



## Appendix A

### RF Test Data for BLE (Conducted Measurement)

Product Name: MixPad D1

Test Model: V70X-M

#### Environmental Conditions

|                    |                  |
|--------------------|------------------|
| Temperature:       | 23.5° C          |
| Relative Humidity: | 52.2%            |
| ATM Pressure:      | 100.0 kPa        |
| Test Engineer:     | Nick Peng        |
|                    | <i>Nick Peng</i> |
| Supervised by:     | Ling Zhu         |
|                    | <i>Ling Zhu</i>  |



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



A.1 DTS Bandwidth

Test Result

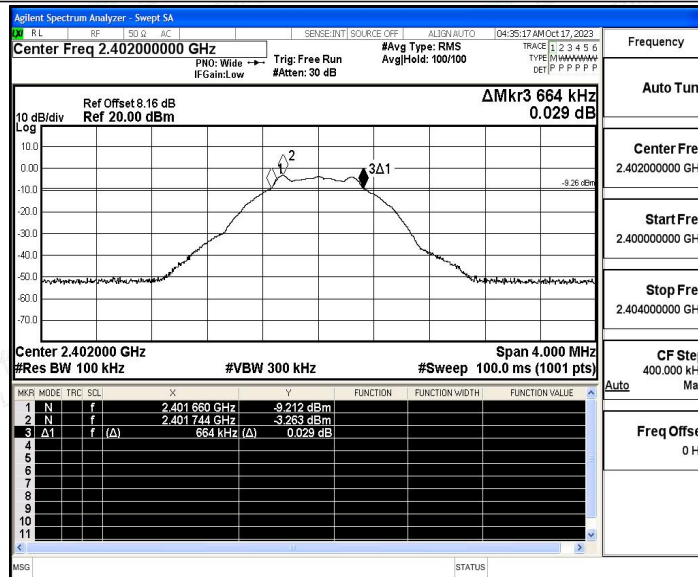
| TestMode | Antenna | Channel | DTS BW [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|---------|--------------|----------|----------|------------|---------|
| BLE_1M   | Ant1    | 2402    | 0.664        | 2401.660 | 2402.324 | 0.5        | PASS    |
|          |         | 2440    | 0.656        | 2439.664 | 2440.320 | 0.5        | PASS    |
|          |         | 2480    | 0.664        | 2479.660 | 2480.324 | 0.5        | PASS    |



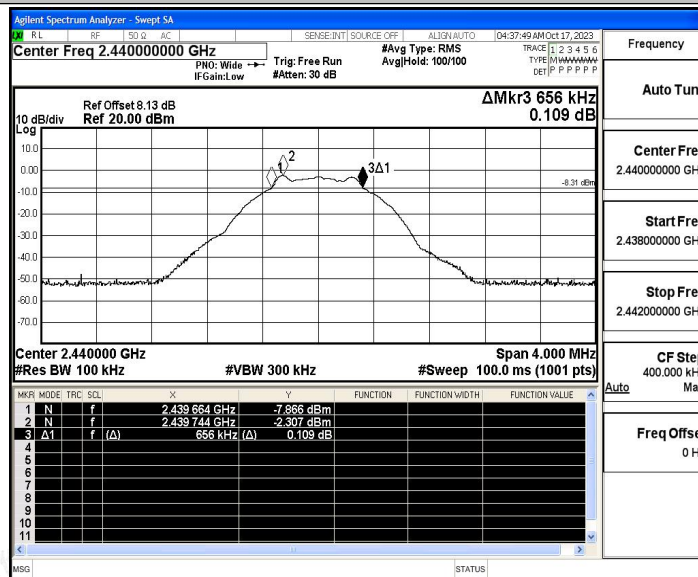


## Test Graphs

BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480

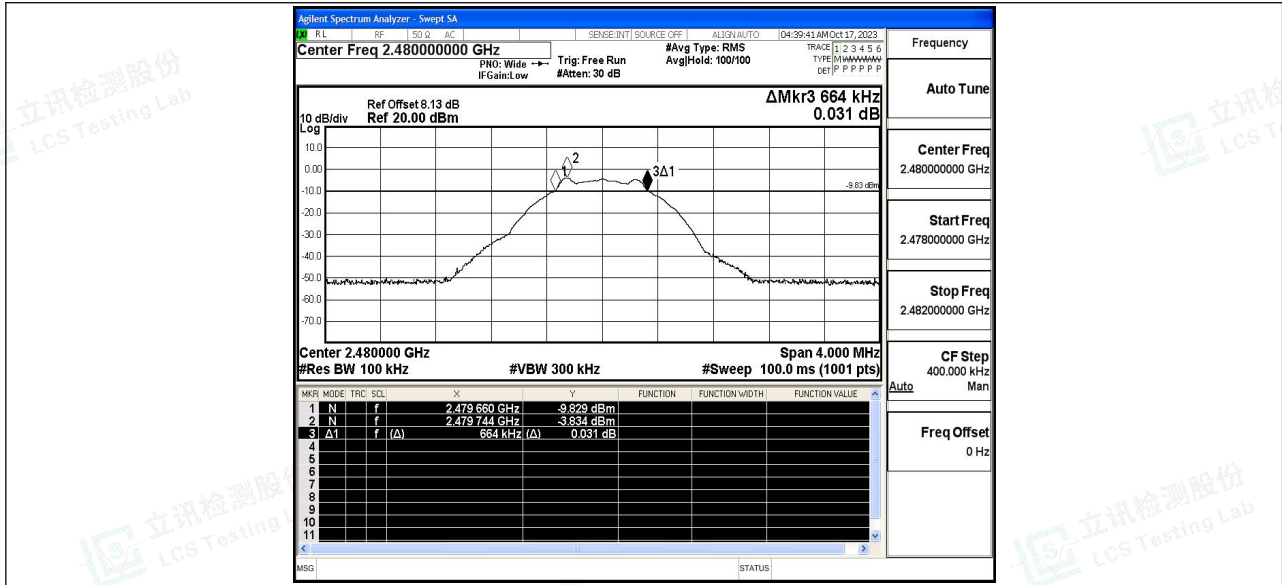


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



## A.2 Maximum conducted output power

### Test Result

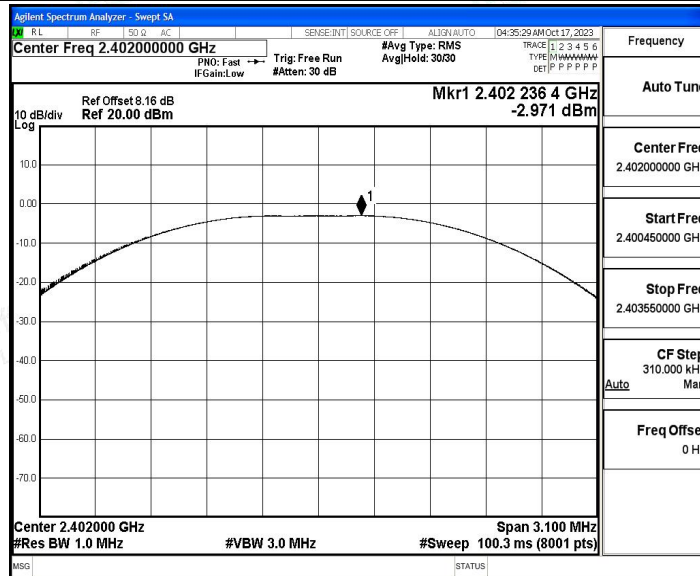
| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| BLE_1M   | Ant1    | 2402    | -2.97       | ≤30        | PASS    |
|          |         | 2440    | -2.02       | ≤30        | PASS    |
|          |         | 2480    | -3.58       | ≤30        | PASS    |



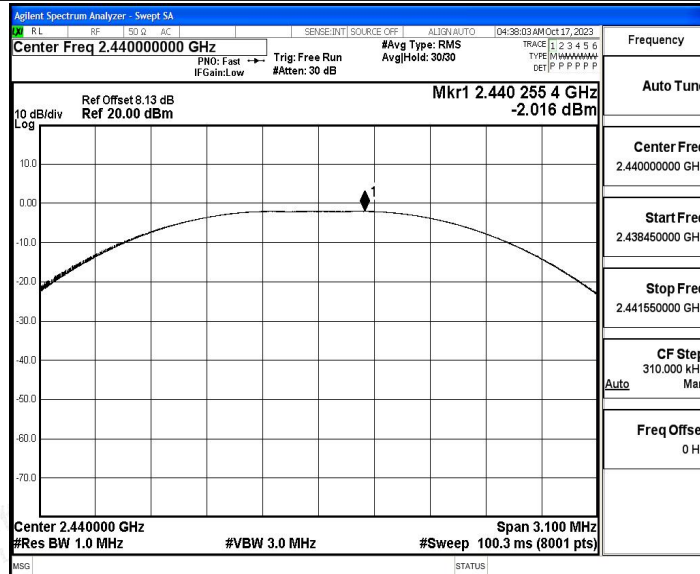


## Test Graphs

BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity





### A.3 Maximum power spectral density

#### Test Result

| TestMode | Antenna | Channel | Result[dBm/3kHz] | Limit[dBm/3kHz] | Verdict |
|----------|---------|---------|------------------|-----------------|---------|
| BLE_1M   | Ant1    | 2402    | -19.42           | ≤8.00           | PASS    |
|          |         | 2440    | -18.47           | ≤8.00           | PASS    |
|          |         | 2480    | -20.08           | ≤8.00           | PASS    |



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

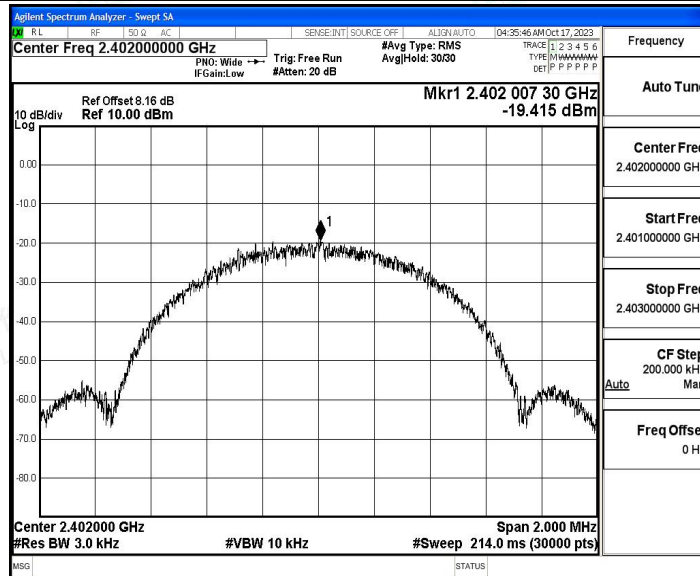
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

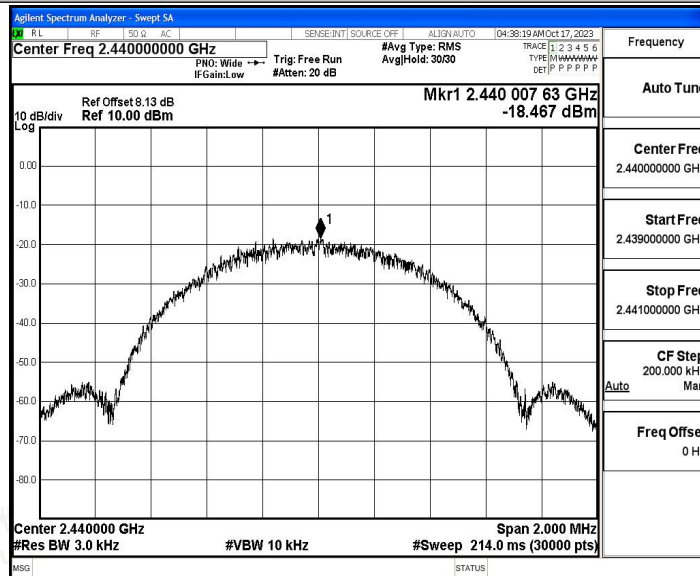


## Test Graphs

BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480

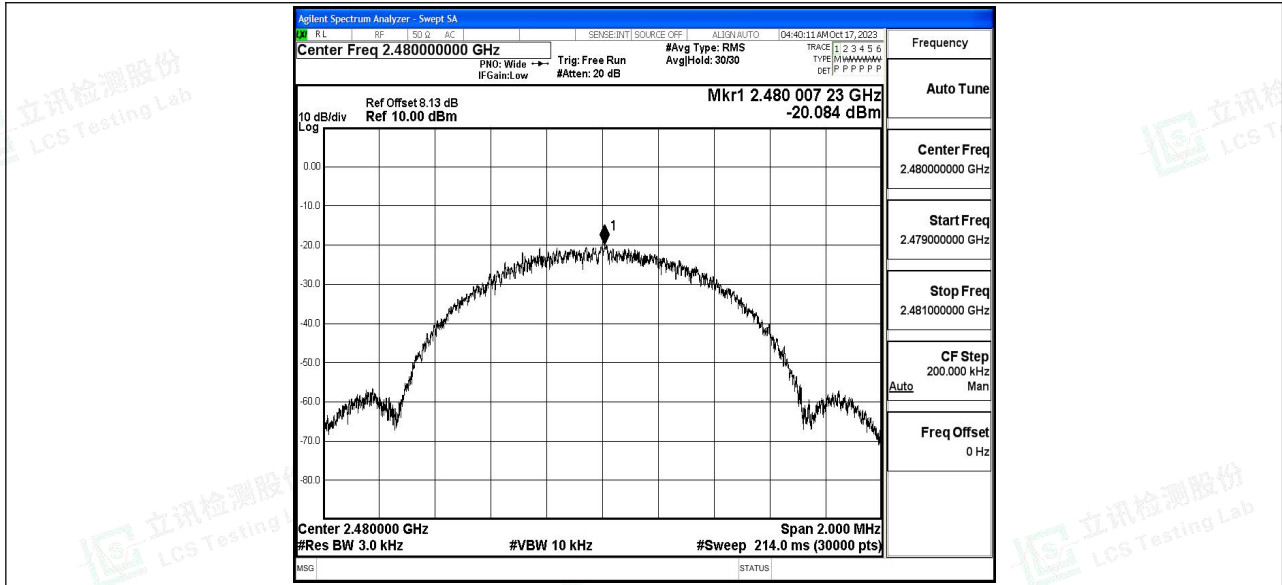


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



### A.4 Band edge measurements

#### Test Result

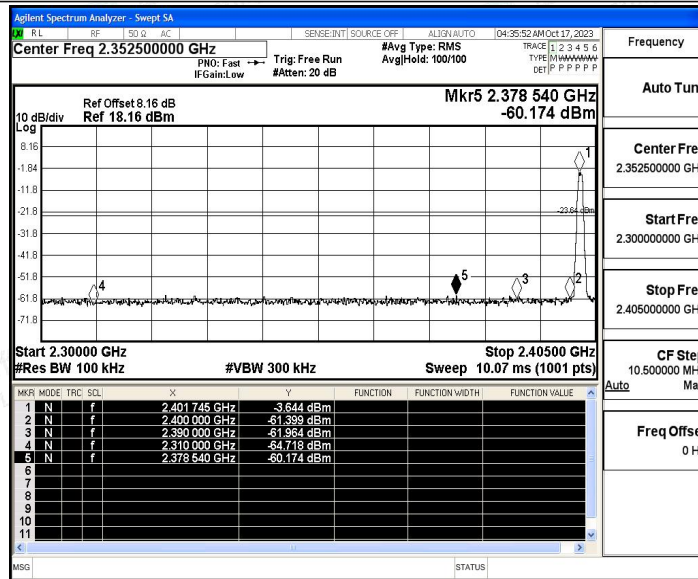
| TestMode | Antenna | ChName | Channel | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|--------|---------|---------------|-------------|------------|---------|
| BLE_1M   | Ant1    | Low    | 2402    | -3.64         | -60.17      | ≤-23.64    | PASS    |
|          |         | High   | 2480    | -4.41         | -59.97      | ≤-24.41    | PASS    |



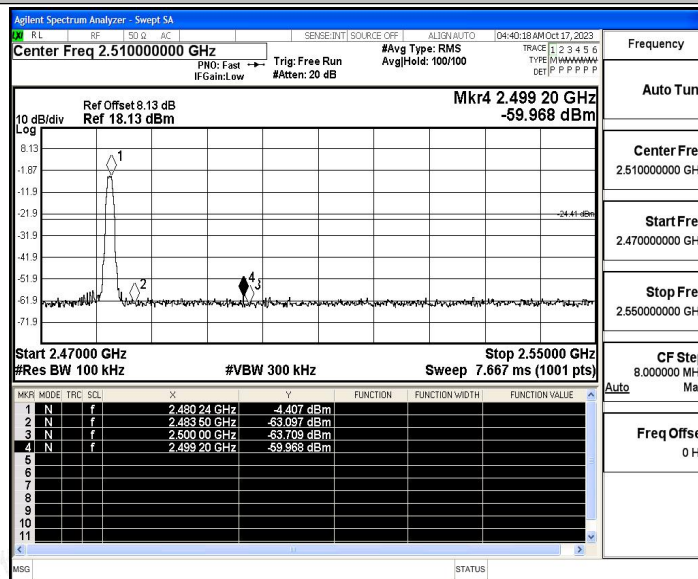


## Test Graphs

BLE\_1M\_Ant1\_Low\_2402



BLE\_1M\_Ant1\_High\_2480



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



## 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          | -3.25             | -3.25       | ---        | PASS    |
|          |         |         | 30~1000            | -3.25             | -61.57      | ≤-23.25    | PASS    |
|          |         |         | 1000~26500         | -3.25             | -49.11      | ≤-23.25    | PASS    |
|          |         | 2440    | Reference          | -2.30             | -2.30       | ---        | PASS    |
|          |         |         | 30~1000            | -2.30             | -60.94      | ≤-22.3     | PASS    |
|          |         |         | 1000~26500         | -2.30             | -49.25      | ≤-22.3     | PASS    |
|          |         | 2480    | Reference          | -3.82             | -3.82       | ---        | PASS    |
|          |         |         | 30~1000            | -3.82             | -62.02      | ≤-23.82    | PASS    |
|          |         |         | 1000~26500         | -3.82             | -48.67      | ≤-23.82    | PASS    |



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

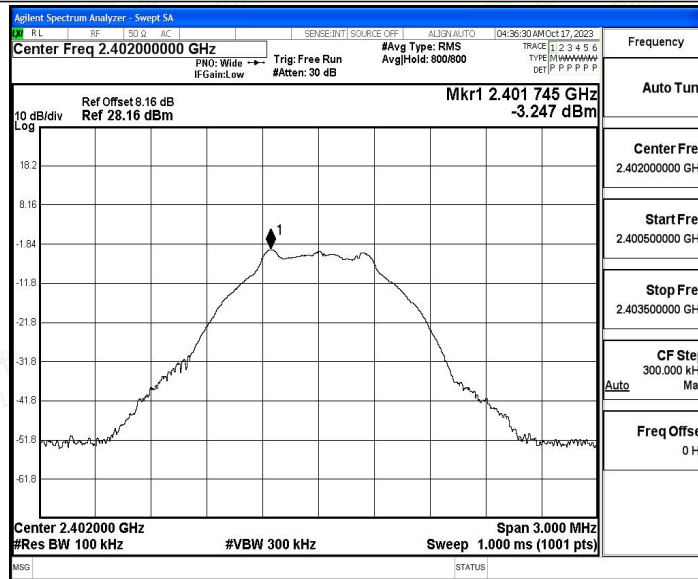
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

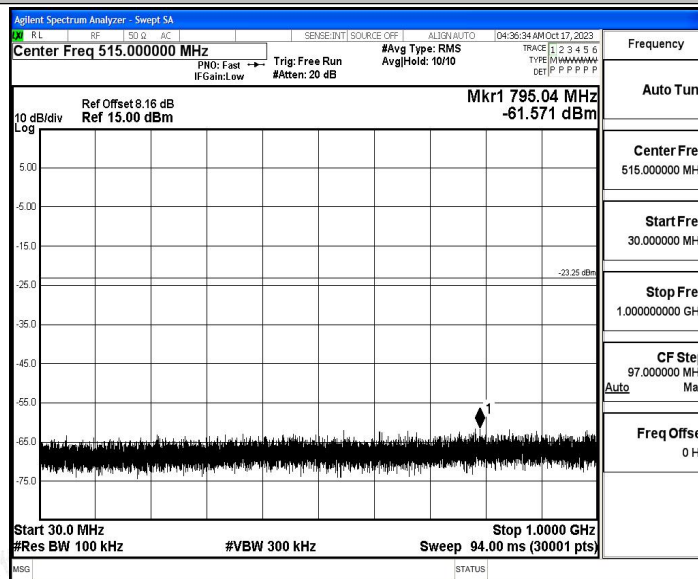


## Test Graphs

BLE\_1M\_Ant1\_2402\_0~Reference



BLE\_1M\_Ant1\_2402\_30~1000



BLE\_1M\_Ant1\_2402\_1000~26500

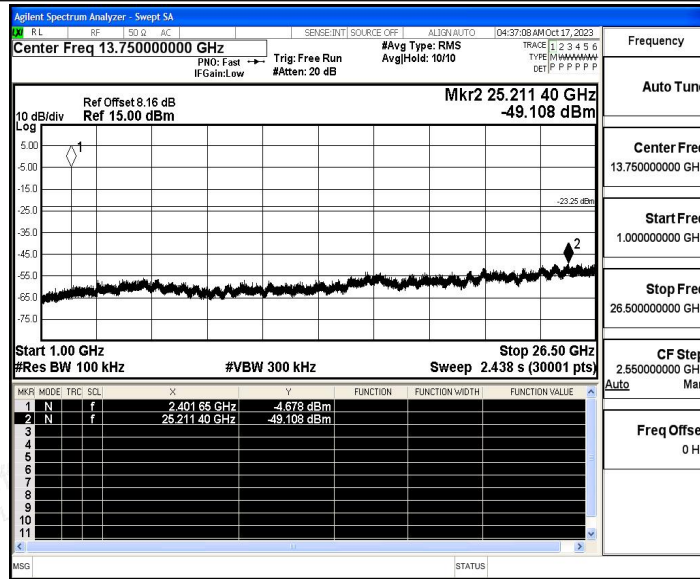


Shenzhen LCS Compliance Testing Laboratory Ltd.

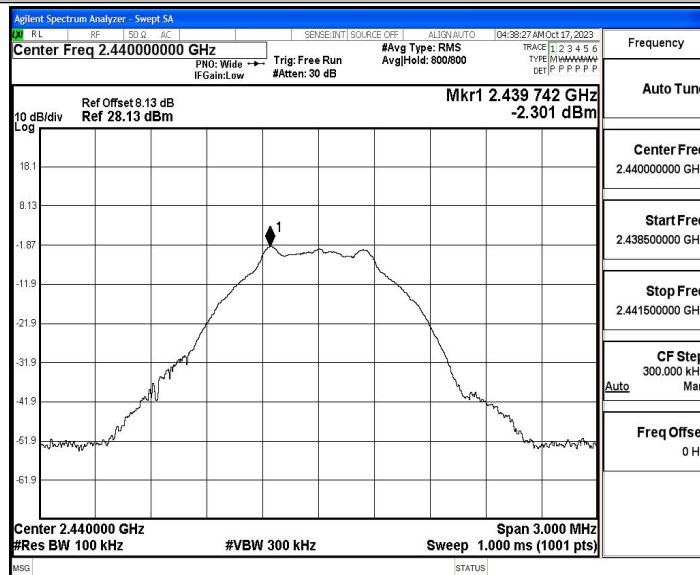
Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



BLE\_1M\_Ant1\_2440\_0~Reference



BLE\_1M\_Ant1\_2440\_30~1000

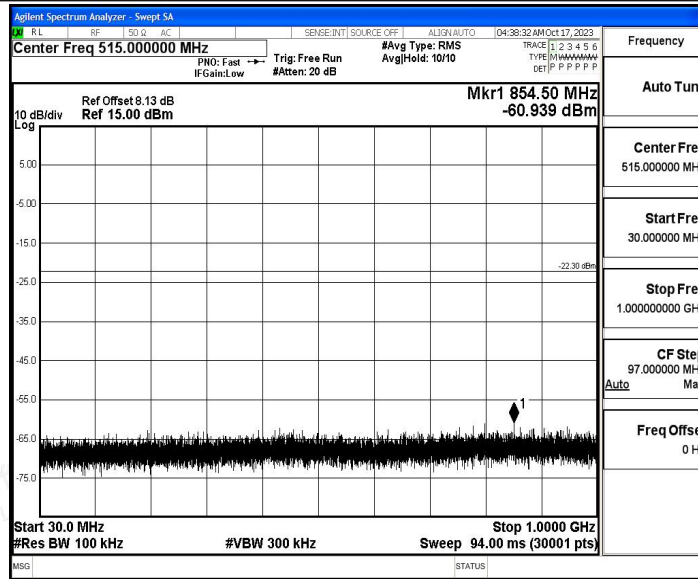


Shenzhen LCS Compliance Testing Laboratory Ltd.

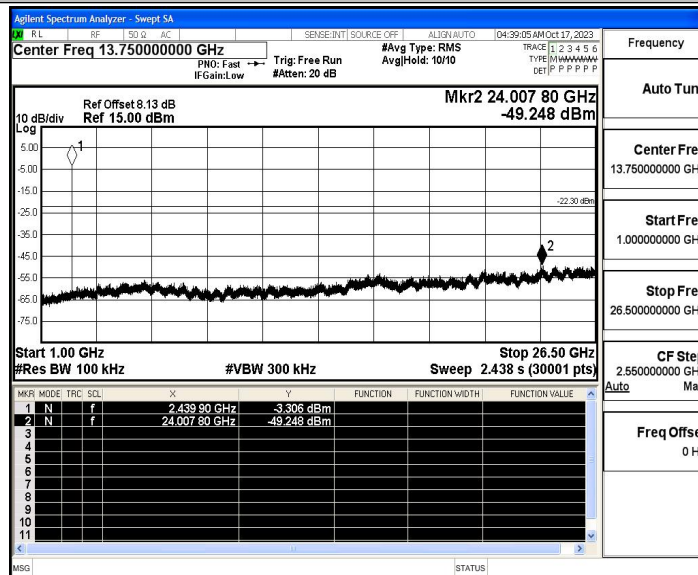
Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



BLE\_1M\_Ant1\_2440\_1000~26500



BLE\_1M\_Ant1\_2480\_0~Reference

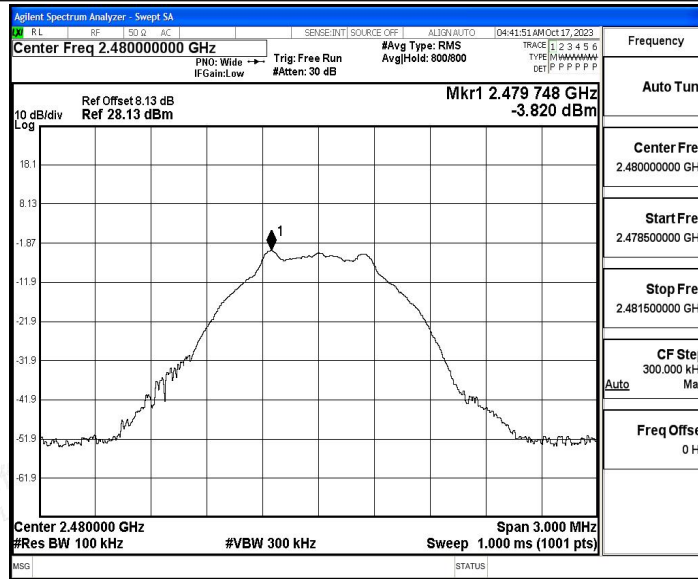


Shenzhen LCS Compliance Testing Laboratory Ltd.

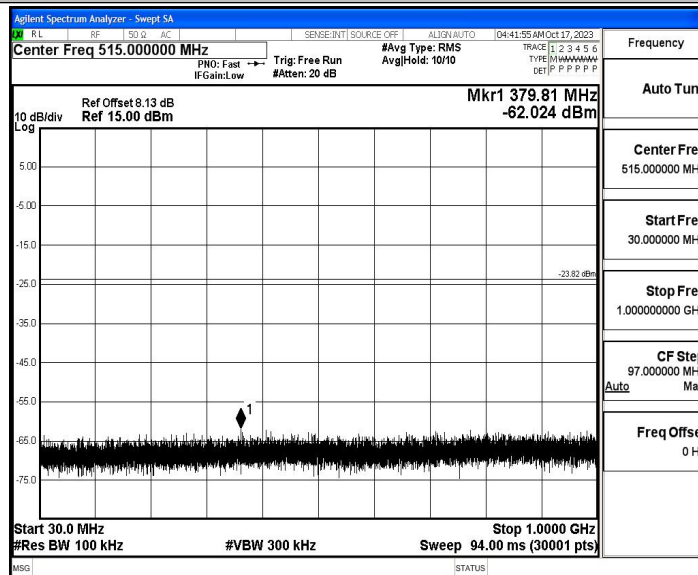
Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



BLE\_1M\_Ant1\_2480\_30~1000



BLE\_1M\_Ant1\_2480\_1000~26500

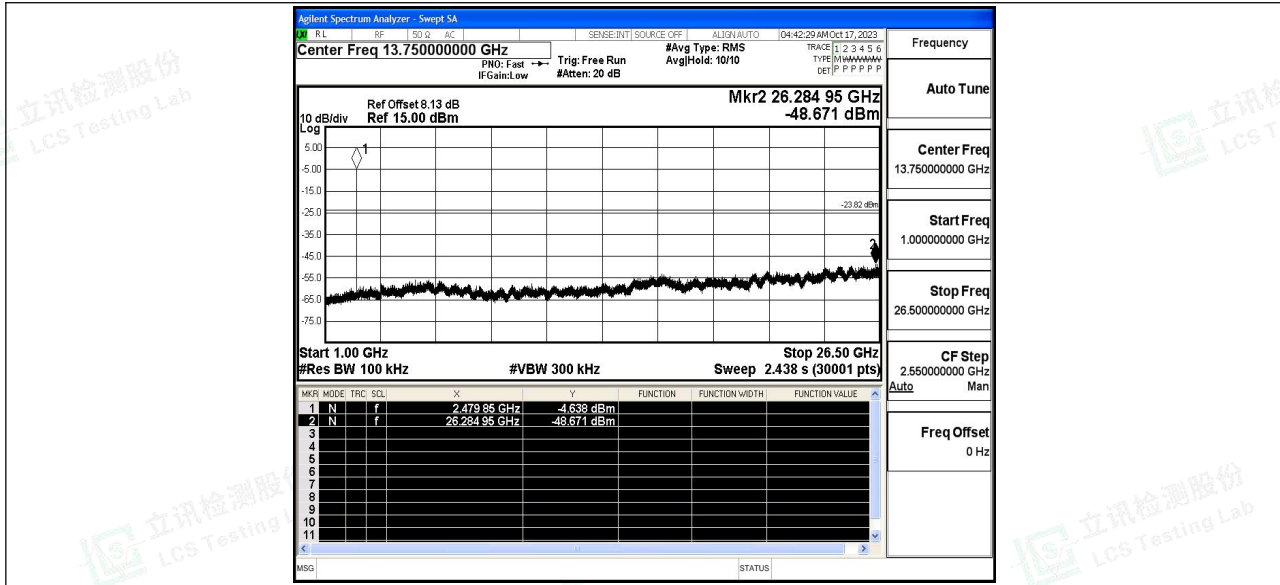


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



A.6 Duty Cycle

Test Result

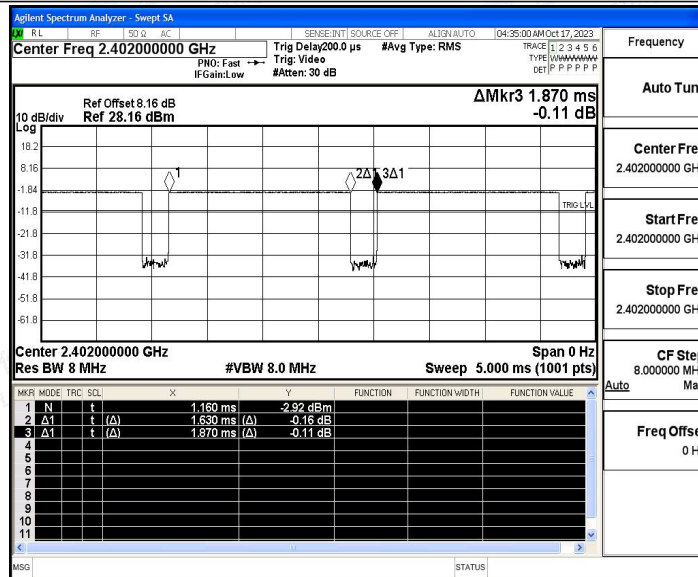
| TestMode | Antenna | Channel | ON Time [ms] | Period [ms] | X      | DC [%] | xFactor | 1/T  | Limit | Verdict |
|----------|---------|---------|--------------|-------------|--------|--------|---------|------|-------|---------|
| BLE_1M   | Ant1    | 2402    | 1.63         | 1.87        | 0.8717 | 87.17  | 0.60    | 0.61 | ---   | ---     |
|          |         | 2440    | 1.32         | 1.88        | 0.7021 | 70.21  | 1.54    | 0.76 | ---   | ---     |
|          |         | 2480    | 1.32         | 1.88        | 0.7021 | 70.21  | 1.54    | 0.76 | ---   | ---     |



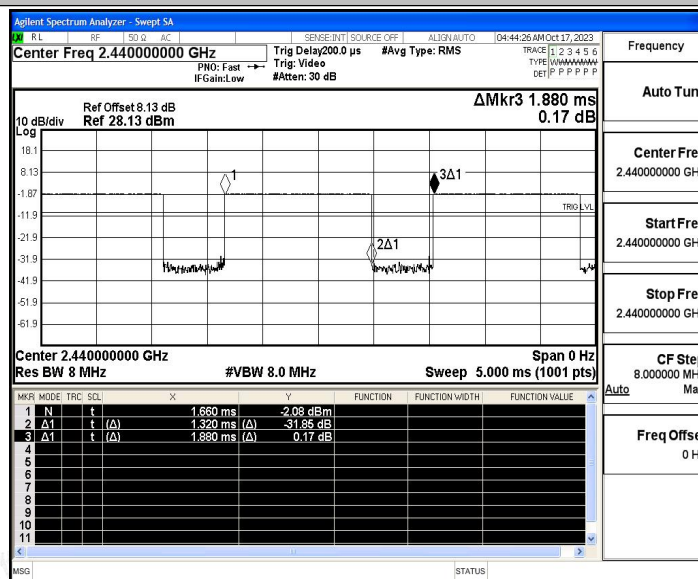


## Test Graphs

BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480

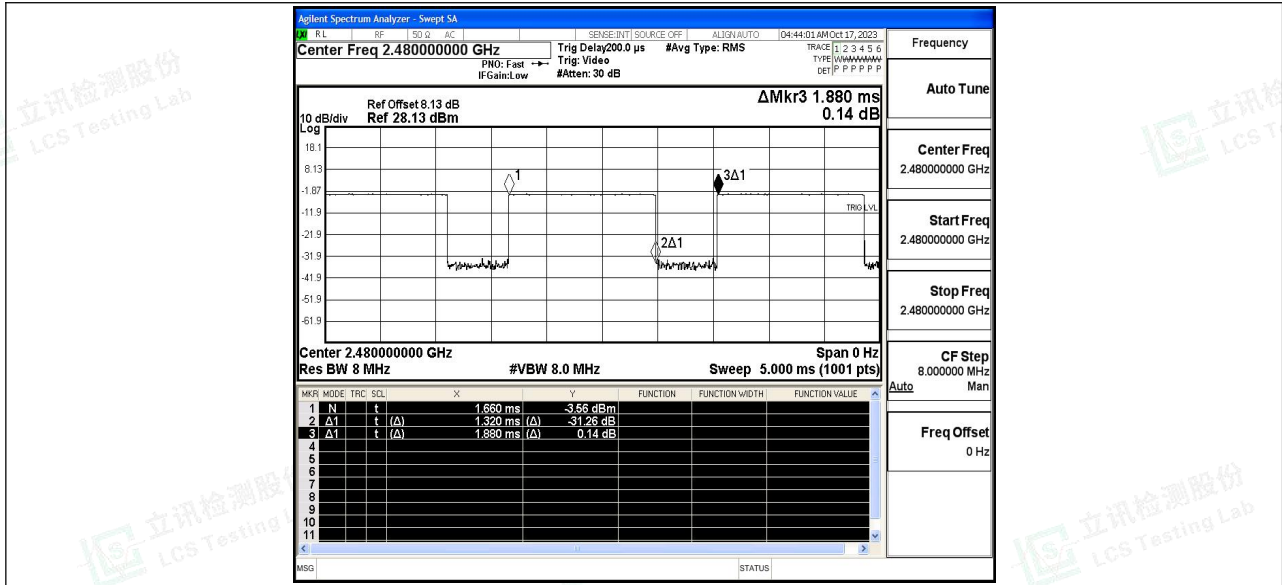


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



## 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       | -58.97          | ≤-41.20        | 36.23              | ≤54               | PASS    |
|          |         |        |         | AV       | 2385.890       | -58.44          | ≤-41.20        | 36.76              | ≤54               | PASS    |
|          |         |        |         | AV       | 2390.000       | -58.62          | ≤-41.20        | 36.58              | ≤54               | PASS    |
|          |         |        |         | Peak     | 2310.000       | -52.78          | ≤-21.20        | 42.42              | ≤74               | PASS    |
|          |         |        |         | Peak     | 2377.070       | -48.97          | ≤-21.20        | 46.23              | ≤74               | PASS    |
|          |         |        |         | Peak     | 2390.000       | -51.32          | ≤-21.20        | 43.88              | ≤74               | PASS    |
|          |         | High   | 2480    | AV       | 2483.500       | -57.32          | ≤-41.20        | 37.88              | ≤54               | PASS    |
|          |         |        |         | AV       | 2483.520       | -57.32          | ≤-41.20        | 37.88              | ≤54               | PASS    |
|          |         |        |         | AV       | 2500.000       | -58.97          | ≤-41.20        | 36.23              | ≤54               | PASS    |
|          |         |        |         | Peak     | 2483.500       | -51.79          | ≤-21.20        | 43.41              | ≤74               | PASS    |
|          |         |        |         | Peak     | 2487.200       | -44.56          | ≤-21.20        | 50.64              | ≤74               | PASS    |
|          |         |        |         | Peak     | 2500.000       | -50.15          | ≤-21.20        | 45.05              | ≤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.



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

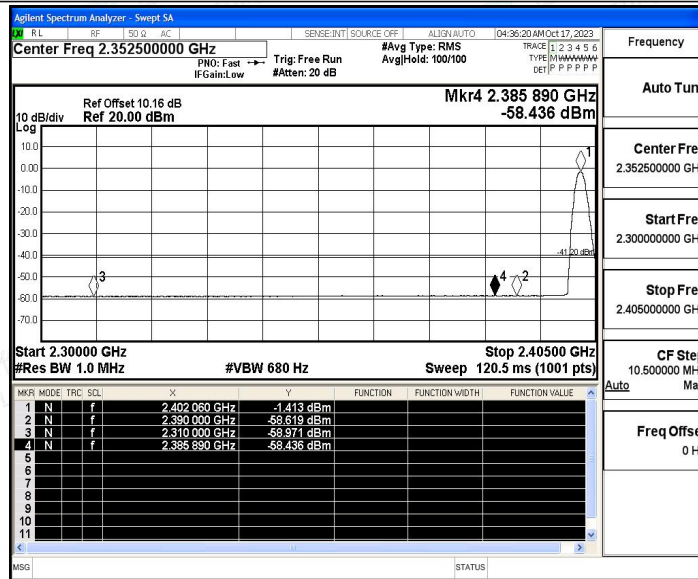
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

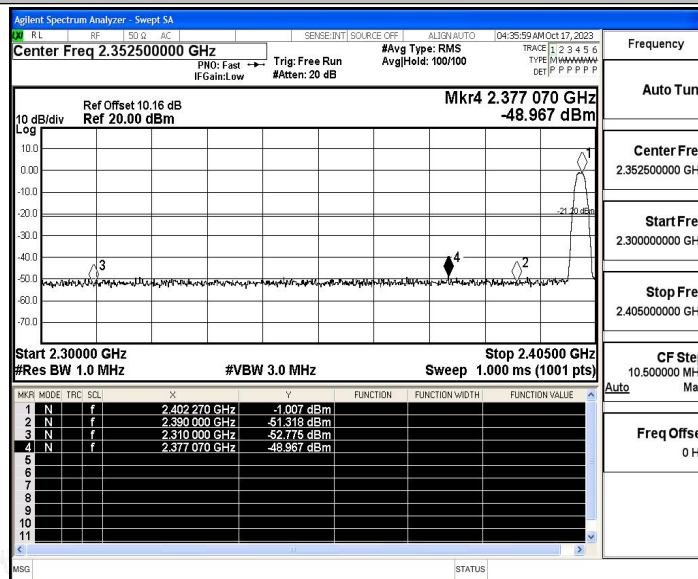


## Test Graphs

BLE\_1M\_Ant1\_Low\_2402\_AV



BLE\_1M\_Ant1\_Low\_2402\_Peak



BLE\_1M\_Ant1\_High\_2480\_AV

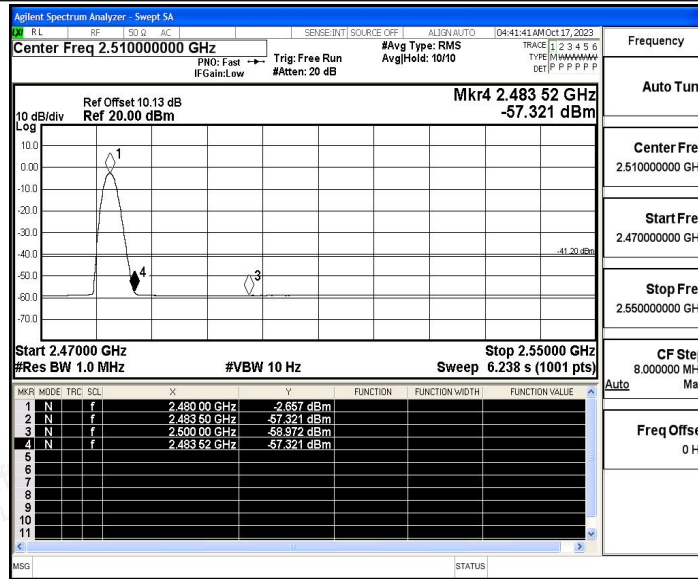


Shenzhen LCS Compliance Testing Laboratory Ltd.

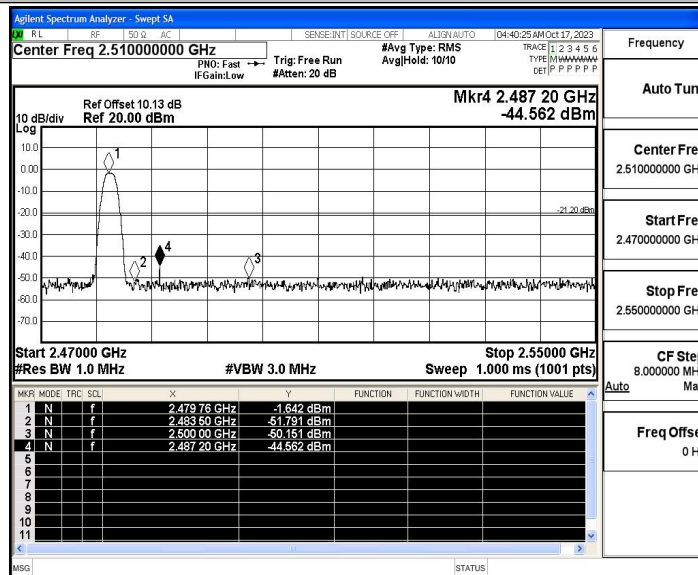
Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



## BLE\_1M\_Ant1\_High\_2480\_Peak



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity