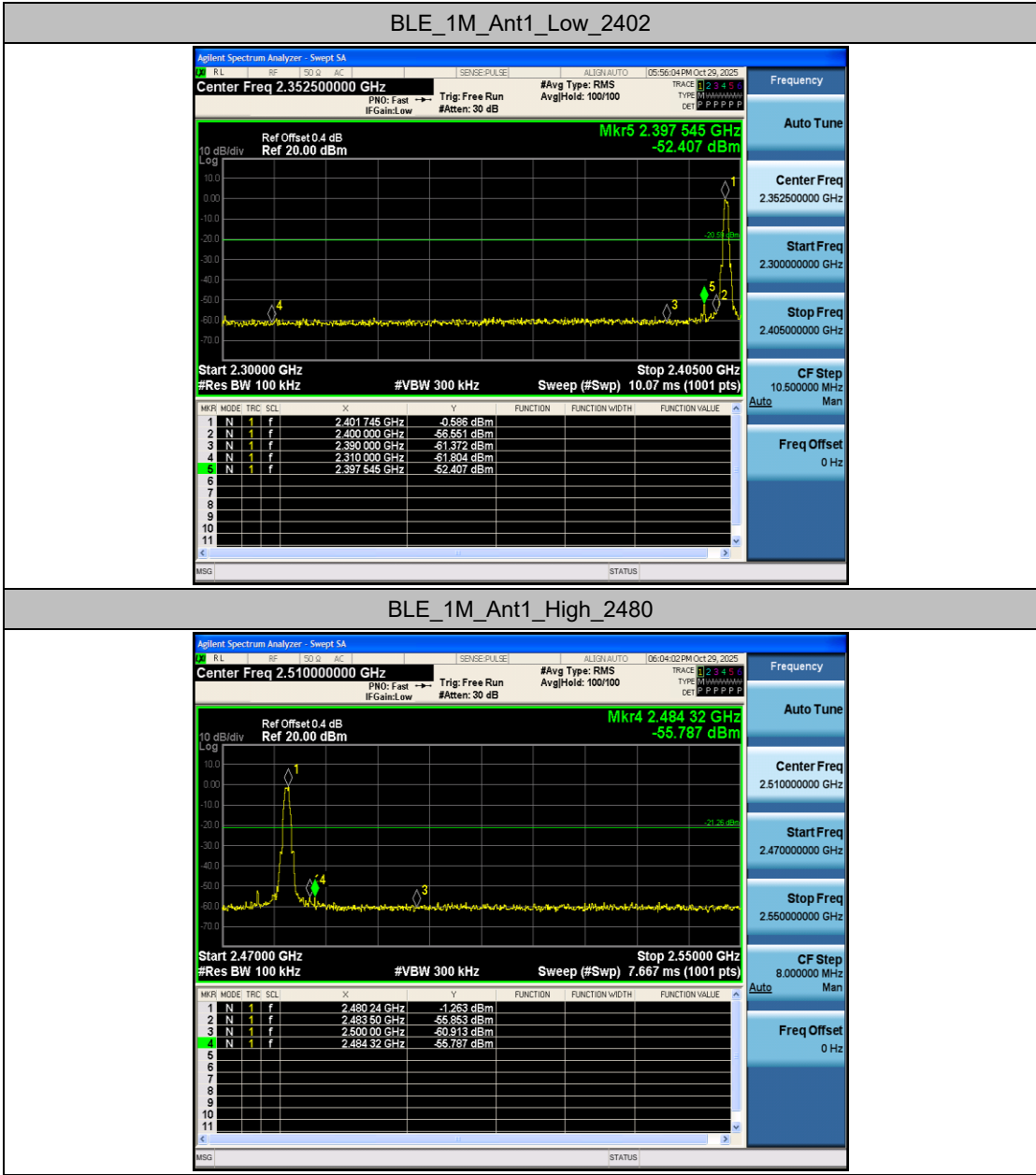


## Appendix E: Band edge measurements

### Test Result

| TestMode | Antenna | ChName | Freq(MHz) | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|--------|-----------|---------------|-------------|------------|---------|
| BLE_1M   | Ant1    | Low    | 2402      | -0.59         | -52.41      | ≤-20.59    | PASS    |
|          |         | High   | 2480      | -1.26         | -55.79      | ≤-21.26    | PASS    |

Test Graphs

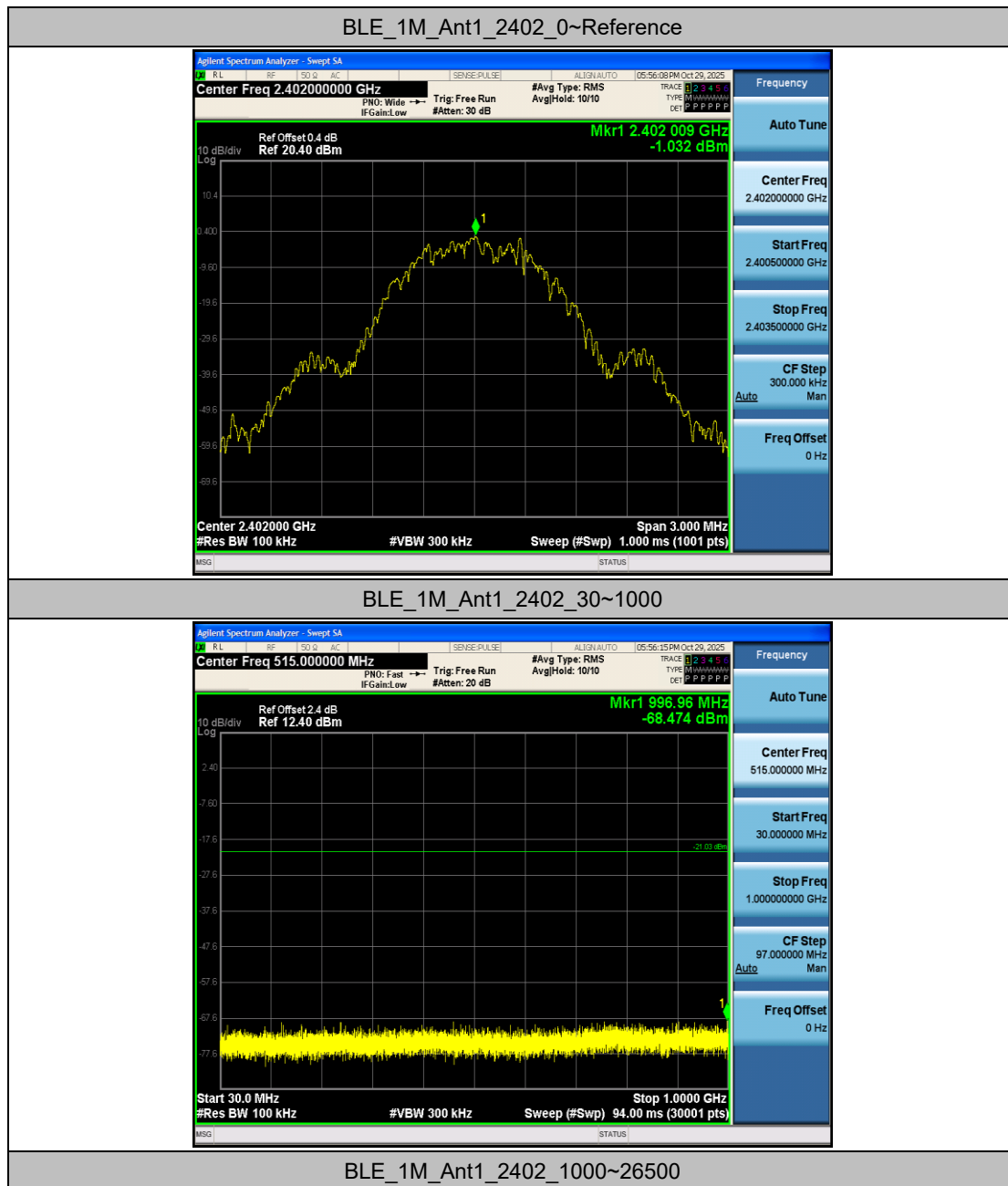


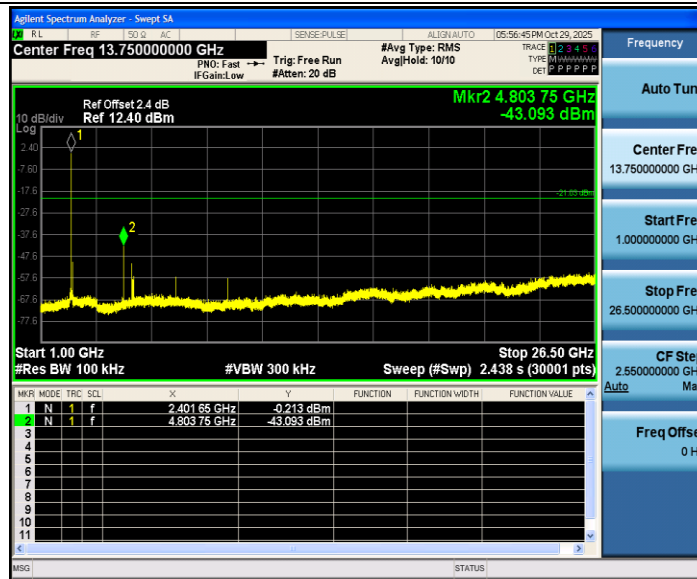
## Appendix F: Conducted Spurious Emission

### Test Result

| TestMode | Antenna | Freq(MHz) | FreqRange<br>[MHz] | RefLevel<br>[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|-----------|--------------------|-------------------|-------------|------------|---------|
| BLE_1M   | Ant1    | 2402      | Reference          | -1.03             | -1.03       | ---        | PASS    |
|          |         |           | 30~1000            | -1.03             | -68.47      | ≤-21.03    | PASS    |
|          |         |           | 1000~26500         | -1.03             | -43.09      | ≤-21.03    | PASS    |
|          |         | 2440      | Reference          | -1.60             | -1.60       | ---        | PASS    |
|          |         |           | 30~1000            | -1.60             | -67.29      | ≤-21.6     | PASS    |
|          |         |           | 1000~26500         | -1.60             | -41.36      | ≤-21.6     | PASS    |
|          |         | 2480      | Reference          | -0.90             | -0.90       | ---        | PASS    |
|          |         |           | 30~1000            | -0.90             | -66.74      | ≤-20.9     | PASS    |
|          |         |           | 1000~26500         | -0.90             | -43.24      | ≤-20.9     | PASS    |

## Test Graphs

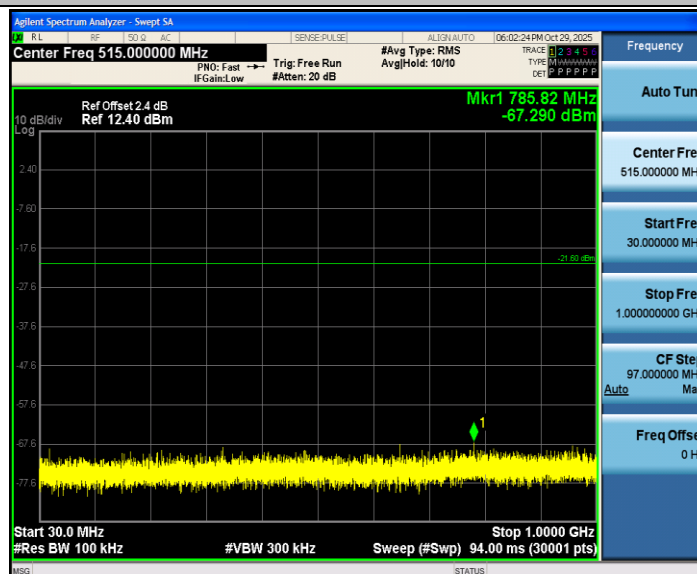




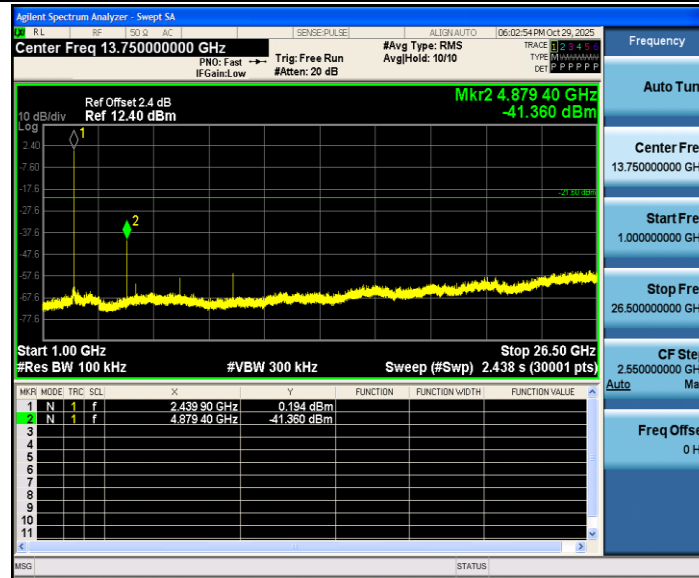
BLE\_1M\_Ant1\_2440\_0~Reference



BLE\_1M\_Ant1\_2440\_30~1000



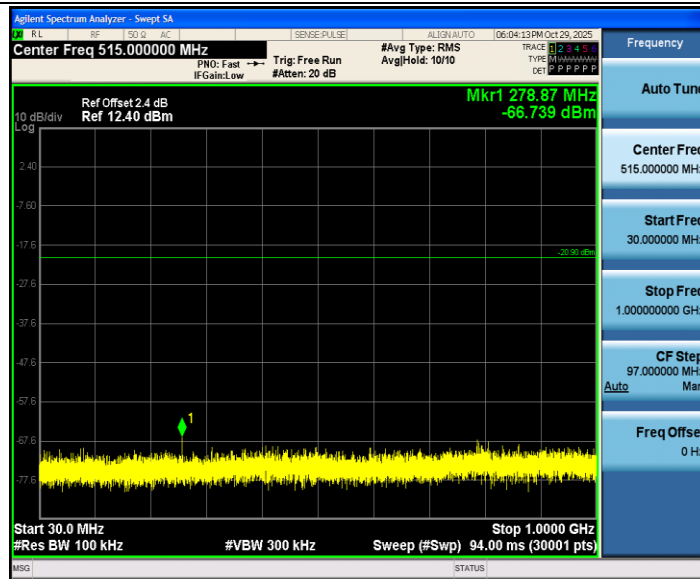
# BLE\_1M\_Ant1\_2440\_1000~26500



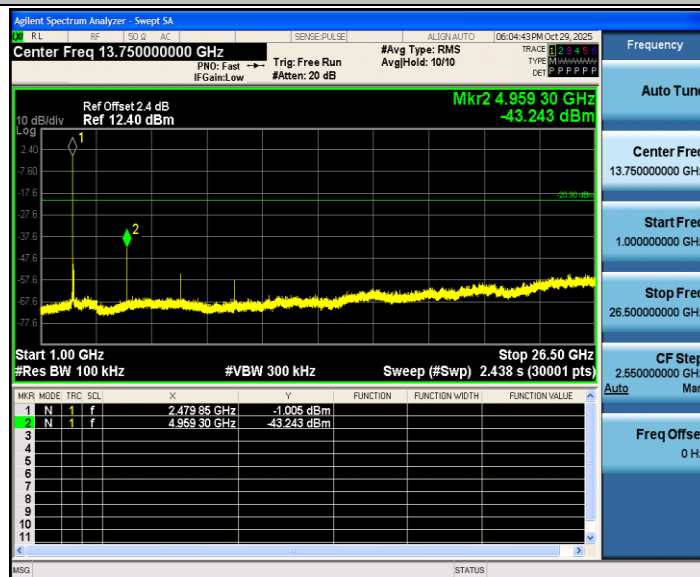
# BLE\_1M\_Ant1\_2480\_0~Reference



# BLE\_1M\_Ant1\_2480\_30~1000



BLE\_1M\_Ant1\_2480\_1000~26500



## Appendix G: Duty Cycle

### Test Result

| TestMode | Antenna | Freq(MHz) | ON Time<br>[ms] | Period<br>[ms] | X      | DC<br>[%] | xFactor | Limit | Verdict |
|----------|---------|-----------|-----------------|----------------|--------|-----------|---------|-------|---------|
| BLE_1M   | Ant1    | 2402      | 0.41            | 0.62           | 0.6613 | 66.13     | 1.80    | ---   | ---     |
|          |         | 2440      | 0.41            | 0.62           | 0.6613 | 66.13     | 1.80    | ---   | ---     |
|          |         | 2480      | 0.41            | 0.62           | 0.6613 | 66.13     | 1.80    | ---   | ---     |

Test Graphs

