



## Appendix A

### RF Test Data for BT LE V5.2(DTS) (Conducted Measurement)

Product Name: LED ROCK LIGHT

Trade Mark: N/A

Test Model: DC-B1T10-1

#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 21.2° C   |
| Relative Humidity: | 52.1%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Jay Li    |
| Supervised by:     | Li Huan   |



## A.1 DTS Bandwidth

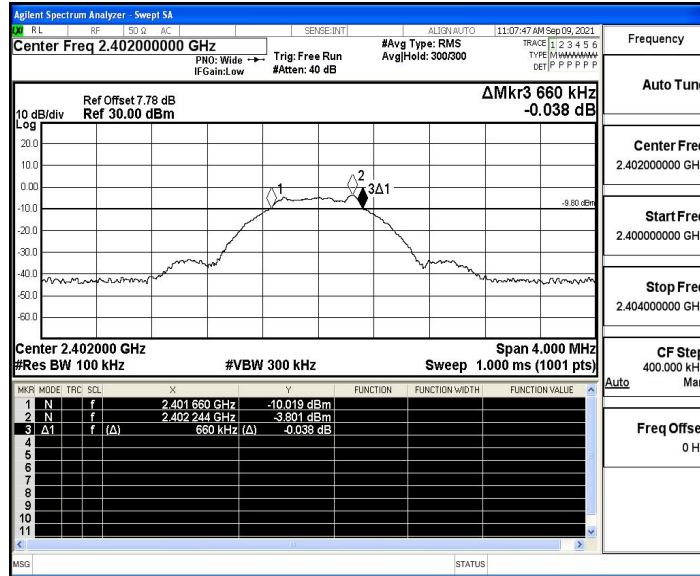
### Test Result

| TestMode | Antenna | Channel | DTS BW [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|---------|--------------|----------|----------|------------|---------|
| BLE_1M   | Ant1    | 2402    | 0.660        | 2401.660 | 2402.320 | ≥0.5       | PASS    |
|          |         | 2440    | 0.680        | 2439.648 | 2440.328 | ≥0.5       | PASS    |
|          |         | 2480    | 0.692        | 2479.644 | 2480.336 | ≥0.5       | PASS    |

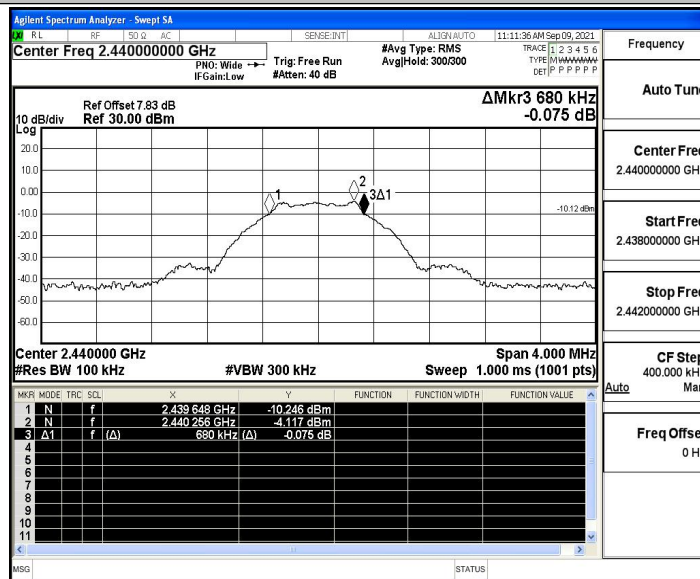


## Test Graphs

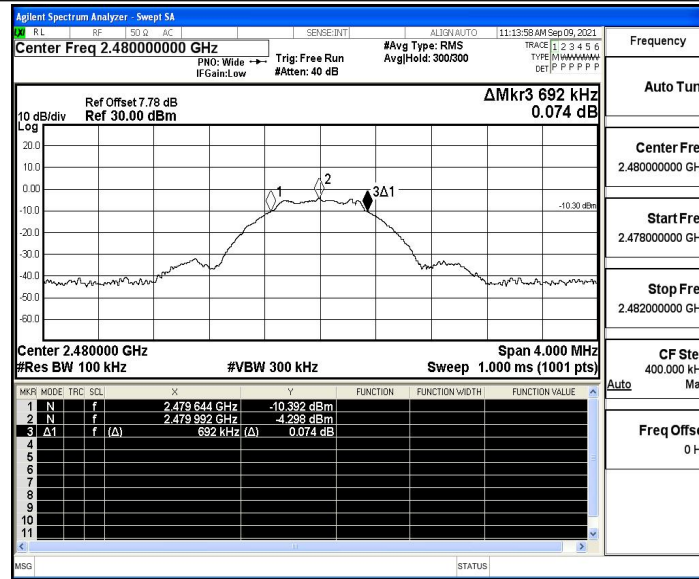
BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480





## A.2 Maximum peak conducted output power

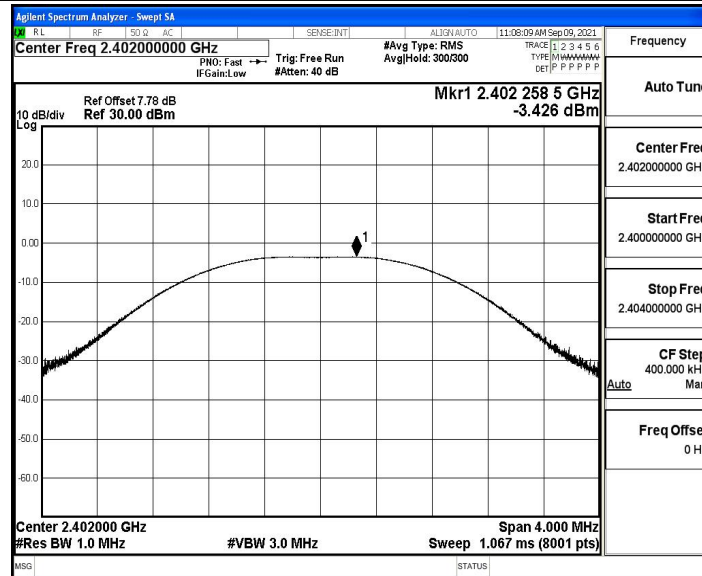
### Test Result

| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| BLE_1M   | Ant1    | 2402    | -3.43       | ≤30        | PASS    |
|          |         | 2440    | -3.46       | ≤30        | PASS    |
|          |         | 2480    | -3.52       | ≤30        | PASS    |

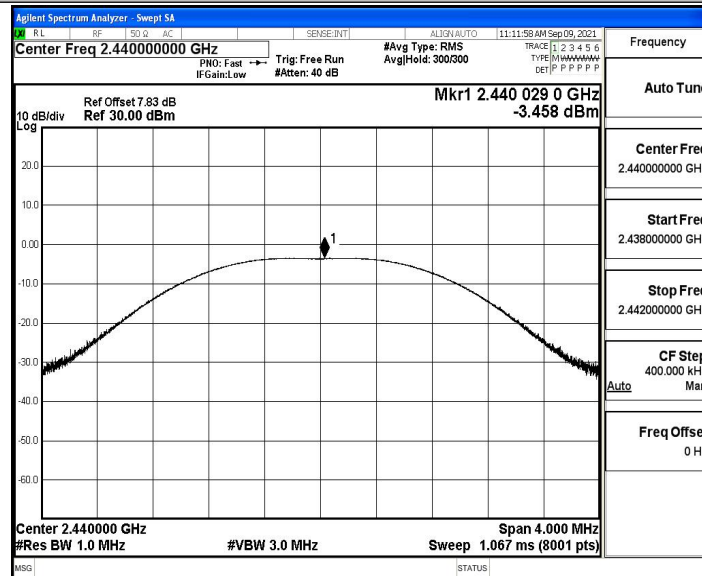


## Test Graphs

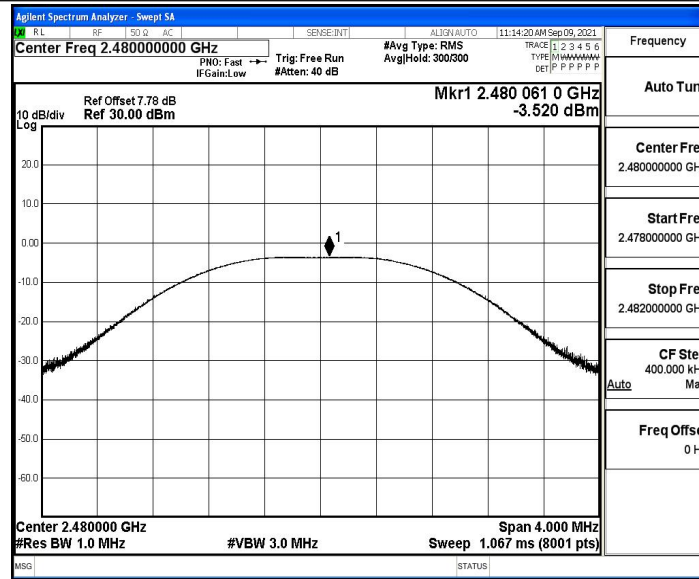
BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480





## A.3 Maximum power spectral density

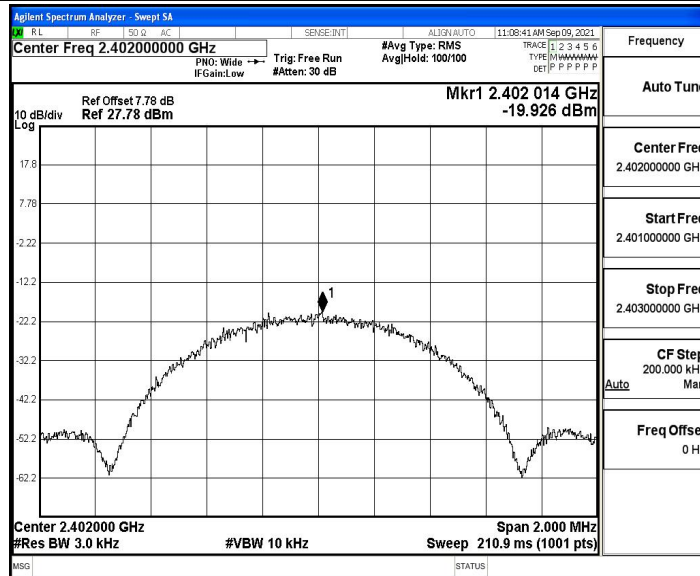
### Test Result

| TestMode | Antenna | Channel | Result[dBm/3-100kHz] | Limit[dBm/3kHz] | Verdict |
|----------|---------|---------|----------------------|-----------------|---------|
| BLE_1M   | Ant1    | 2402    | -19.93               | ≤8              | PASS    |
|          |         | 2440    | -19.88               | ≤8              | PASS    |
|          |         | 2480    | -19.84               | ≤8              | PASS    |

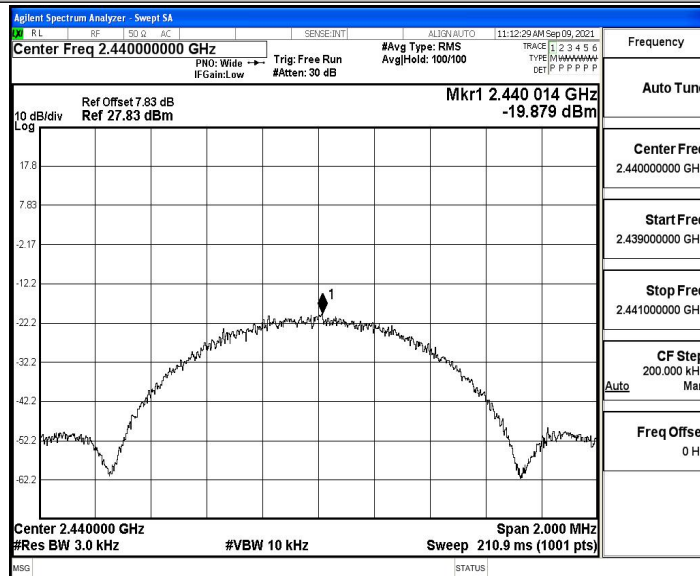


## Test Graphs

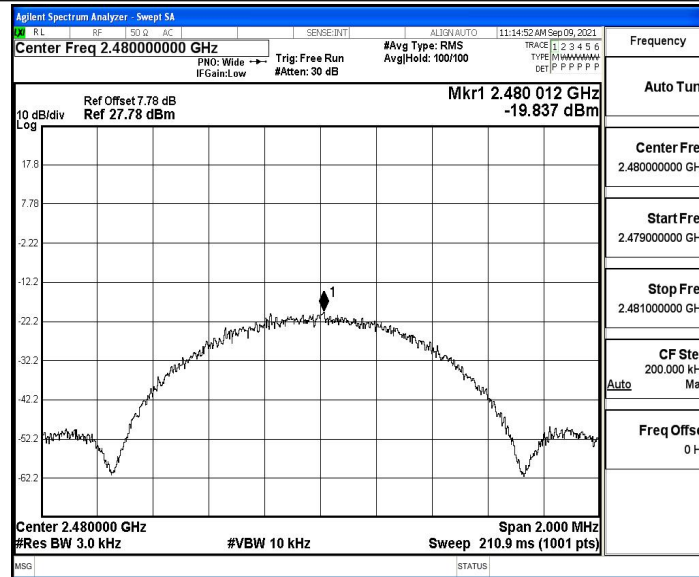
BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480





## A.4 Band edge measurements

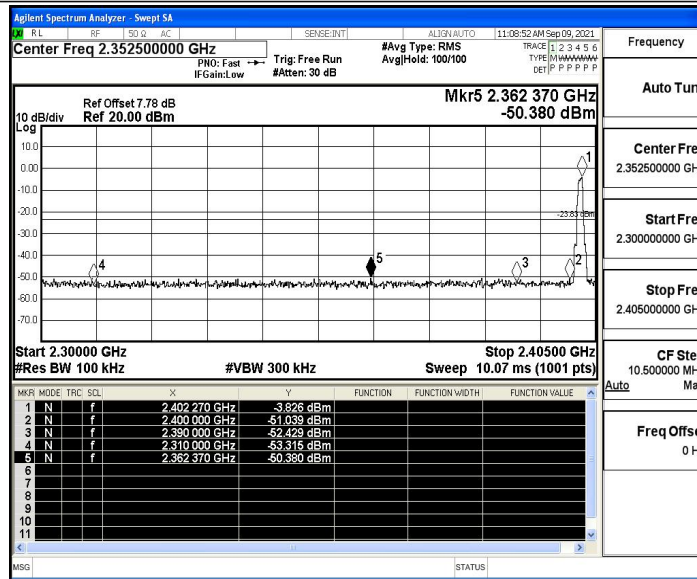
### Test Result

| TestMode | Antenna | ChName | Channel | RefLevel[dBm] | Result[dBm] | Limit[dBm]    | Verdict |
|----------|---------|--------|---------|---------------|-------------|---------------|---------|
| BLE_1M   | Ant1    | Low    | 2402    | -3.83         | -50.38      | $\leq -23.83$ | PASS    |
|          |         | High   | 2480    | -3.89         | -49.07      | $\leq -23.89$ | PASS    |

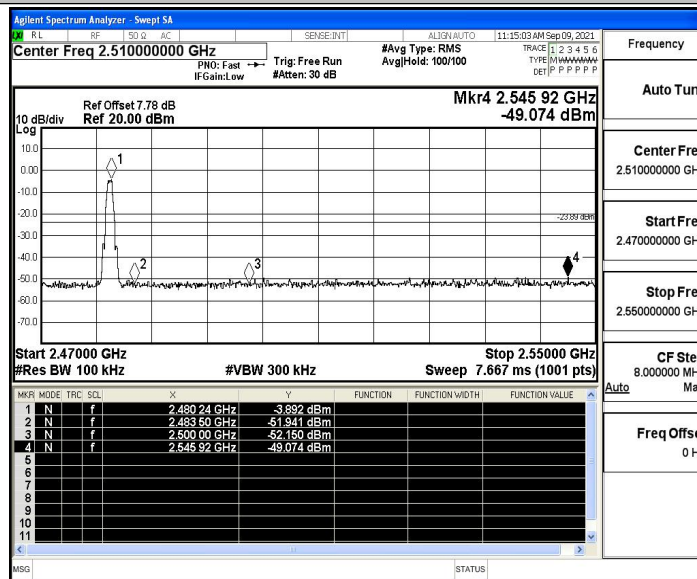


## Test Graphs

BLE\_1M\_Ant1\_Low\_2402



BLE\_1M\_Ant1\_High\_2480





## A.5 Conducted Spurious Emission

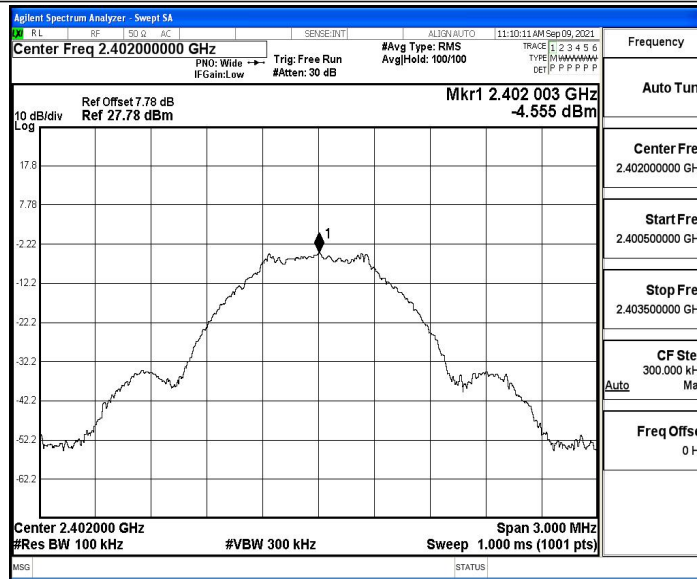
### Test Result

| TestMode | Antenna | Channel | FreqRange<br>[MHz] | RefLevel<br>[dBm] | Result[dBm] | Limit[dBm]    | Verdict |
|----------|---------|---------|--------------------|-------------------|-------------|---------------|---------|
| BLE_1M   | Ant1    | 2402    | Reference          | -4.56             | -4.56       | ---           | PASS    |
|          |         |         | 30~1000            | -4.56             | -61.75      | $\leq -24.56$ | PASS    |
|          |         |         | 1000~26500         | -4.56             | -48.2       | $\leq -24.56$ | PASS    |
|          |         | 2440    | Reference          | -4.27             | -4.27       | ---           | PASS    |
|          |         |         | 30~1000            | -4.27             | -61.65      | $\leq -24.27$ | PASS    |
|          |         |         | 1000~26500         | -4.27             | -47.41      | $\leq -24.27$ | PASS    |
|          |         | 2480    | Reference          | -4.73             | -4.73       | ---           | PASS    |
|          |         |         | 30~1000            | -4.73             | -62.15      | $\leq -24.73$ | PASS    |
|          |         |         | 1000~26500         | -4.73             | -47.52      | $\leq -24.73$ | PASS    |

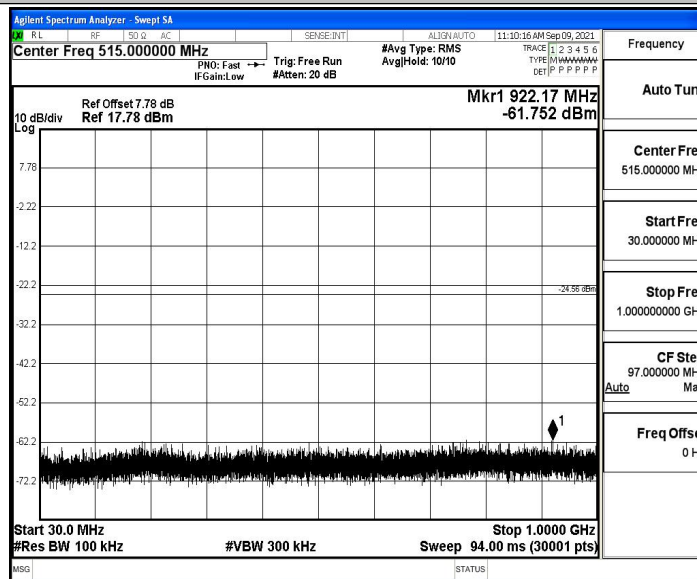


## Test Graphs

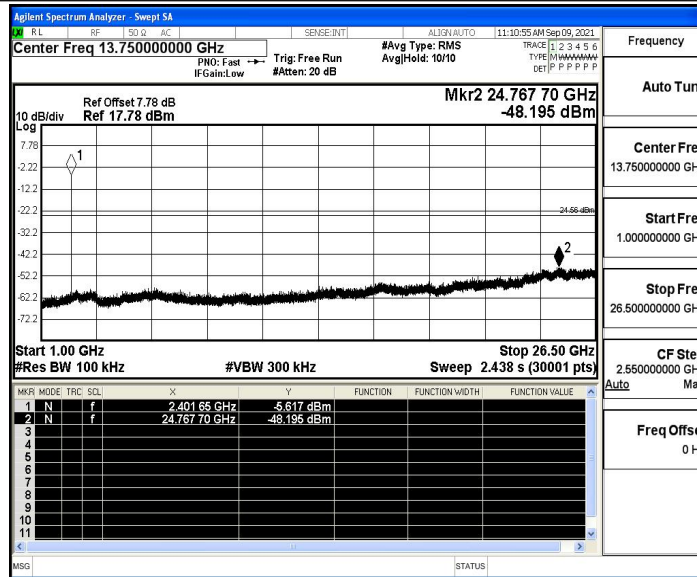
BLE\_1M\_Ant1\_2402\_0~Reference



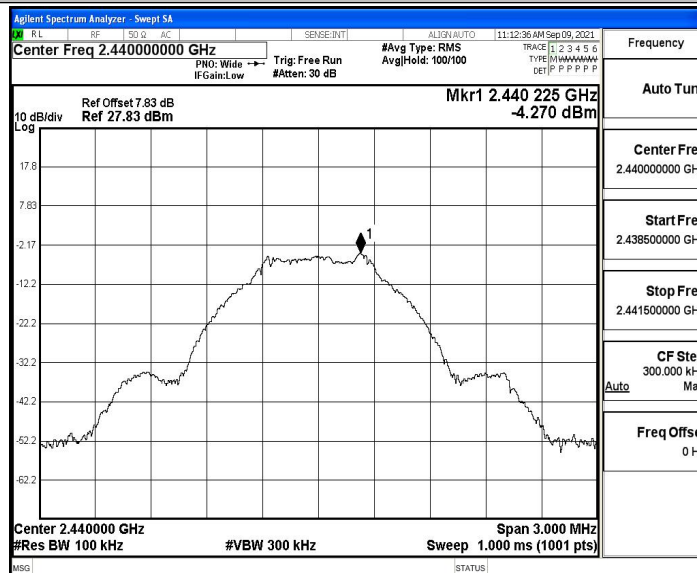
BLE\_1M\_Ant1\_2402\_30~1000



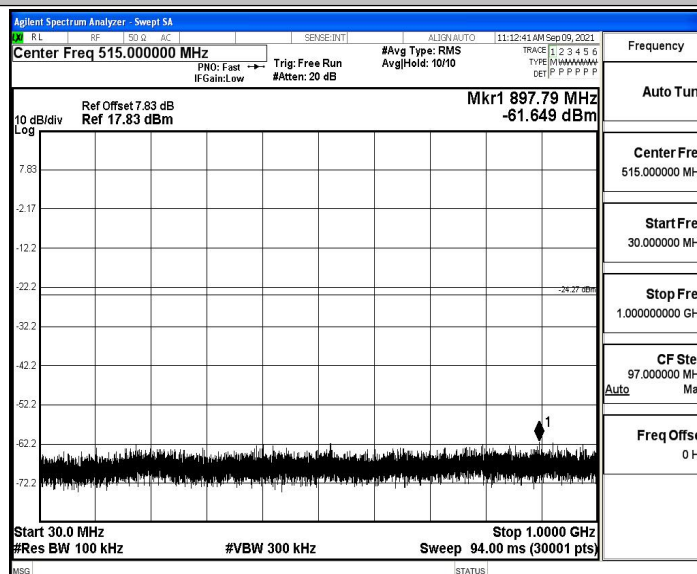
BLE\_1M\_Ant1\_2402\_1000~26500



BLE\_1M\_Ant1\_2440\_0~Reference

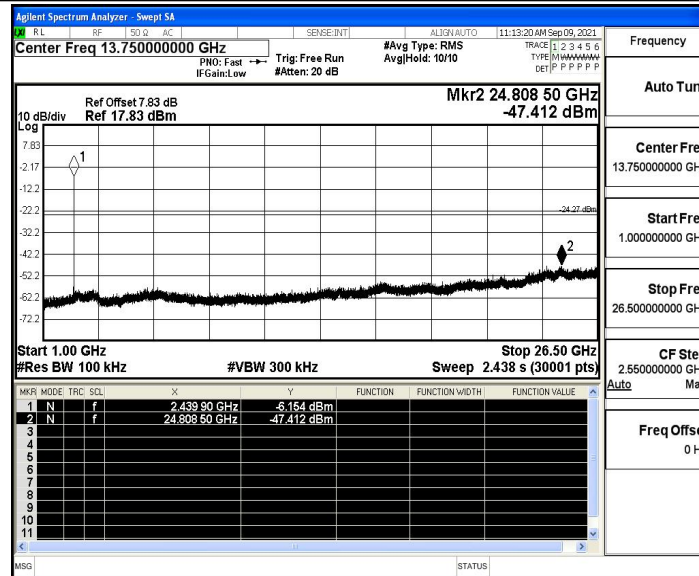


BLE\_1M\_Ant1\_2440\_30~1000

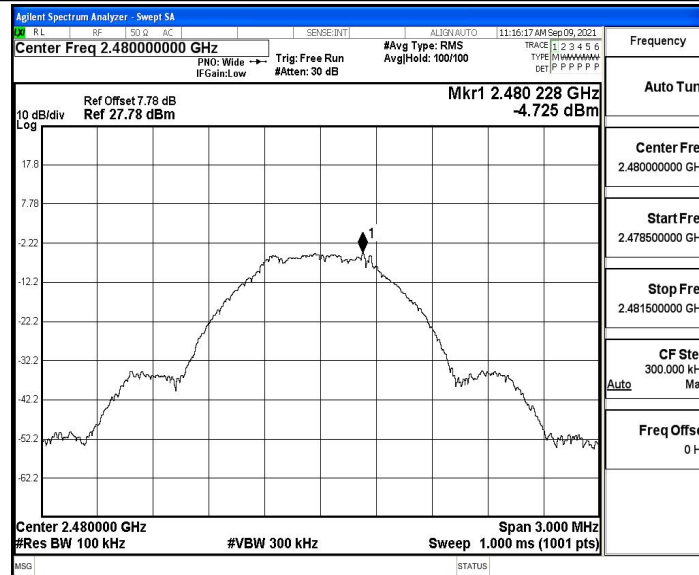




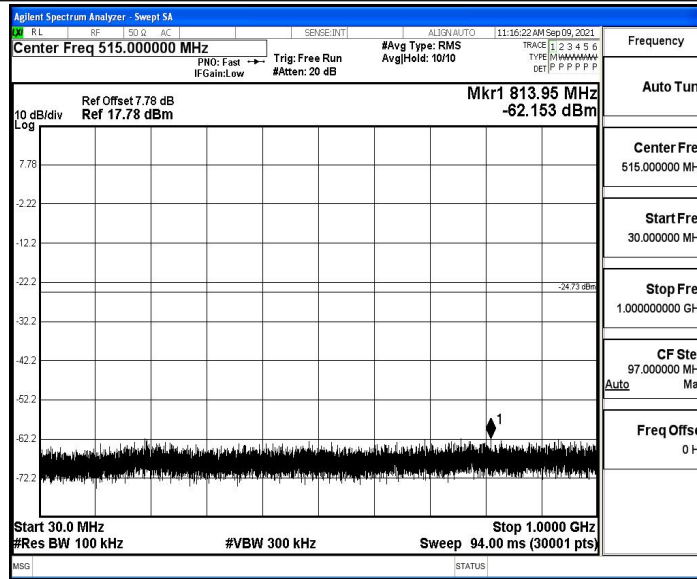
## BLE\_1M\_Ant1\_2440\_1000~26500



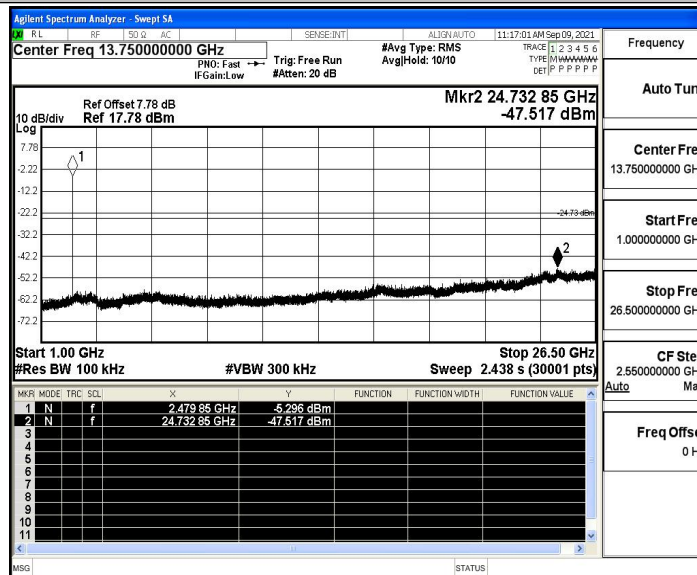
## BLE\_1M\_Ant1\_2480\_0~Reference



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



BLE\_1M\_Ant1\_2480\_1000~26500





## A.6 Duty Cycle

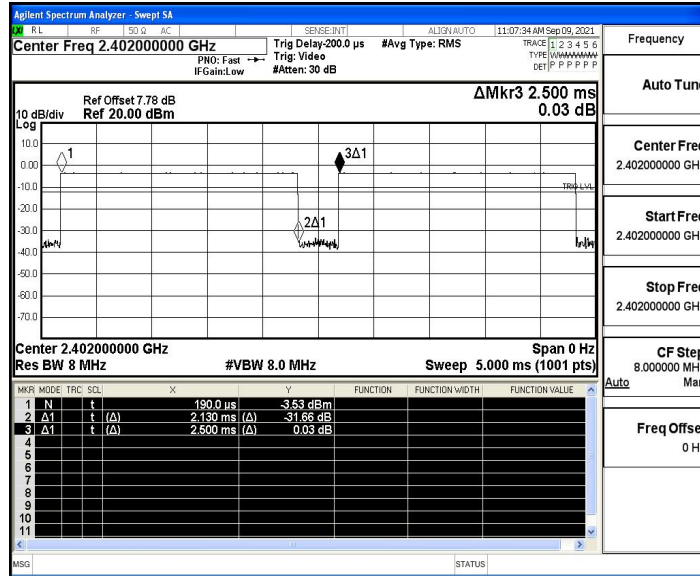
### Test Result

| TestMode | Antenna | Channel | ON Time<br>[ms] | Period<br>[ms] | X      | DC<br>[%] | xFactor | Minimum<br>VBW(KHz) | Limit | Verdict |
|----------|---------|---------|-----------------|----------------|--------|-----------|---------|---------------------|-------|---------|
| BLE_1M   | Ant1    | 2402    | 2.13            | 2.50           | 0.8520 | 85.20     | 0.70    | 0.47                | ---   | PASS    |
|          |         | 2440    | 2.13            | 2.50           | 0.8520 | 85.20     | 0.70    | 0.47                | ---   | PASS    |
|          |         | 2480    | 2.13            | 2.50           | 0.8520 | 85.20     | 0.70    | 0.47                | ---   | PASS    |

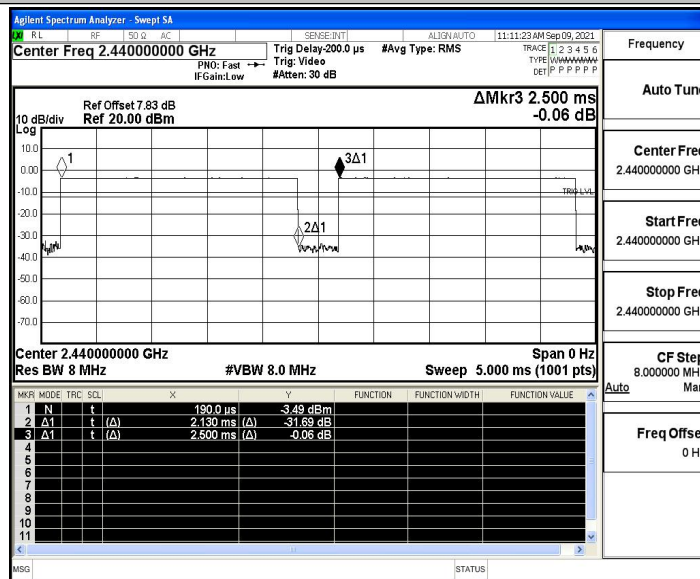


## Test Graphs

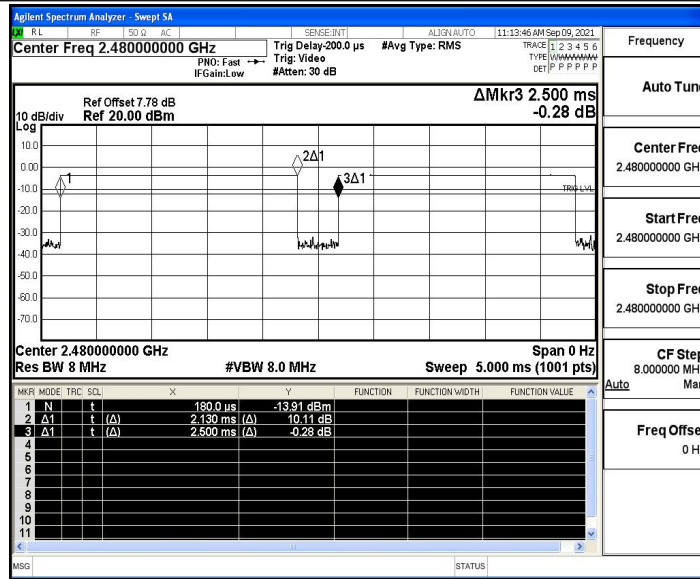
BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480





## A.7 Emissions in Restricted Bands

### Test Result

| TestMode | Antenna | ChName | Channel | Detector | Freq.<br>[MHz] | Result<br>[dBm] | Limit<br>[dBm] | Result<br>[dBuV/m] | Limit<br>[dBuV/m] | Verdict |
|----------|---------|--------|---------|----------|----------------|-----------------|----------------|--------------------|-------------------|---------|
| BLE_1M   | Ant1    | Low    | 2402    | AV       | 2310.000       | -49.04          | ≤-41.20        | 46.16              | ≤54               | PASS    |
|          |         |        |         | AV       | 2385.890       | -48.02          | ≤-41.20        | 47.18              | ≤54               | PASS    |
|          |         |        |         | AV       | 2390.000       | -48.8           | ≤-41.20        | 46.40              | ≤54               | PASS    |
|          |         |        |         | Peak     | 2310.000       | -41.49          | ≤-21.20        | 53.71              | ≤74               | PASS    |
|          |         |        |         | Peak     | 2355.020       | -38.33          | ≤-21.20        | 56.87              | ≤74               | PASS    |
|          |         |        |         | Peak     | 2390.000       | -41.94          | ≤-21.20        | 53.26              | ≤74               | PASS    |
|          |         | High   | 2480    | AV       | 2483.500       | -48.09          | ≤-41.20        | 47.11              | ≤54               | PASS    |
|          |         |        |         | AV       | 2498.000       | -47.97          | ≤-41.20        | 47.23              | ≤54               | PASS    |
|          |         |        |         | AV       | 2500.000       | -48.07          | ≤-41.20        | 47.13              | ≤54               | PASS    |
|          |         |        |         | Peak     | 2483.500       | -41.76          | ≤-21.20        | 53.44              | ≤74               | PASS    |
|          |         |        |         | Peak     | 2495.600       | -38.37          | ≤-21.20        | 56.83              | ≤74               | PASS    |
|          |         |        |         | Peak     | 2500.000       | -41.17          | ≤-21.20        | 54.03              | ≤74               | PASS    |

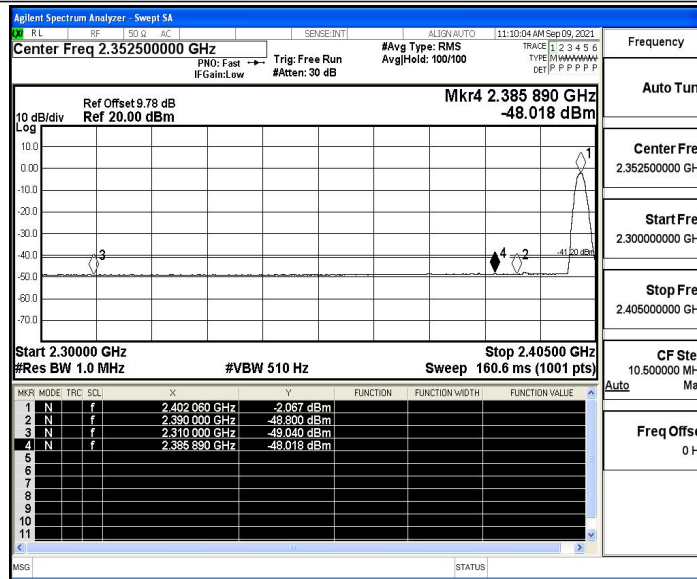
#### Note:

1. The Antenna Gain is compensated in the graph.
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.

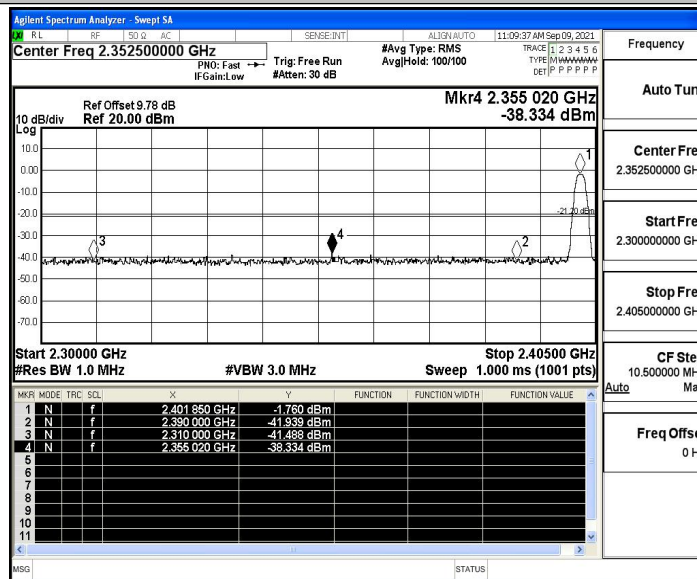


## Test Graphs

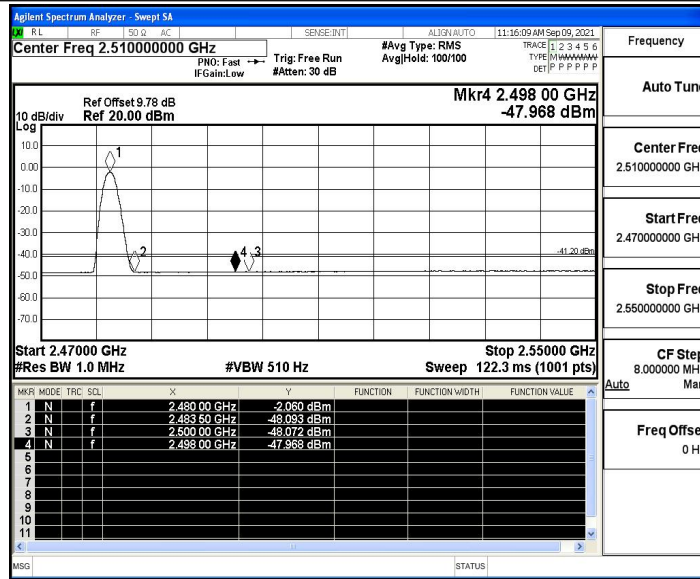
BLE\_1M\_Ant1\_Low\_2402\_AV



BLE\_1M\_Ant1\_Low\_2402\_Peak



BLE\_1M\_Ant1\_High\_2480\_AV



BLE\_1M\_Ant1\_High\_2480\_Peak

