

**RF Test Data for BT(BLE) (Conducted Measurement)****Product Name: Pro<sup>1</sup> X****Trade Mark: F****Test Model: QX1051****FCC ID: 2AUCLQX1050****Environmental Conditions**

|                    |           |
|--------------------|-----------|
| Temperature:       | 25.5°C    |
| Relative Humidity: | 55%       |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Anna Hu   |
| Supervised by:     | Hugo Chen |
| NOTE               | N/A       |

**Appendix A: DTS Bandwidth****Test Result**

| TestMode | Antenna | Channel | DTS BW [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|---------|--------------|----------|----------|------------|---------|
| BLE_1M   | Ant1    | 2402    | 0.640        | 2401.676 | 2402.316 | 0.5        | PASS    |
|          |         | 2440    | 0.660        | 2439.672 | 2440.332 | 0.5        | PASS    |
|          |         | 2480    | 0.656        | 2479.664 | 2480.320 | 0.5        | PASS    |

Test Graphs

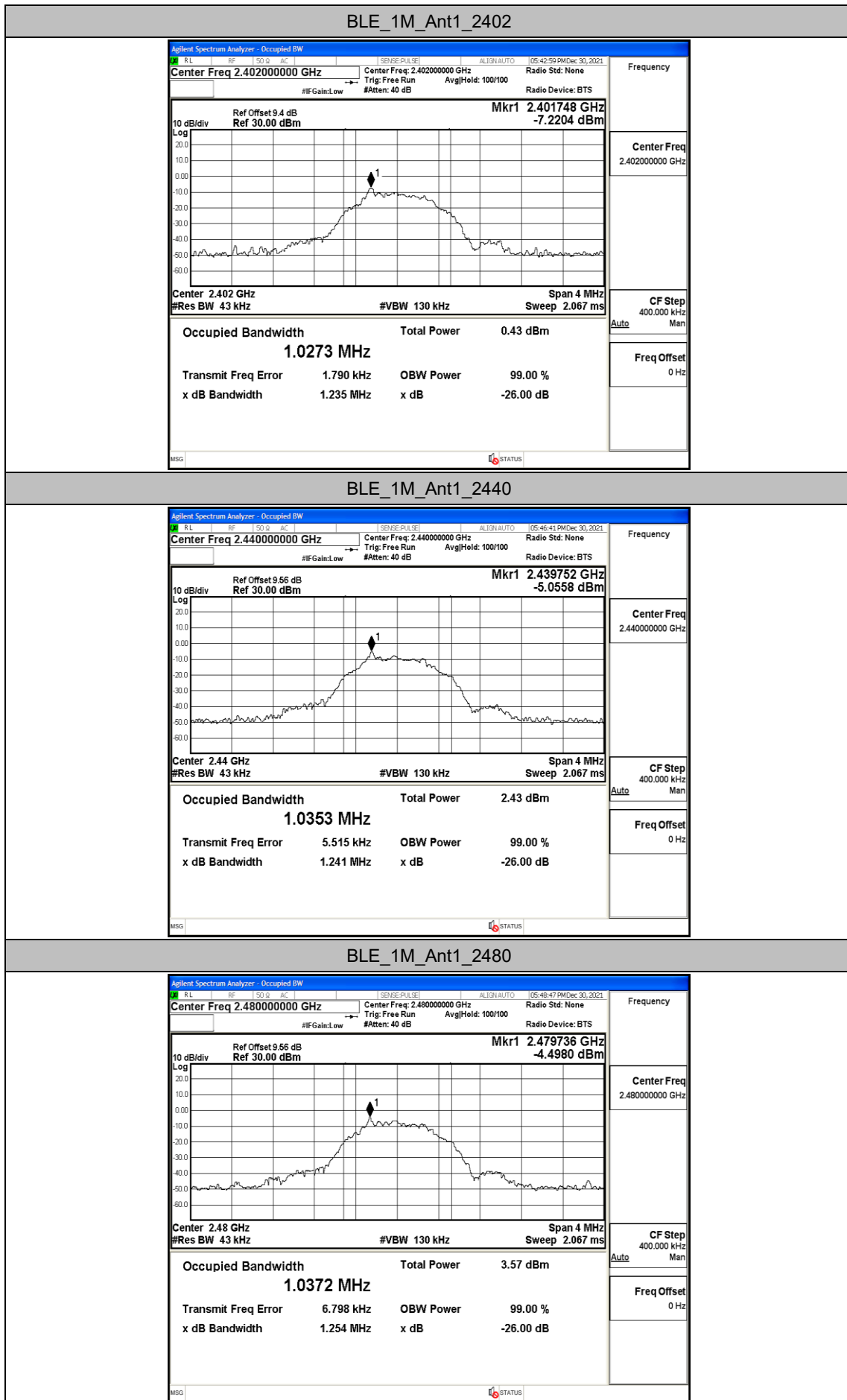


## Appendix B: Occupied Channel Bandwidth

### Test Result

| TestMode | Antenna | Channel | OCB [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|---------|-----------|----------|----------|------------|---------|
| BLE_1M   | Ant1    | 2402    | 1.0273    | 2401.488 | 2402.515 | ---        | PASS    |
|          |         | 2440    | 1.0353    | 2439.488 | 2440.523 | ---        | PASS    |
|          |         | 2480    | 1.0372    | 2479.488 | 2480.525 | ---        | PASS    |

Test Graphs

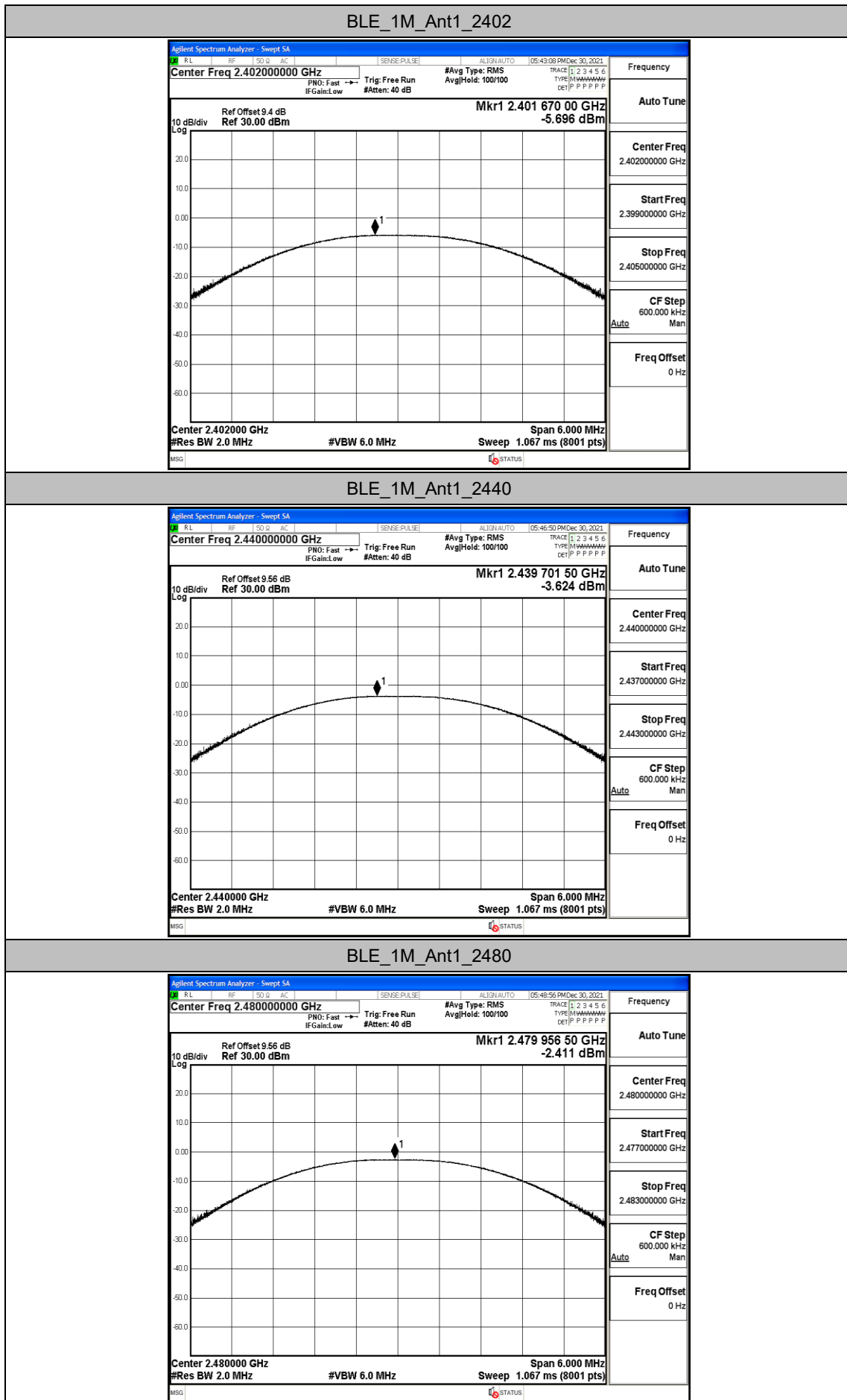


## Appendix C: Maximum conducted output power

### Test Result

| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| BLE_1M   | Ant1    | 2402    | -5.7        | ≤30        | PASS    |
|          |         | 2440    | -3.62       | ≤30        | PASS    |
|          |         | 2480    | -2.41       | ≤30        | PASS    |

Test Graphs

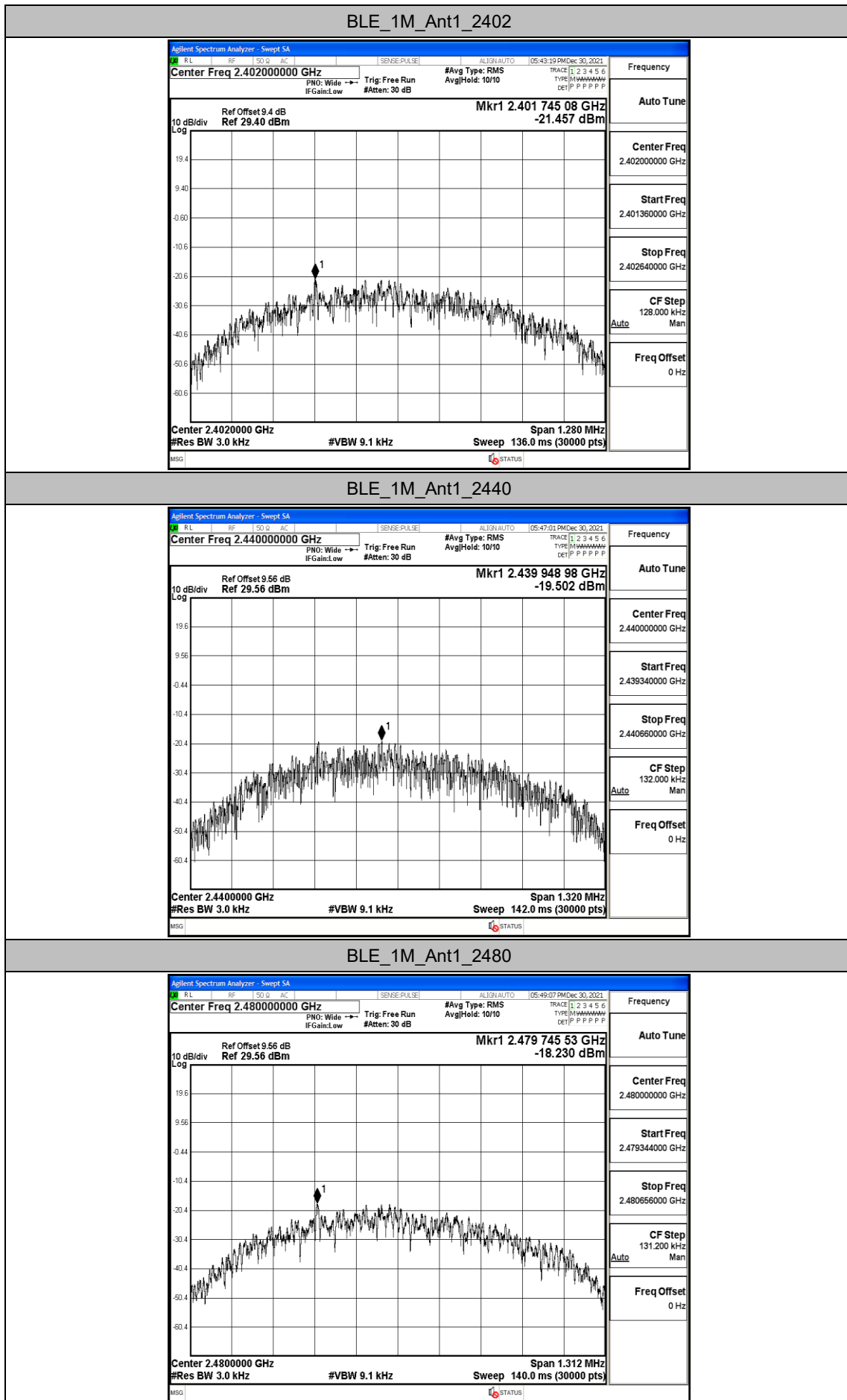


## Appendix D: Maximum power spectral density

### Test Result

| TestMode | Antenna | Channel | Result[dBm/3-100kHz] | Limit[dBm/3kHz] | Verdict |
|----------|---------|---------|----------------------|-----------------|---------|
| BLE_1M   | Ant1    | 2402    | -21.46               | ≤8              | PASS    |
|          |         | 2440    | -19.5                | ≤8              | PASS    |
|          |         | 2480    | -18.23               | ≤8              | PASS    |

Test Graphs



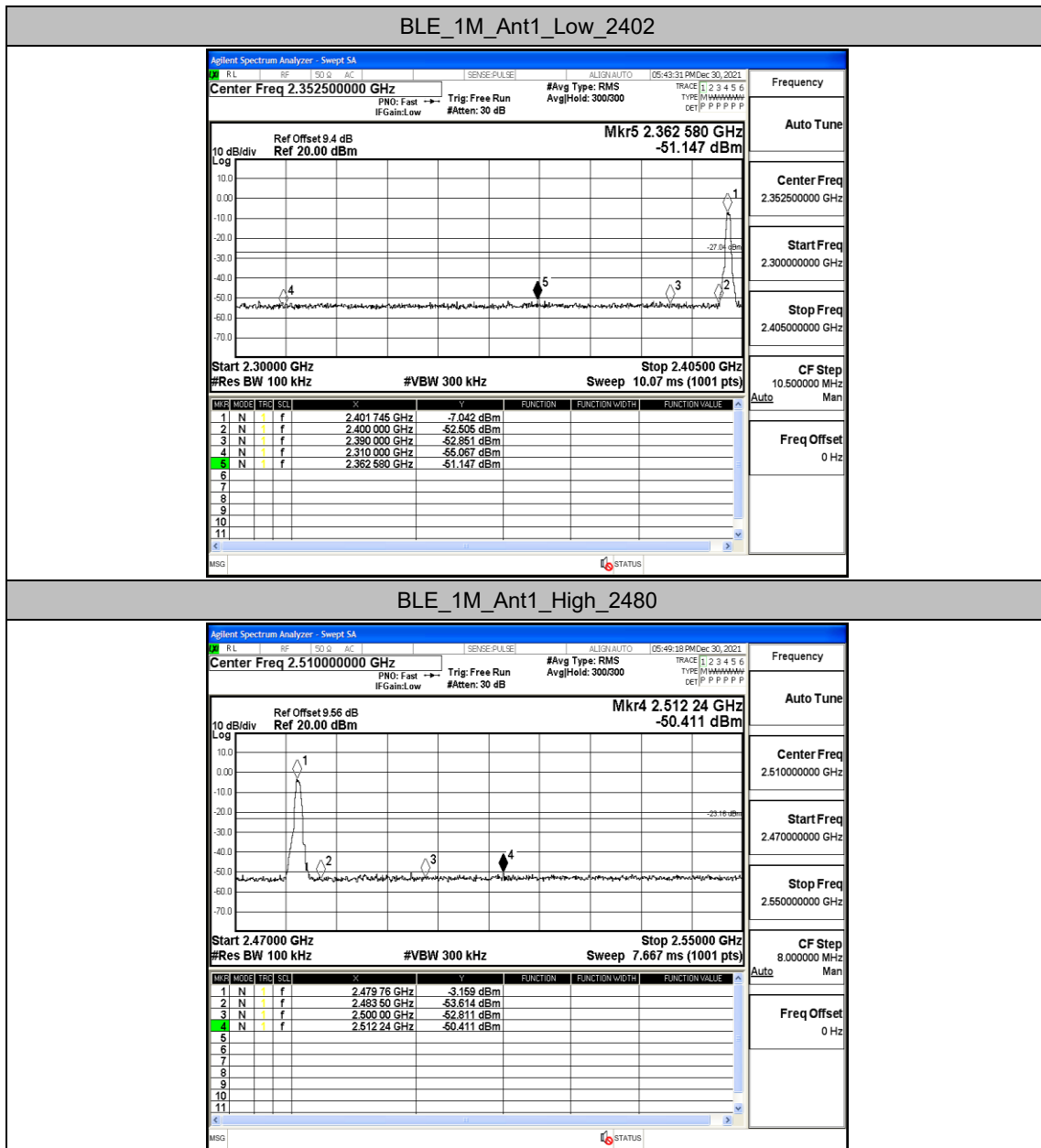


## Appendix E: Band edge measurements

### Test Result

| TestMode | Antenna | ChName | Channel | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|--------|---------|---------------|-------------|------------|---------|
| BLE_1M   | Ant1    | Low    | 2402    | -7.04         | -51.15      | ≤-27.04    | PASS    |
|          |         | High   | 2480    | -3.16         | -50.41      | ≤-23.16    | PASS    |

### Test Graphs

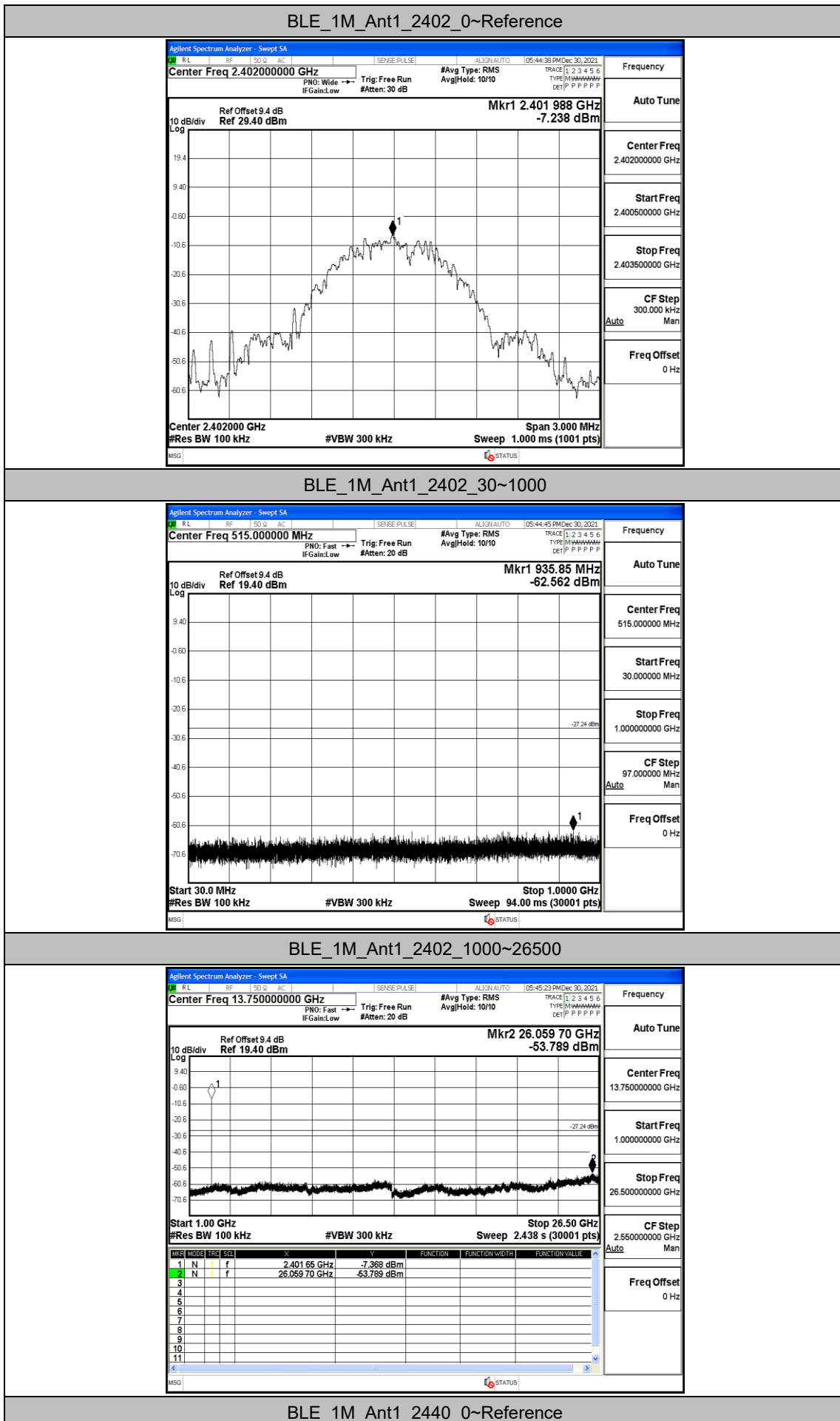


## Appendix F: Conducted Spurious Emission

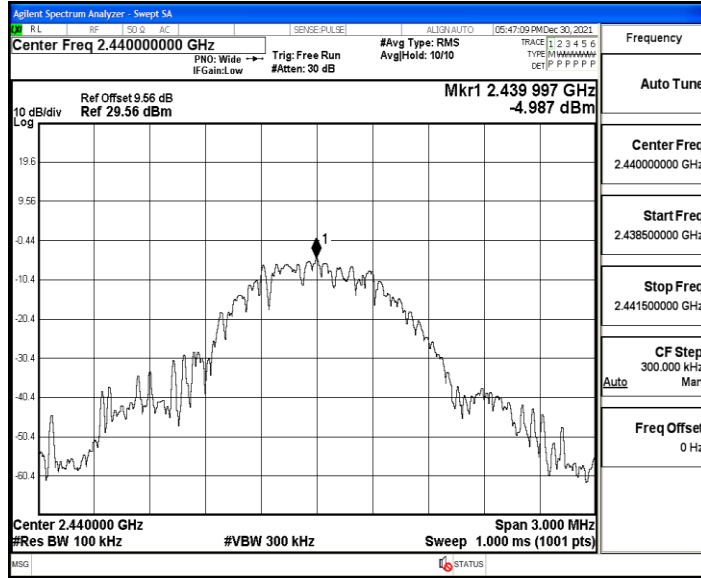
### Test Result

| TestMode | Antenna | Channel | FreqRange [MHz] | RefLevel [dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|-----------------|----------------|-------------|------------|---------|
| BLE_1M   | Ant1    | 2402    | Reference       | -7.24          | -7.24       | ---        | PASS    |
|          |         |         | 30~1000         | -7.24          | -62.56      | ≤-27.24    | PASS    |
|          |         |         | 1000~26500      | -7.24          | -53.79      | ≤-27.24    | PASS    |
|          |         | 2440    | Reference       | -4.99          | -4.99       | ---        | PASS    |
|          |         |         | 30~1000         | -4.99          | -62.53      | ≤-24.99    | PASS    |
|          |         |         | 1000~26500      | -4.99          | -53.76      | ≤-24.99    | PASS    |
|          |         | 2480    | Reference       | -5.06          | -5.06       | ---        | PASS    |
|          |         |         | 30~1000         | -5.06          | -62.02      | ≤-25.06    | PASS    |
|          |         |         | 1000~26500      | -5.06          | -52.86      | ≤-25.06    | PASS    |

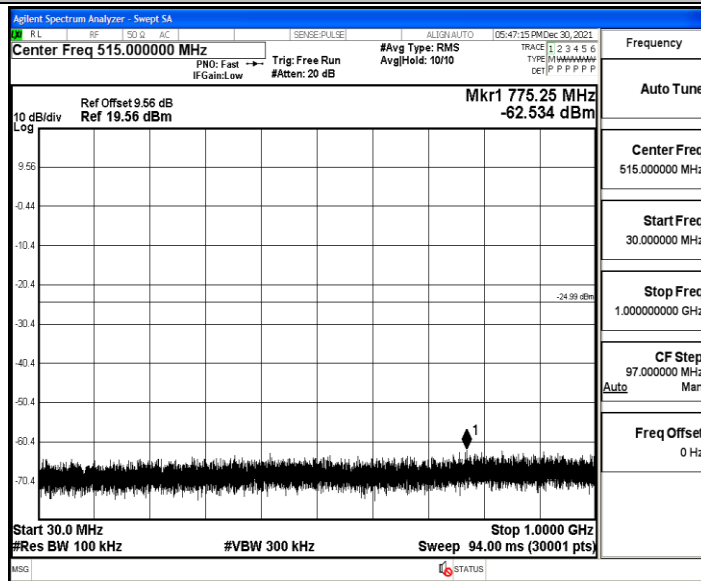
Test Graphs



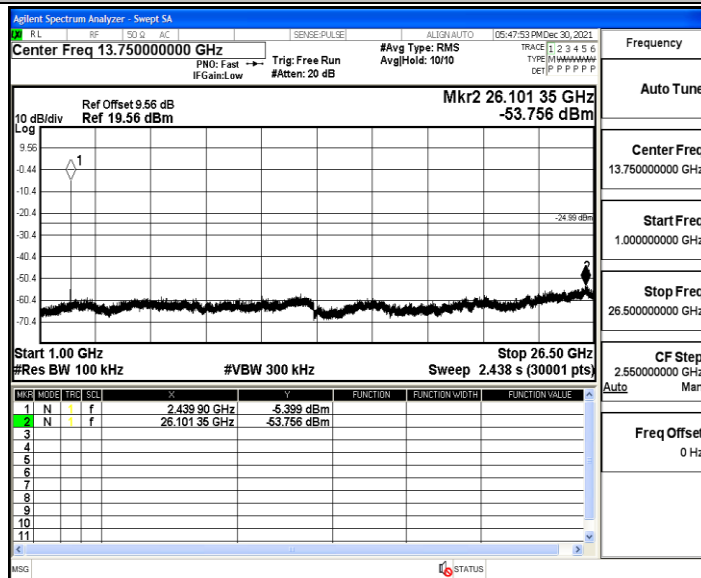
BLE\_1M\_Ant1\_2440\_0~Reference



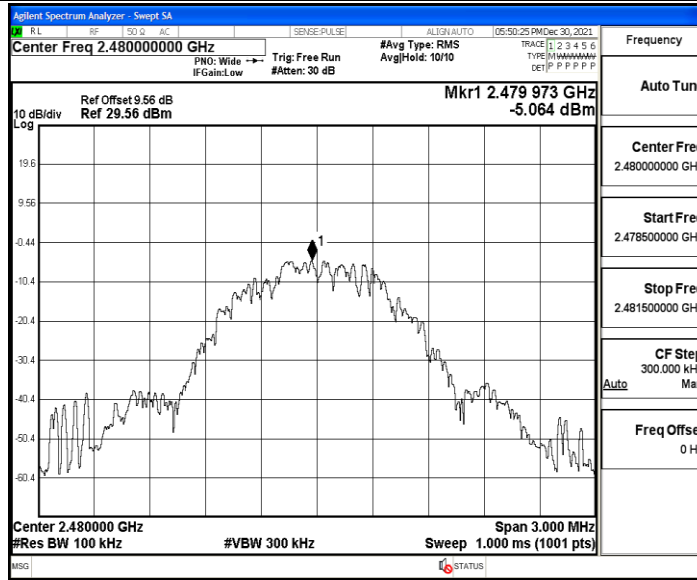
BLE\_1M\_Ant1\_2440\_30~1000



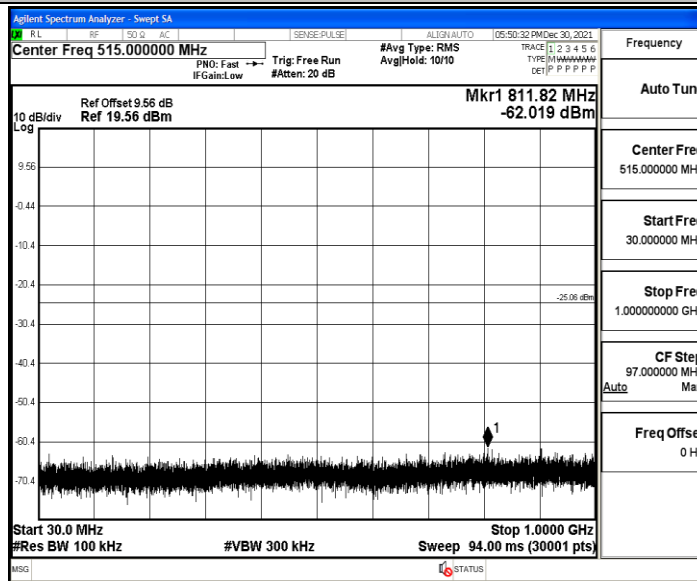
BLE\_1M\_Ant1\_2440\_1000~26500



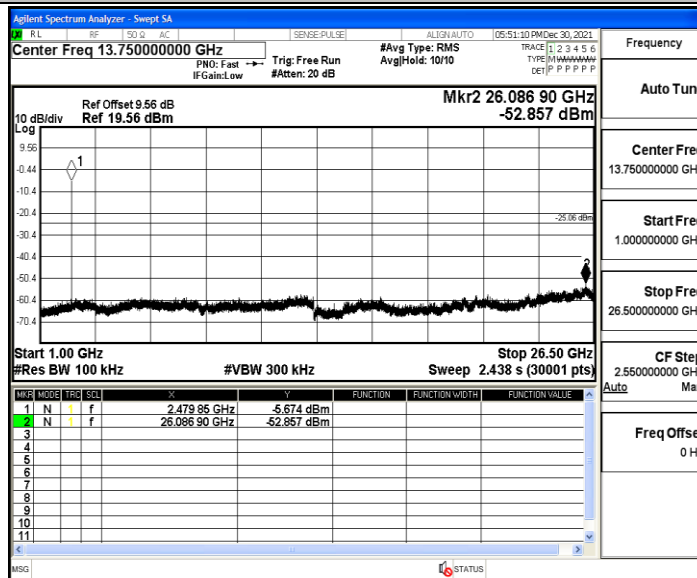
BLE\_1M\_Ant1\_2480\_0~Reference



BLE\_1M\_Ant1\_2480\_30~1000



BLE\_1M\_Ant1\_2480\_1000~26500

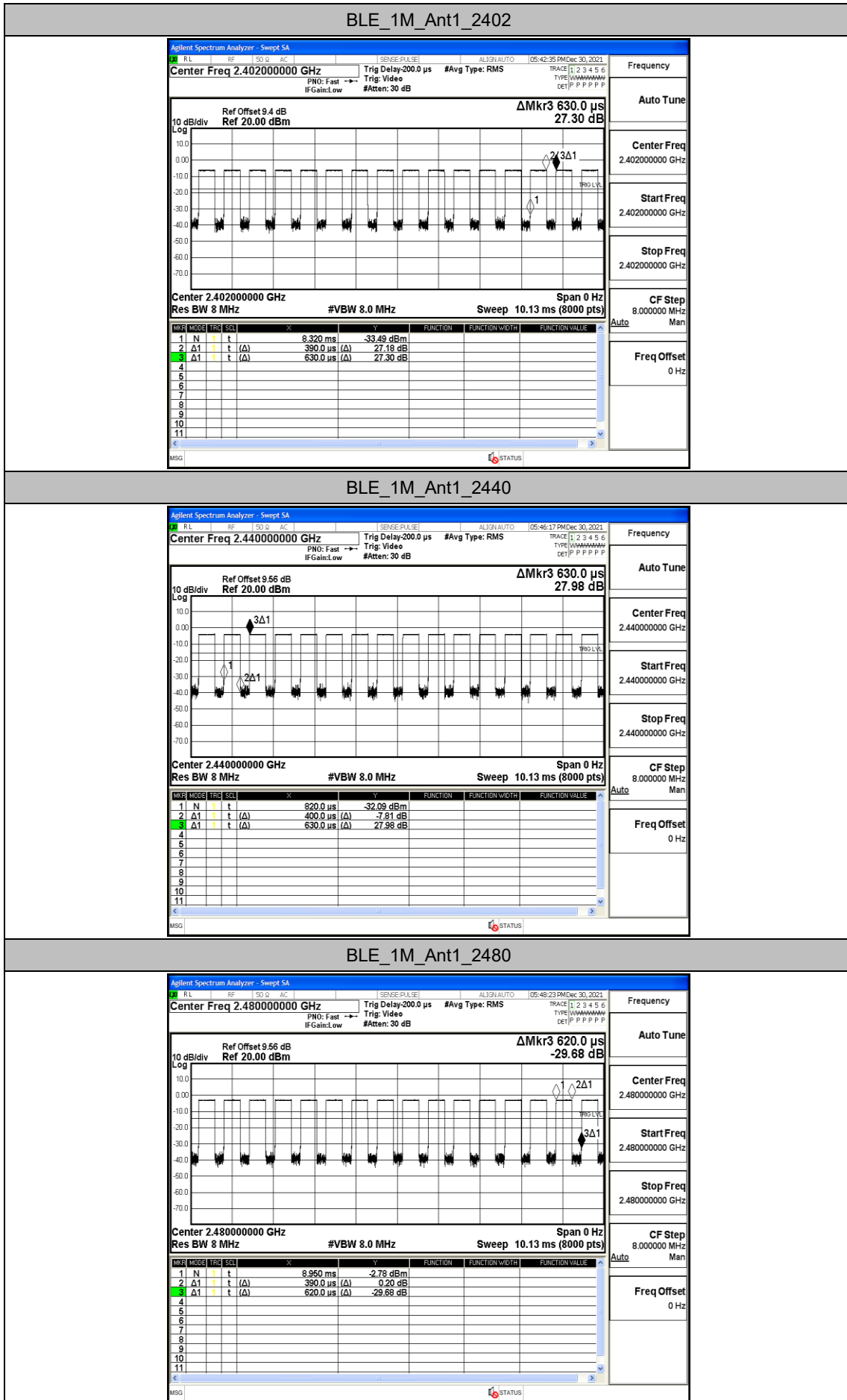


## Appendix G: Duty Cycle

### Test Result

| TestMode | Antenna | Channel | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] | 1/T  |
|----------|---------|---------|----------------------------|--------------------------|----------------|------|
| BLE_1M   | Ant1    | 2402    | 0.39                       | 0.63                     | 61.90          | 2.56 |
|          |         | 2440    | 0.40                       | 0.63                     | 63.49          | 2.50 |
|          |         | 2480    | 0.39                       | 0.62                     | 62.90          | 2.56 |

Test Graphs





## Appendix H: Emissions in Restricted Bands

### Test Result

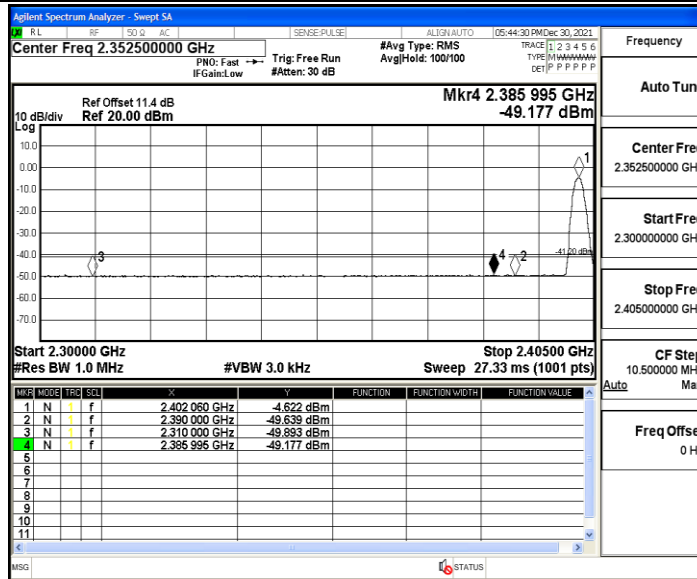
| TestMode | Antenna | ChName | Channel | Detector | Freq. [MHz] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|--------|---------|----------|-------------|--------------|-------------|---------|
| BLE_1M   | Ant1    | Low    | 2402    | AV       | 2310.000    | -49.89       | ≤-41.20     | PASS    |
|          |         |        |         | AV       | 2385.995    | -49.18       | ≤-41.20     | PASS    |
|          |         |        |         | AV       | 2390.000    | -49.64       | ≤-41.20     | PASS    |
|          |         |        |         | Peak     | 2310.000    | -44          | ≤-21.20     | PASS    |
|          |         |        |         | Peak     | 2315.855    | -39.38       | ≤-21.20     | PASS    |
|          |         |        |         | Peak     | 2390.000    | -43.85       | ≤-21.20     | PASS    |
|          |         | High   | 2480    | AV       | 2483.500    | -48.87       | ≤-41.20     | PASS    |
|          |         |        |         | AV       | 2498.880    | -48.59       | ≤-41.20     | PASS    |
|          |         |        |         | AV       | 2500.000    | -48.79       | ≤-41.20     | PASS    |
|          |         |        |         | Peak     | 2483.500    | -42.29       | ≤-21.20     | PASS    |
|          |         |        |         | Peak     | 2496.480    | -40.07       | ≤-21.20     | PASS    |
|          |         |        |         | Peak     | 2500.000    | -40.32       | ≤-21.20     | PASS    |

#### Note:

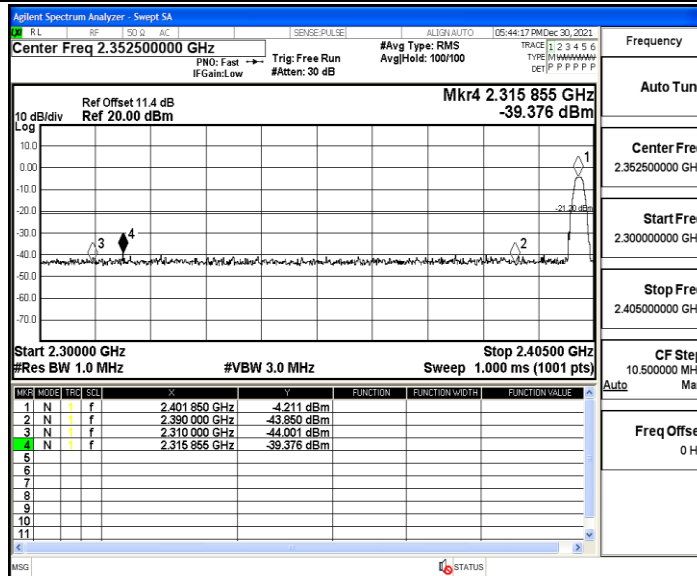
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

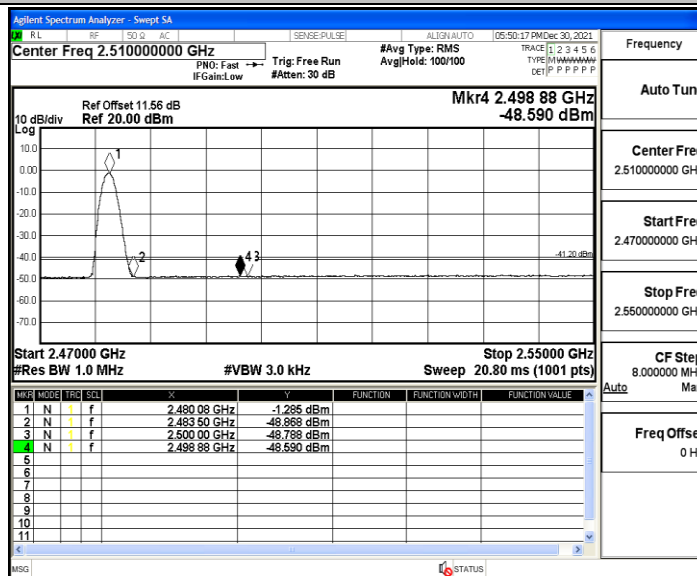
BLE\_1M\_Ant1\_Low\_2402\_AV



BLE\_1M\_Ant1\_Low\_2402\_Peak



BLE\_1M\_Ant1\_High\_2480\_AV



BLE\_1M\_Ant1\_High\_2480\_Peak

