



## Appendix A

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

Product Name: TS Smart Mortise Sectional TS Smart Panic Trim Lock

Test Model: e-Cronus-7000-OS

#### Environmental Conditions

|                    |            |
|--------------------|------------|
| Temperature:       | 23.8° C    |
| Relative Humidity: | 52.1%      |
| ATM Pressure:      | 100.0 kPa  |
| Test Engineer:     | Paddi Chen |
| Supervised by:     | Nick Peng  |



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## A.1 DTS Bandwidth

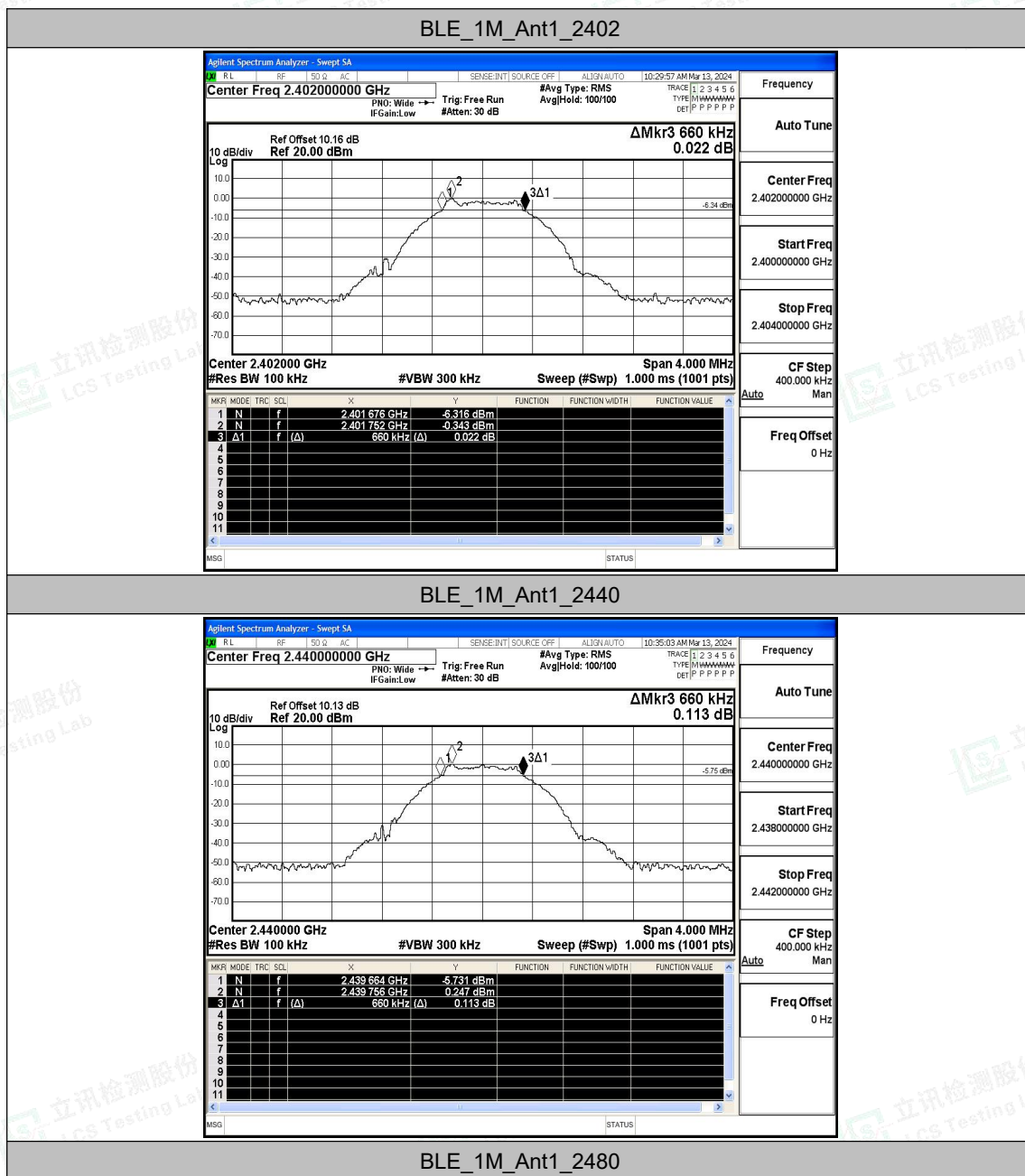
### Test Result

| TestMode | Antenna | Frequency[MHz] | DTS BW [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|----------------|--------------|----------|----------|------------|---------|
| BLE_1M   | Ant1    | 2402           | 0.660        | 2401.676 | 2402.336 | 0.5        | PASS    |
|          |         | 2440           | 0.660        | 2439.664 | 2440.324 | 0.5        | PASS    |
|          |         | 2480           | 0.652        | 2479.680 | 2480.332 | 0.5        | PASS    |
| BLE_2M   | Ant1    | 2402           | 1.116        | 2401.456 | 2402.572 | 0.5        | PASS    |
|          |         | 2440           | 1.164        | 2439.416 | 2440.580 | 0.5        | PASS    |
|          |         | 2480           | 1.124        | 2479.428 | 2480.552 | 0.5        | PASS    |





## Test Graphs

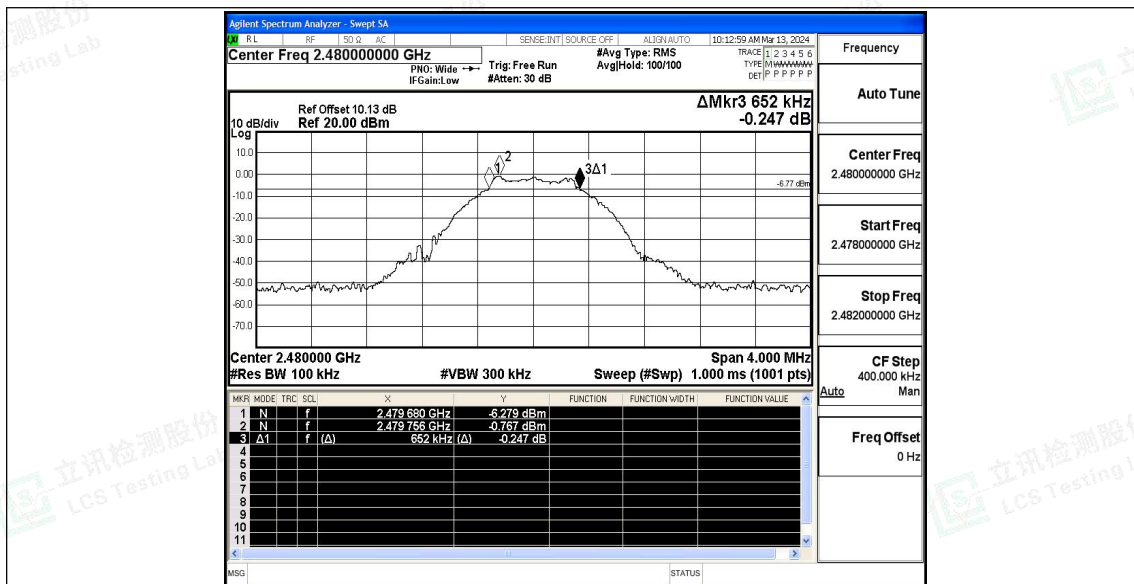


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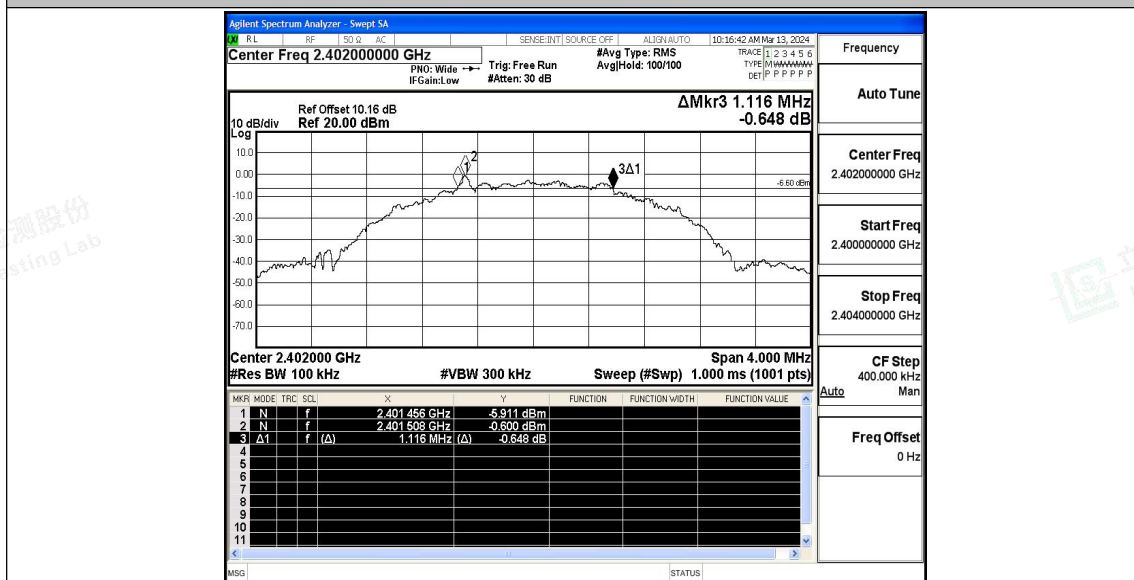
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BLE\_2M\_Ant1\_2402



BLE\_2M\_Ant1\_2440

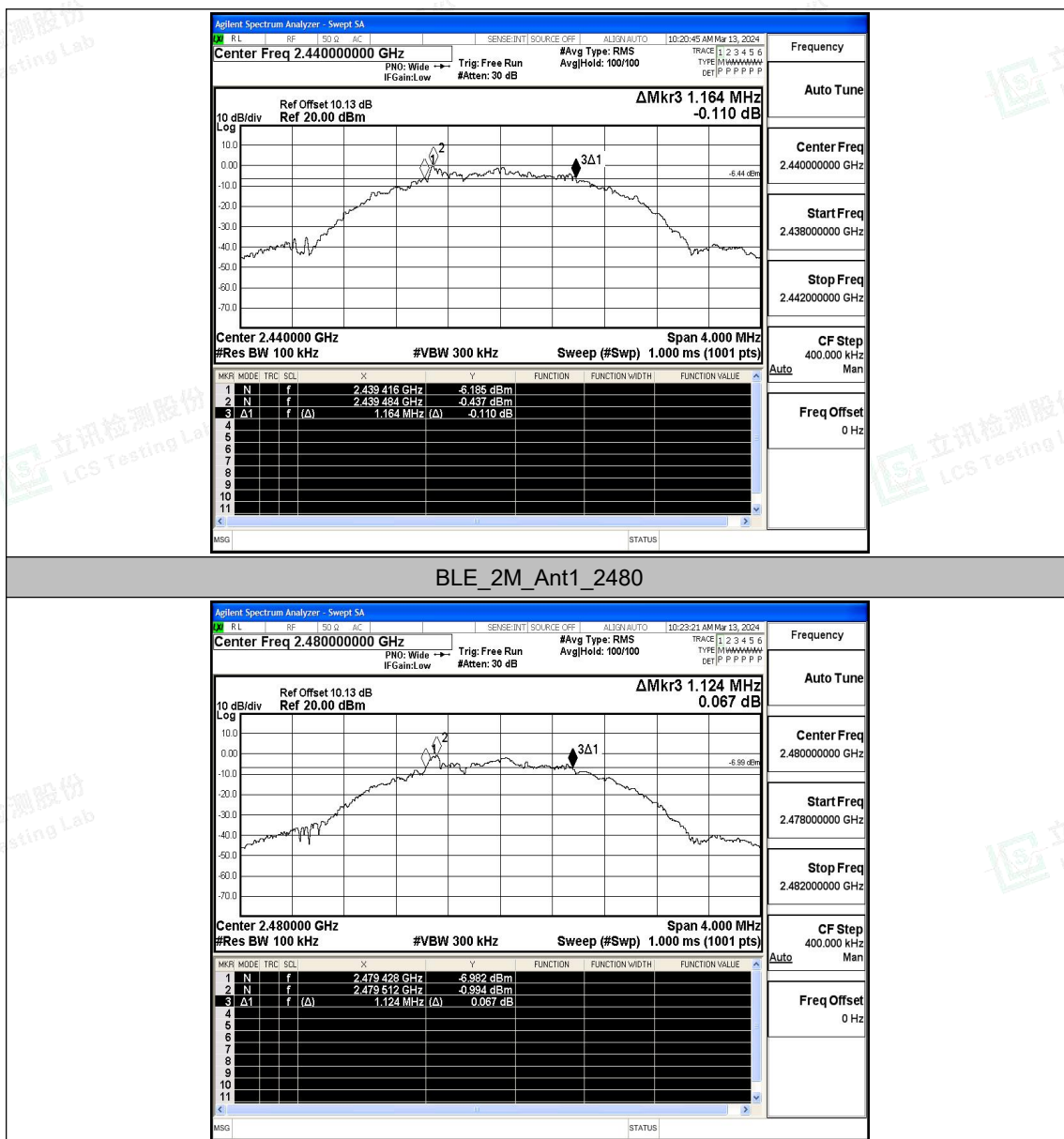


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## A.2 Maximum conducted output power

### Test Result

| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| BLE_1M   | Ant1    | 2402    | 0.17        | ≤30        | PASS    |
|          |         | 2440    | 0.78        | ≤30        | PASS    |
|          |         | 2480    | -0.25       | ≤30        | PASS    |
| BLE_2M   | Ant1    | 2402    | 0.12        | ≤30        | PASS    |
|          |         | 2440    | 0.60        | ≤30        | PASS    |
|          |         | 2480    | -0.41       | ≤30        | PASS    |



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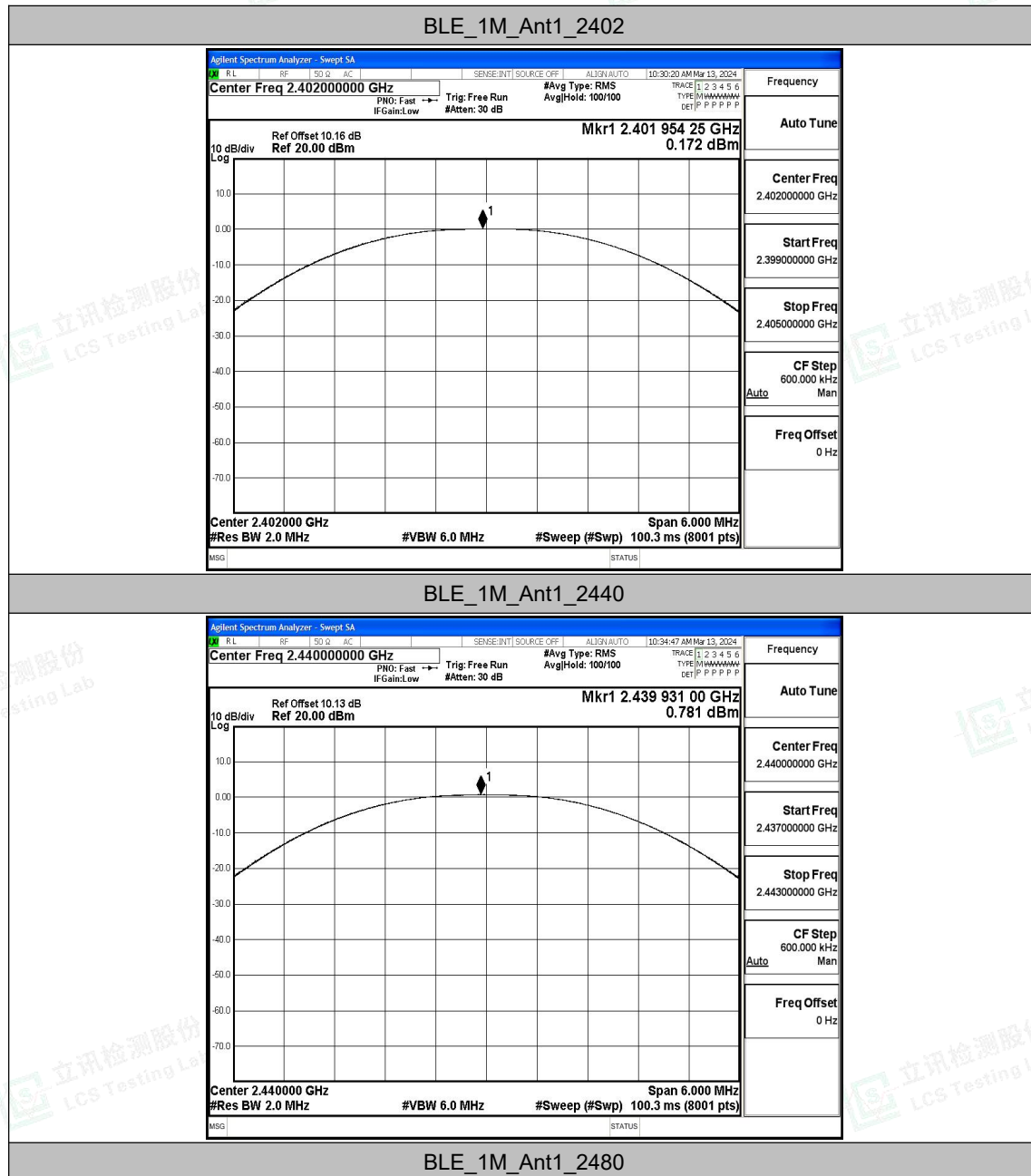
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## Test Graphs



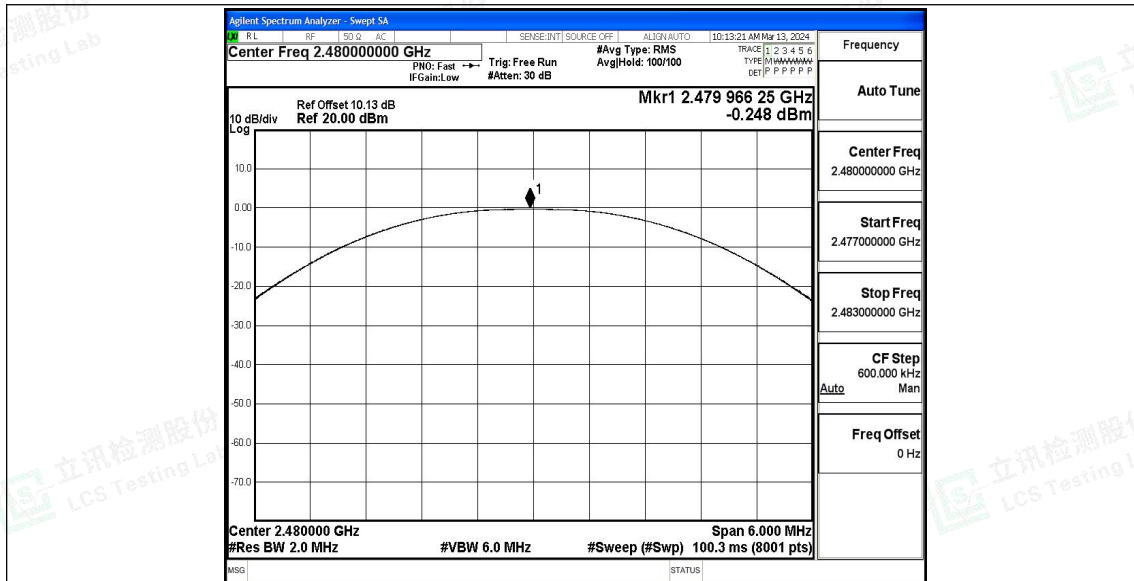
Shenzhen LCS Compliance Testing Laboratory Ltd.

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

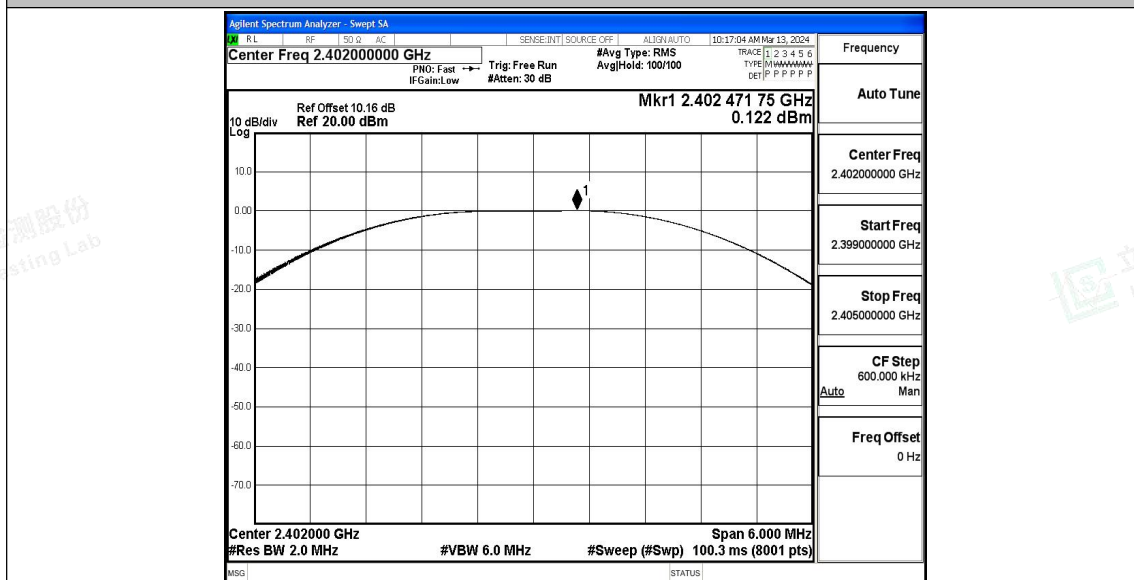
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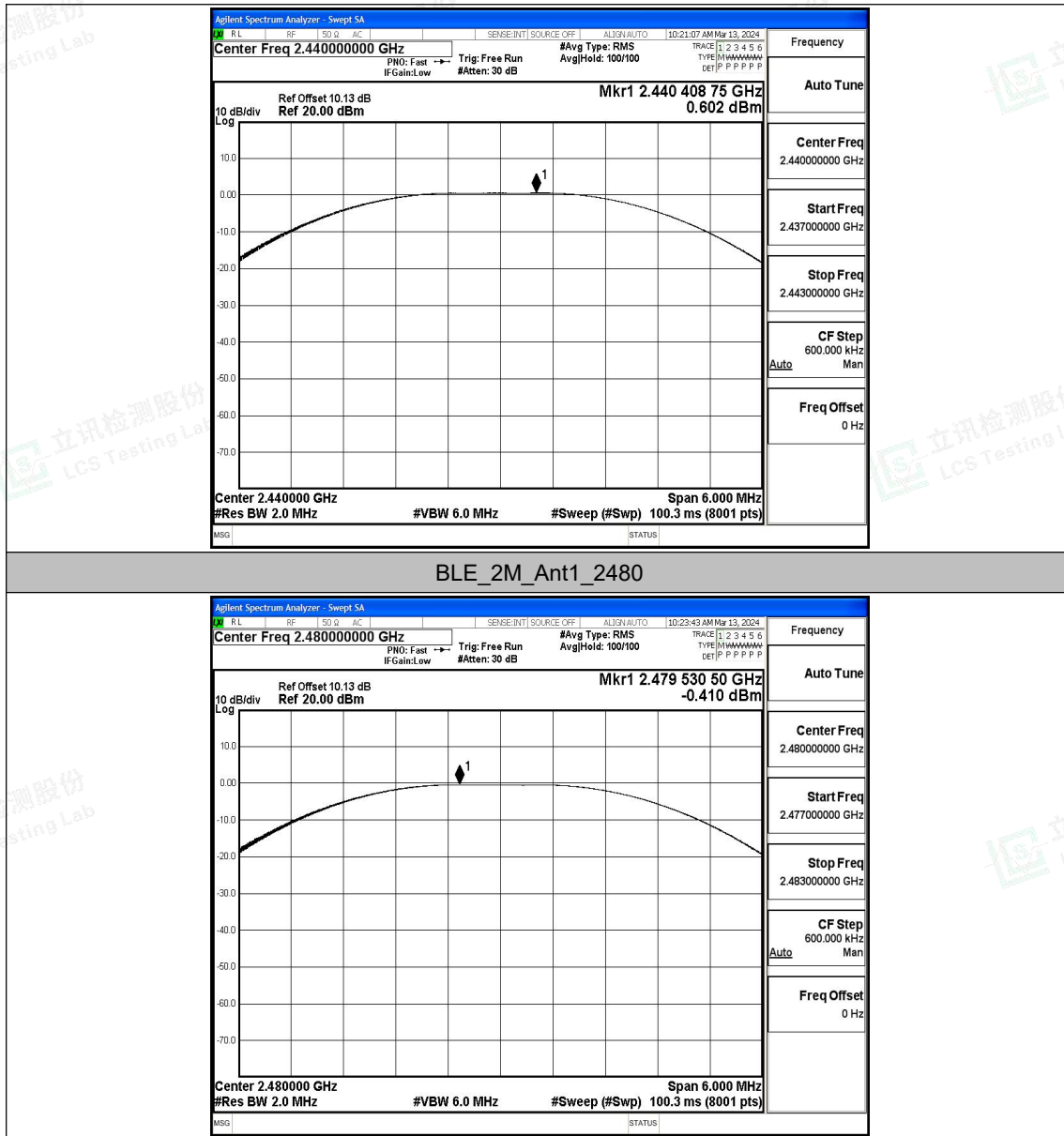
BLE\_2M\_Ant1\_2402



BLE\_2M\_Ant1\_2440









### A.3 Maximum power spectral density

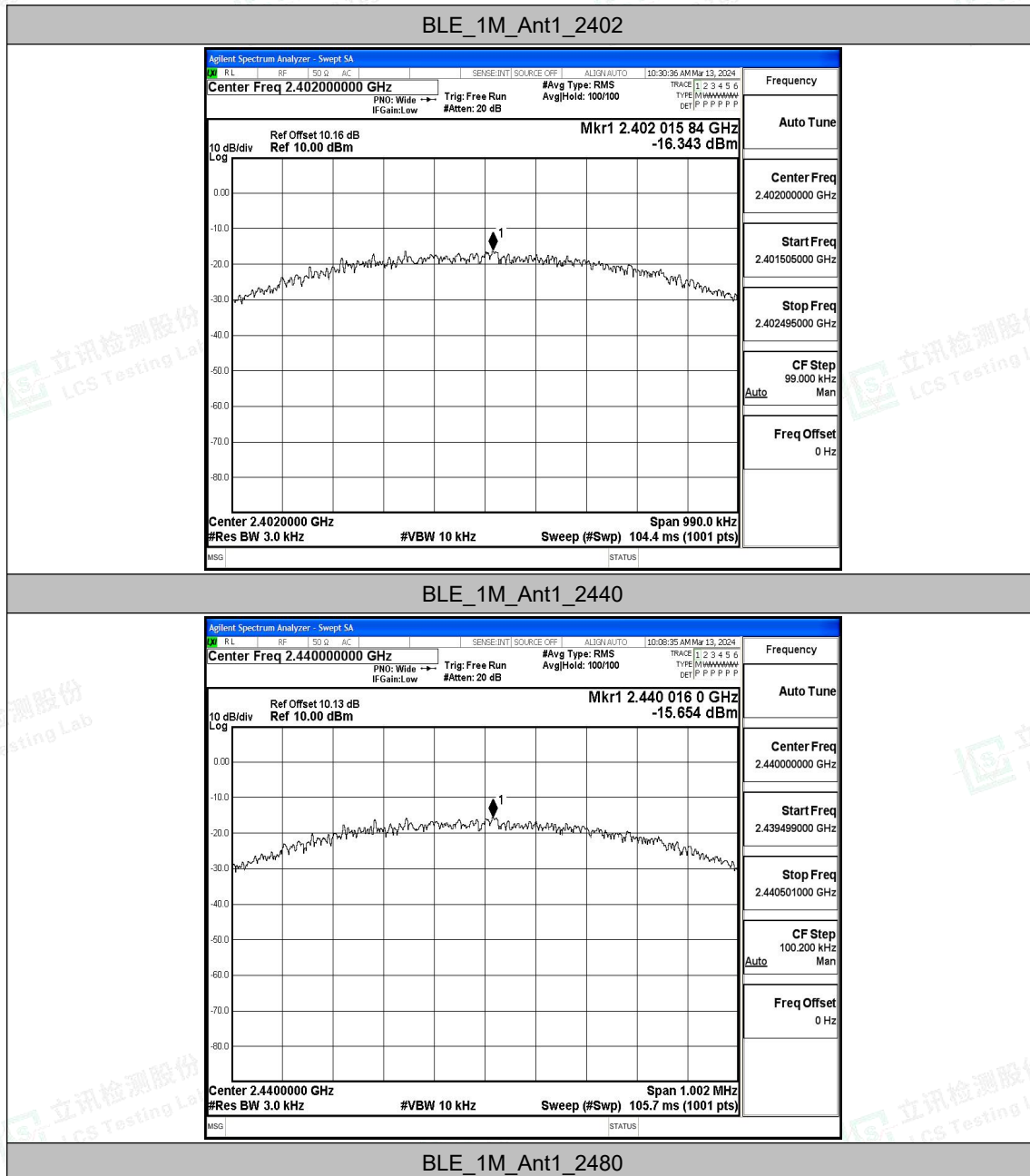
#### Test Result

| TestMode | Antenna | Frequency[MHz] | Result[dBm/3kHz] | Limit[dBm/3kHz] | Verdict |
|----------|---------|----------------|------------------|-----------------|---------|
| BLE_1M   | Ant1    | 2402           | -16.34           | ≤8.00           | PASS    |
|          |         | 2440           | -15.65           | ≤8.00           | PASS    |
|          |         | 2480           | -16.83           | ≤8.00           | PASS    |
| BLE_2M   | Ant1    | 2402           | -19.62           | ≤8.00           | PASS    |
|          |         | 2440           | -18.80           | ≤8.00           | PASS    |
|          |         | 2480           | -20.20           | ≤8.00           | PASS    |





## Test Graphs

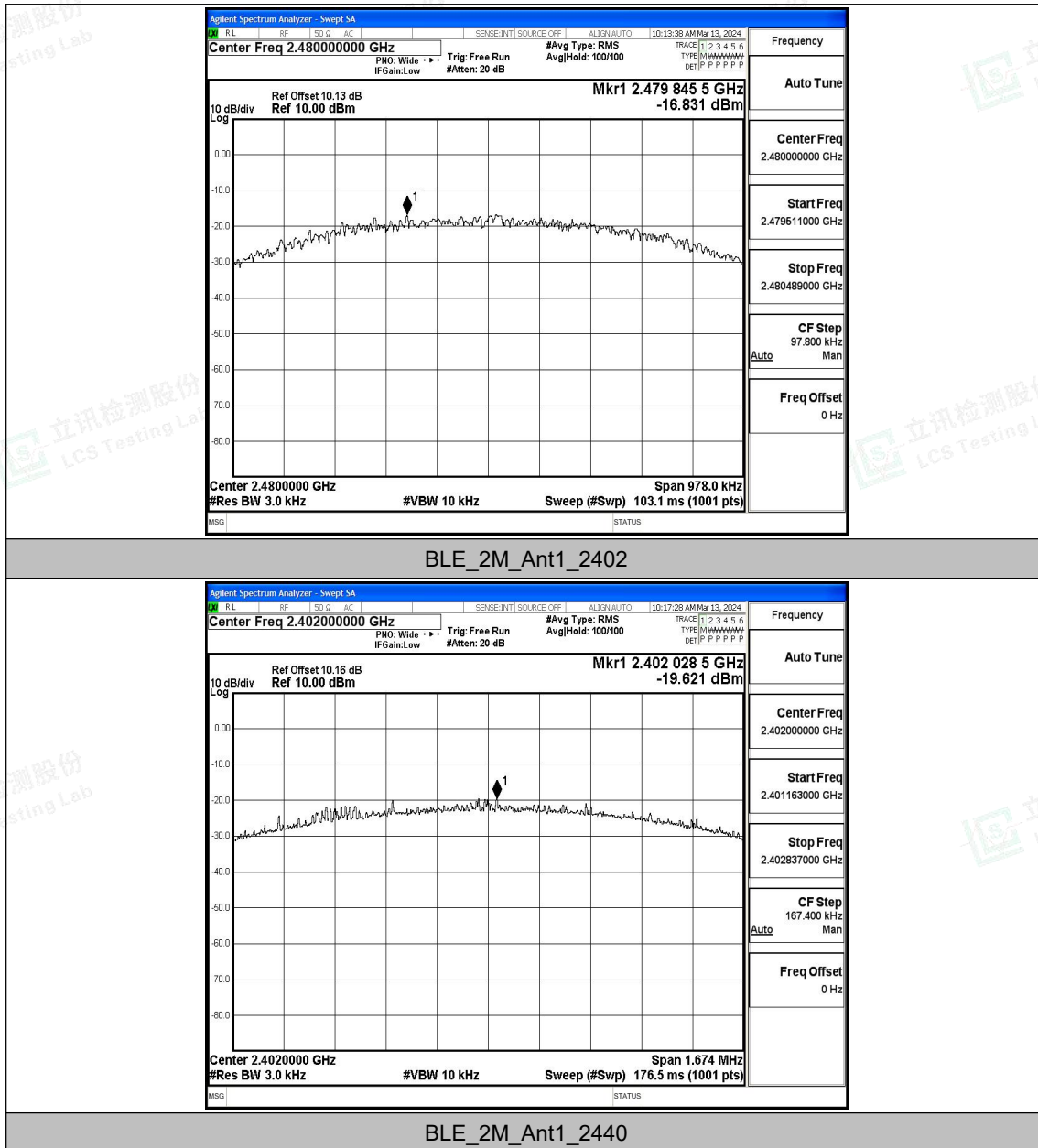


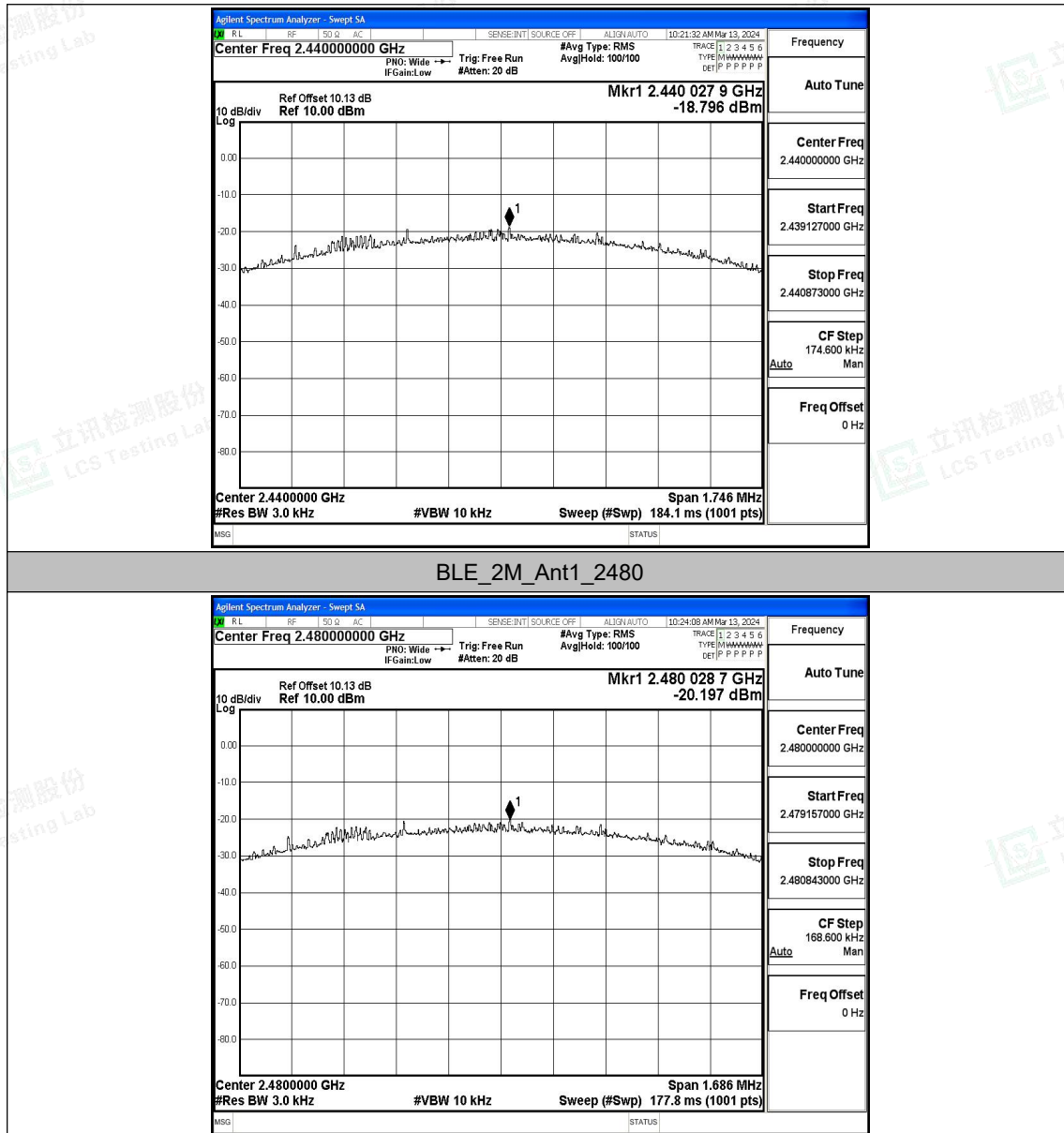
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## A.4 Band edge measurements

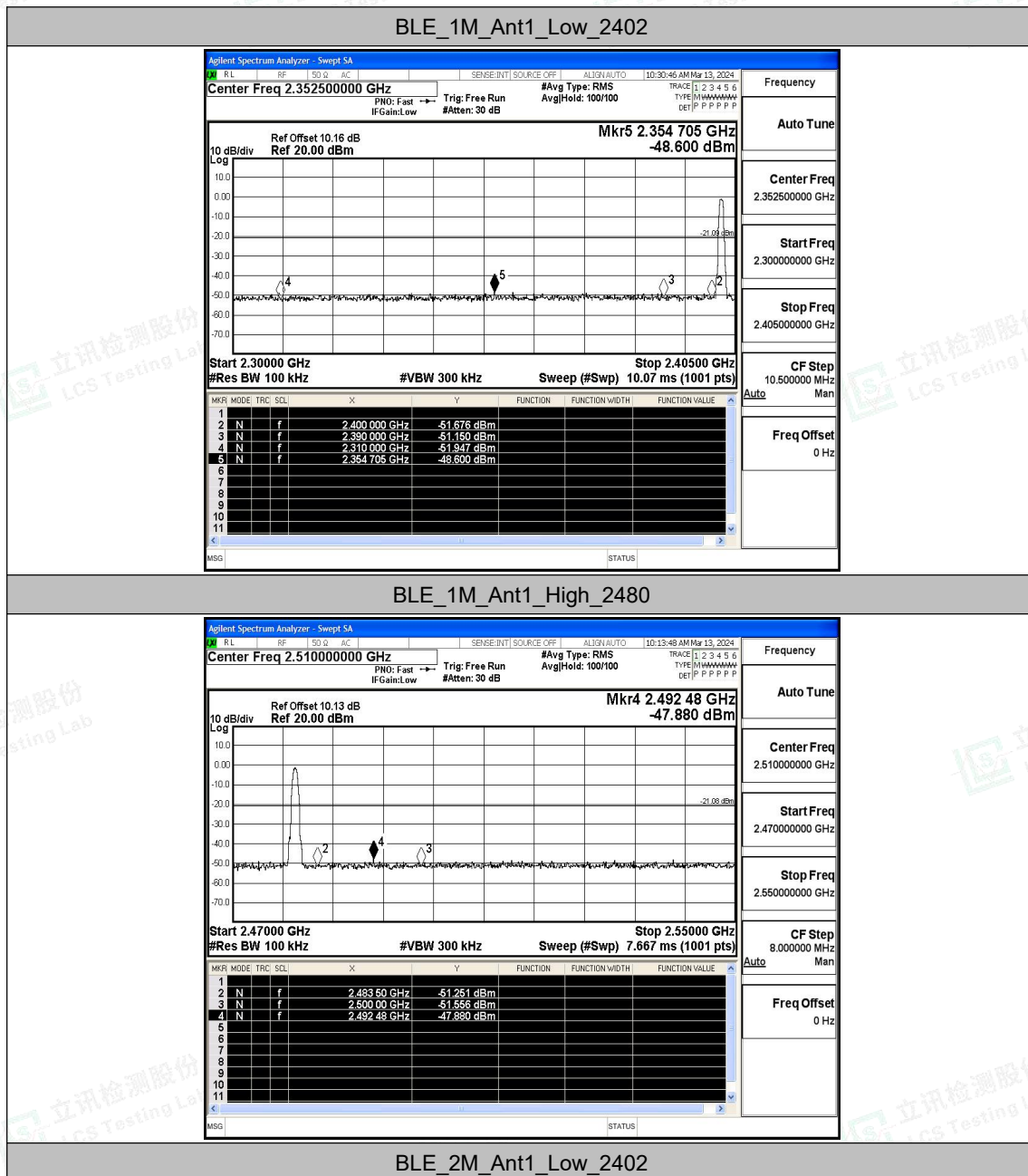
### Test Result

| TestMode | Antenna | Channel | Frequency[MHz] | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|----------------|---------------|-------------|------------|---------|
| BLE_1M   | Ant1    | Low     | 2402           | -1.09         | -48.6       | ≤-21.09    | PASS    |
|          |         | High    | 2480           | -1.08         | -47.88      | ≤-21.08    | PASS    |
| BLE_2M   | Ant1    | Low     | 2402           | -0.96         | -45.44      | ≤-20.96    | PASS    |
|          |         | High    | 2480           | -0.94         | -46.83      | ≤-20.94    | PASS    |





## Test Graphs



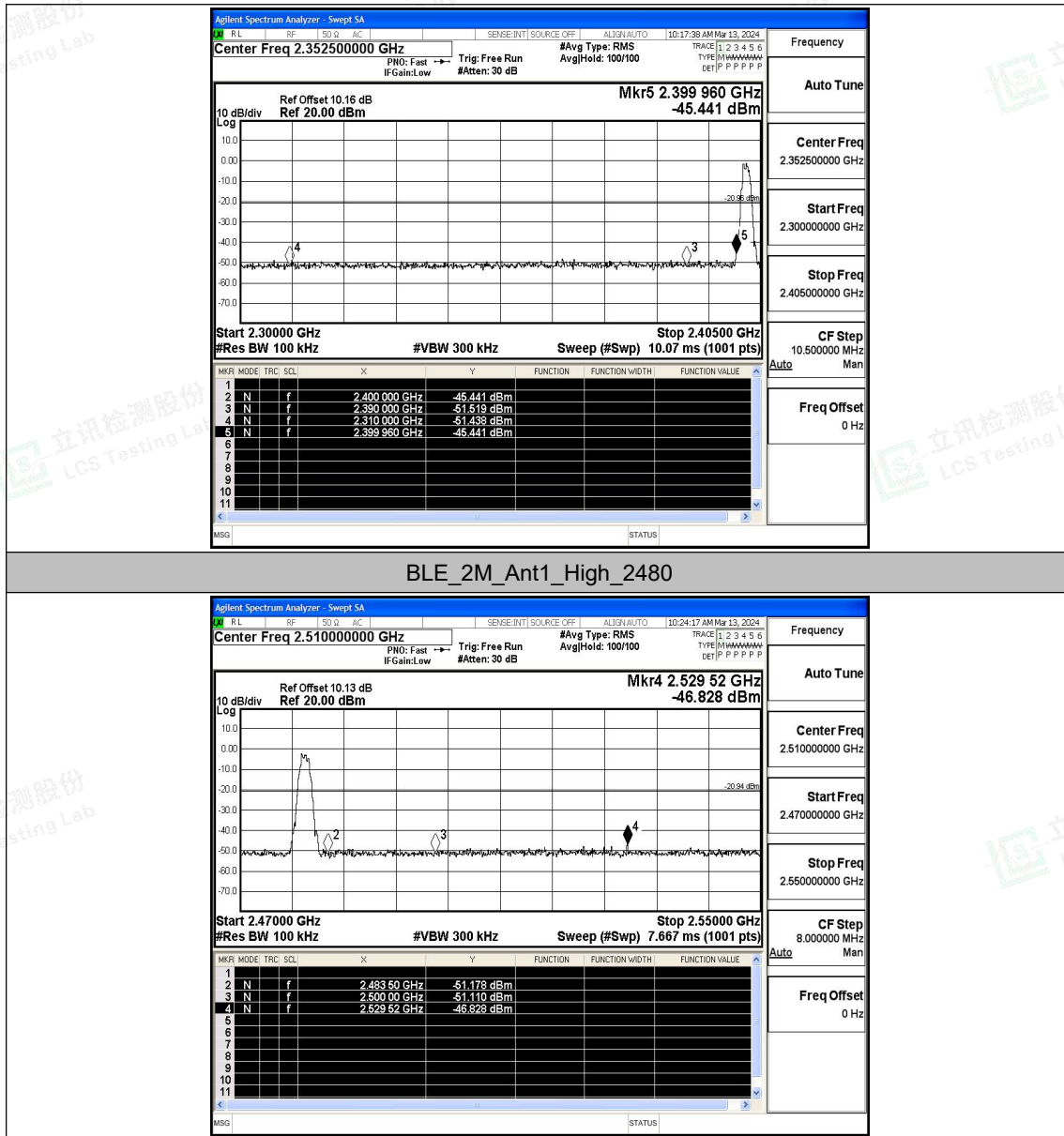
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## A.5 Conducted Spurious Emission

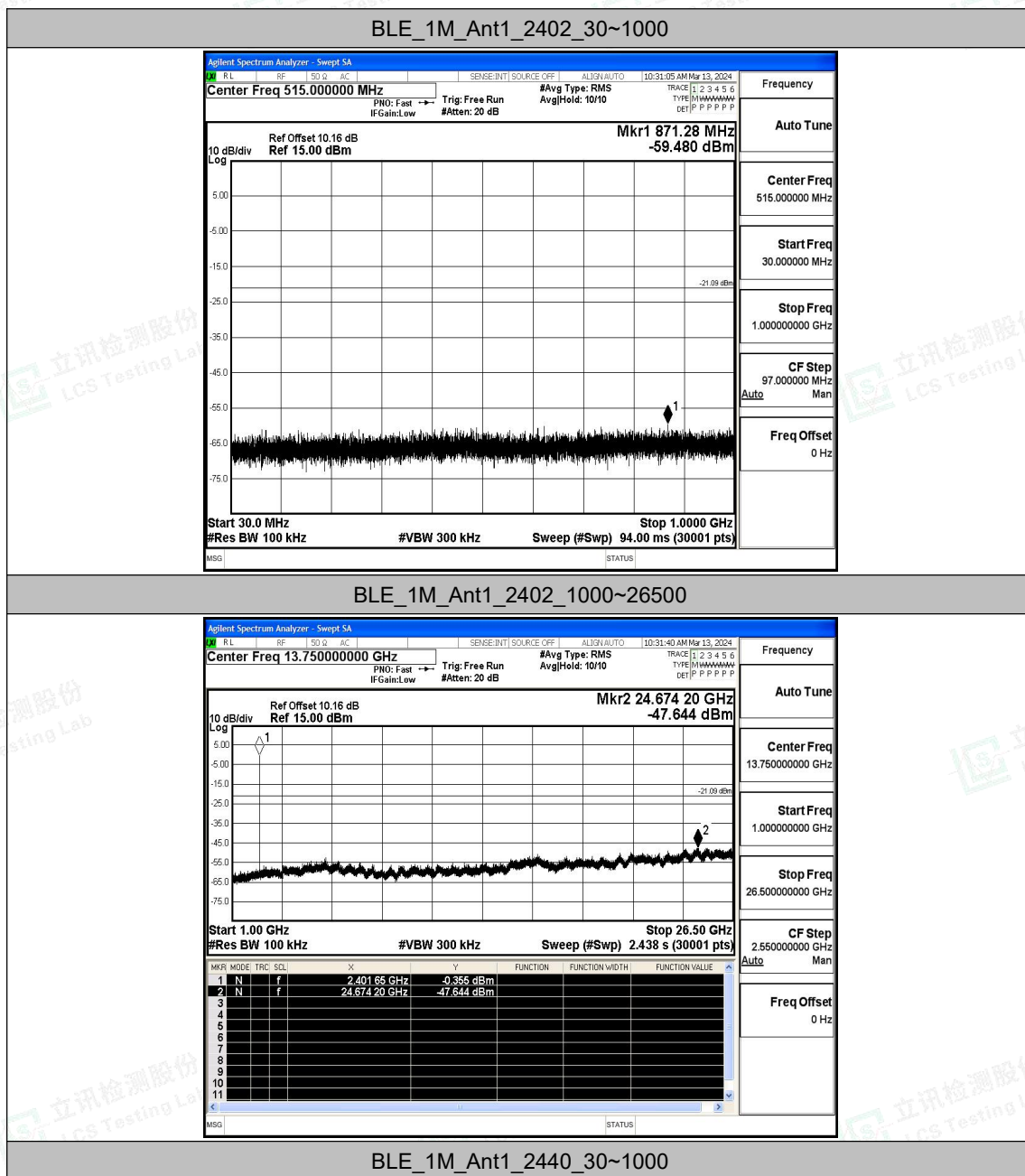
### Test Result

| TestMode | Antenna | Frequency[MHz] | FreqRange [MHz] | RefLevel [dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|----------------|-----------------|----------------|-------------|------------|---------|
| BLE_1M   | Ant1    | 2402           | 30~1000         | -1.09          | -59.48      | ≤-21.09    | PASS    |
|          |         |                | 1000~26500      | -1.09          | -47.64      | ≤-21.09    | PASS    |
|          |         | 2440           | 30~1000         | 0.28           | -58.35      | ≤-19.72    | PASS    |
|          |         |                | 1000~26500      | 0.28           | -47.36      | ≤-19.72    | PASS    |
|          |         | 2480           | 30~1000         | -1.08          | -59.85      | ≤-21.08    | PASS    |
|          |         |                | 1000~26500      | -1.08          | -47.47      | ≤-21.08    | PASS    |
| BLE_2M   | Ant1    | 2402           | 30~1000         | -0.96          | -60.35      | ≤-20.96    | PASS    |
|          |         |                | 1000~26500      | -0.96          | -47.02      | ≤-20.96    | PASS    |
|          |         | 2440           | 30~1000         | -2.84          | -59.78      | ≤-22.84    | PASS    |
|          |         |                | 1000~26500      | -2.84          | -47.33      | ≤-22.84    | PASS    |
|          |         | 2480           | 30~1000         | -0.94          | -59.91      | ≤-20.94    | PASS    |
|          |         |                | 1000~26500      | -0.94          | -47.39      | ≤-20.94    | PASS    |





## Test Graphs

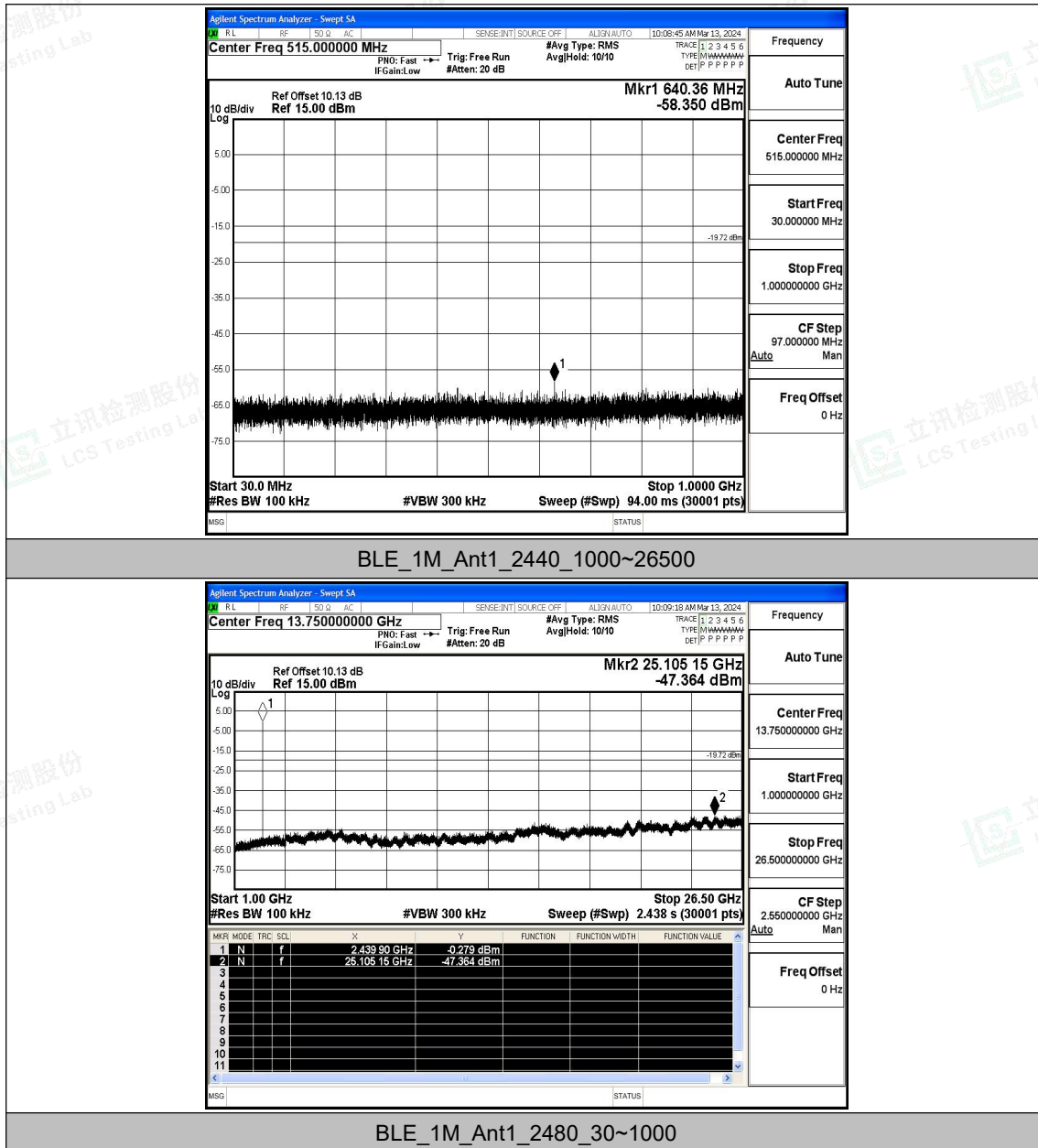


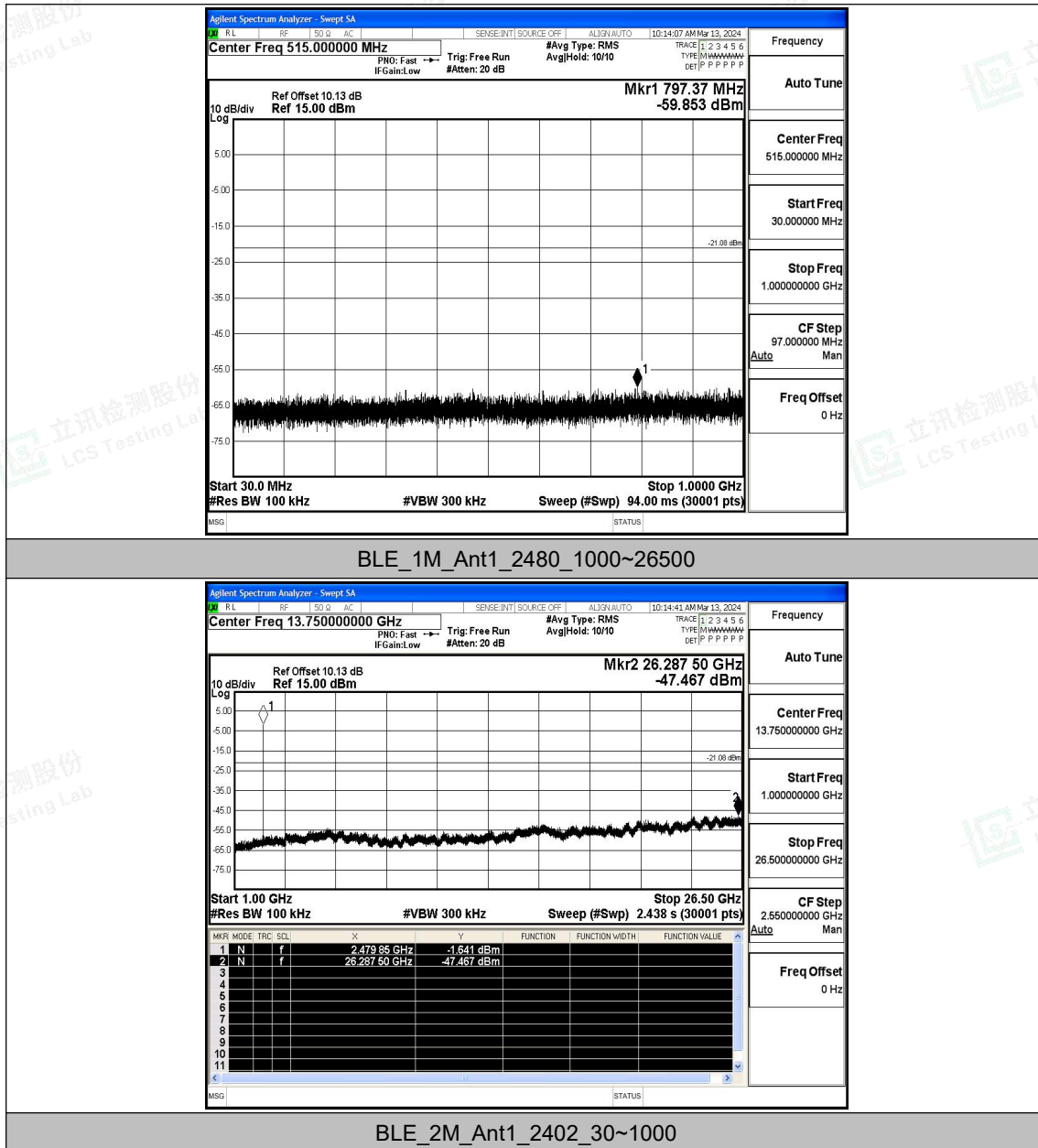
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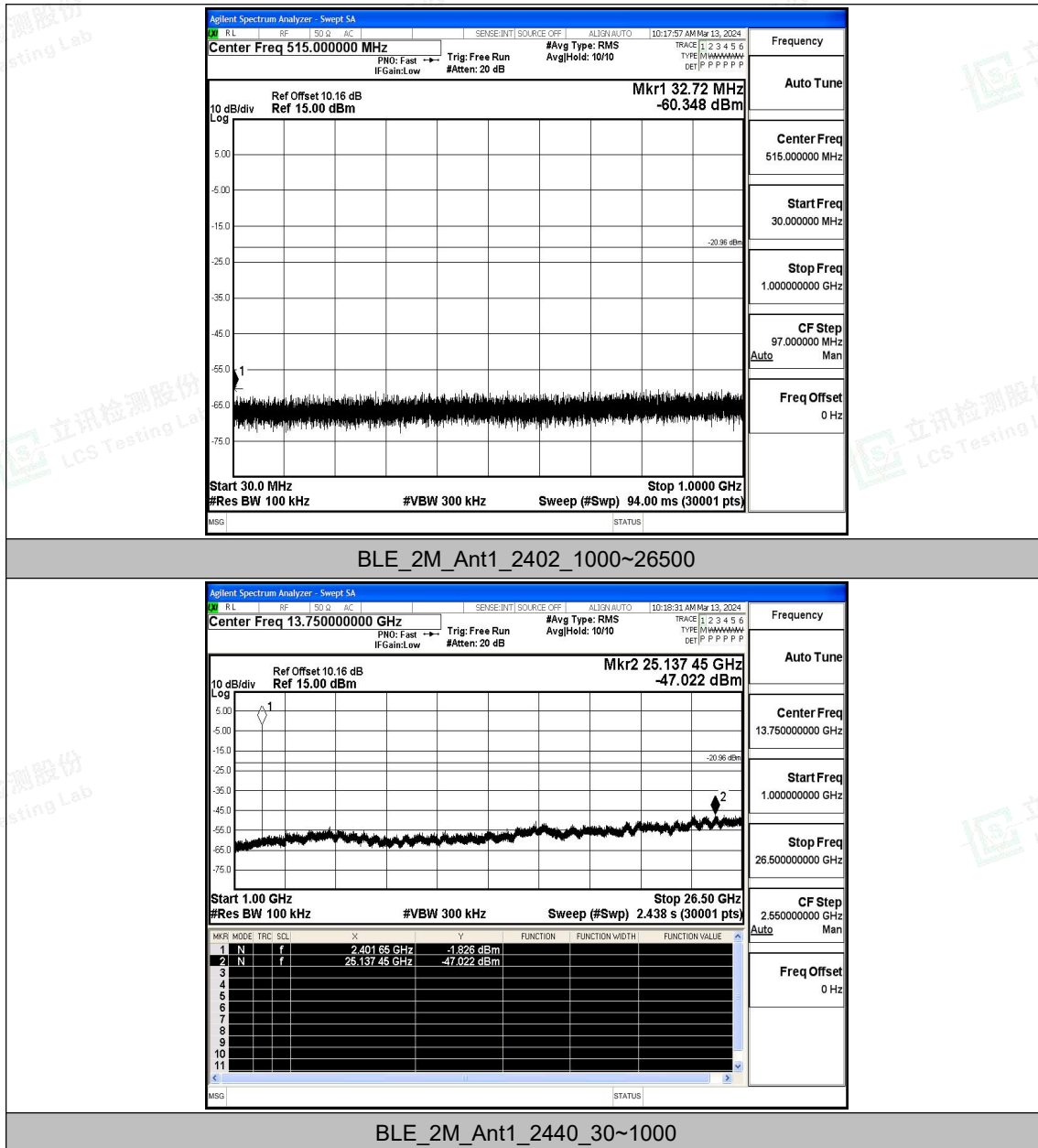
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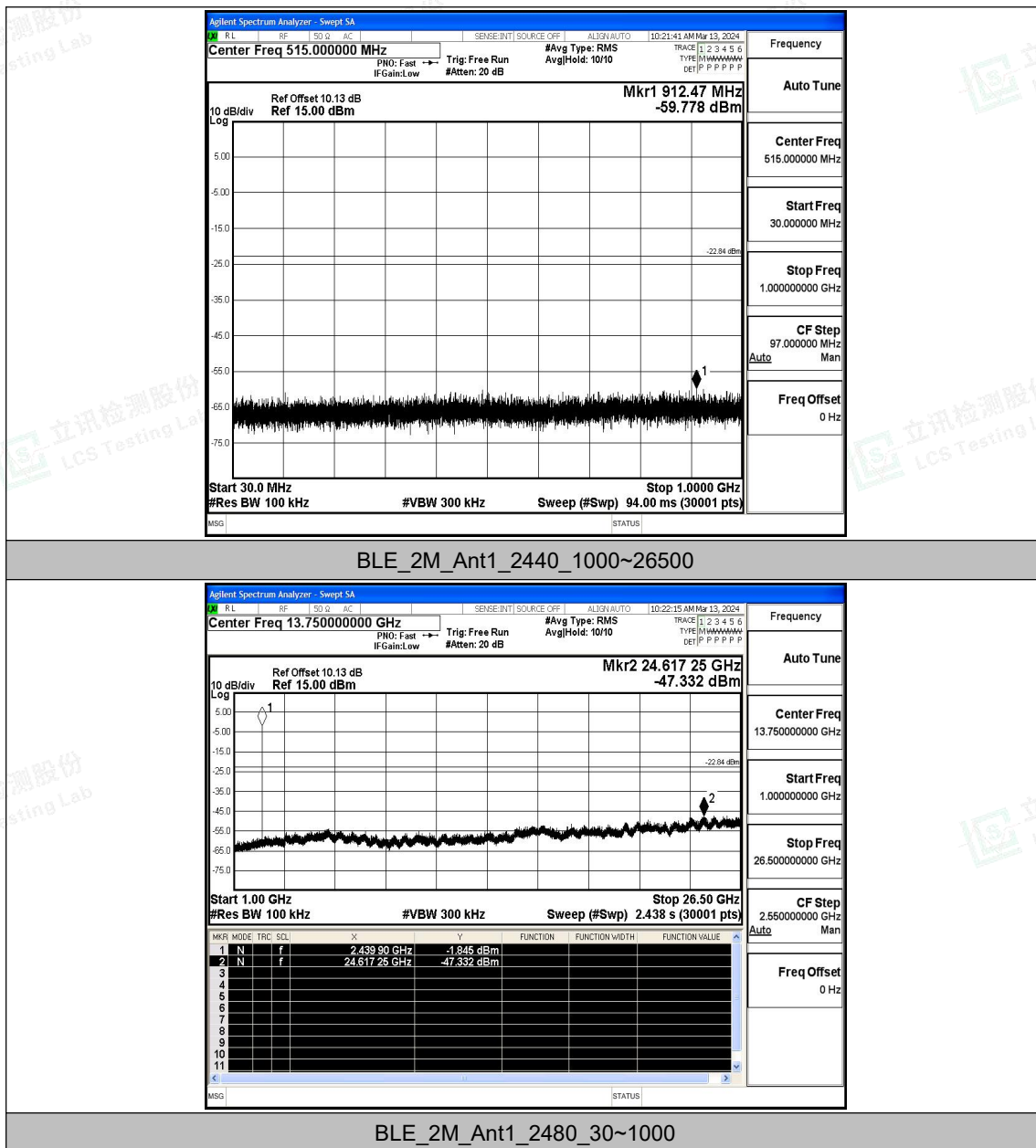
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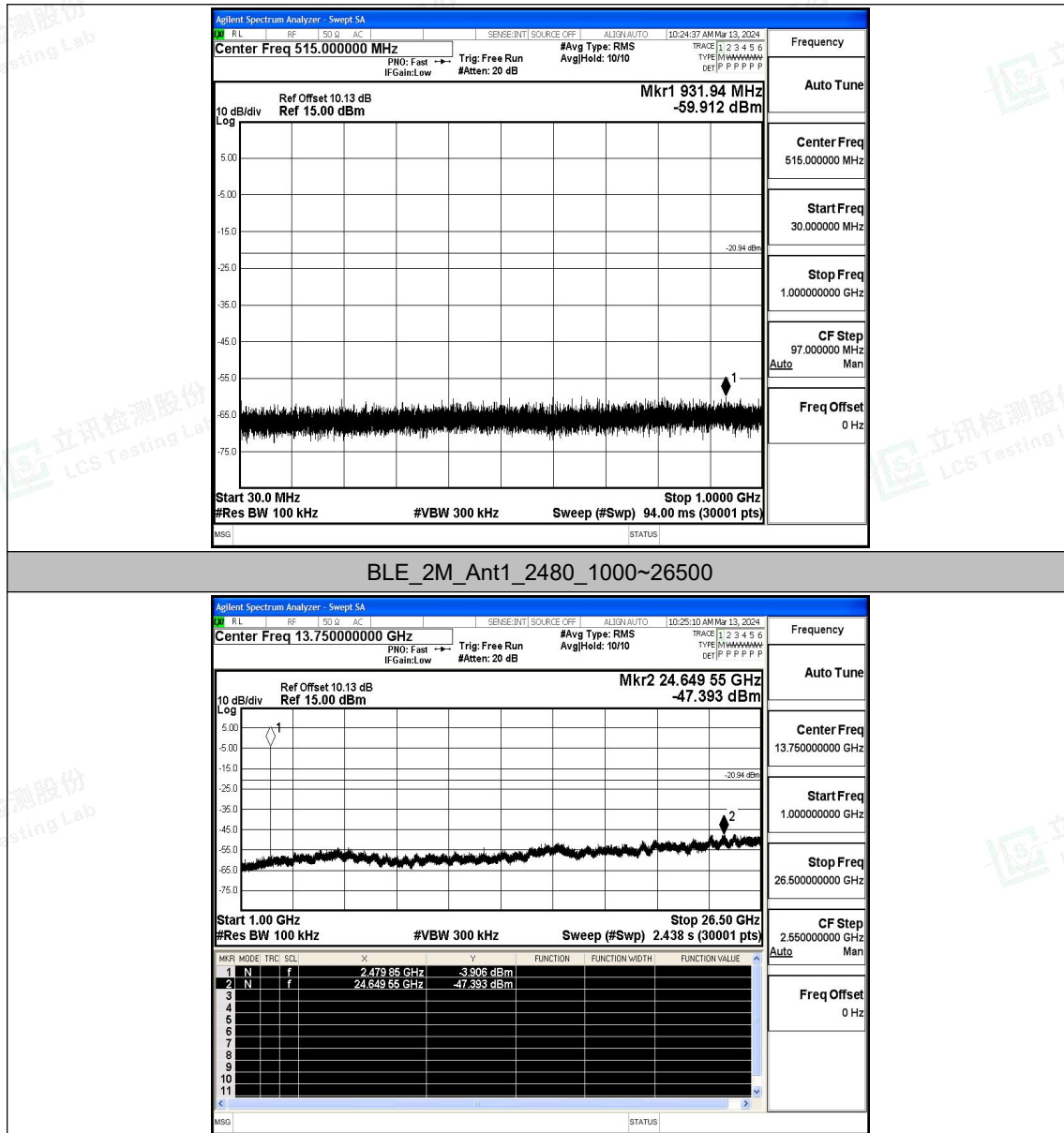
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## Reference level measurement

### Test Result

| TestMode | Antenna | Freq(MHz) | Max.Point[MHz] | Result[dBm] |
|----------|---------|-----------|----------------|-------------|
| BLE_1M   | Ant1    | 2402      | 2402.24        | -1.09       |
|          |         | 2440      | 2439.75        | 0.28        |
|          |         | 2480      | 2479.77        | -1.08       |
| BLE_2M   | Ant1    | 2402      | 2401.49        | -0.96       |
|          |         | 2440      | 2440.19        | -2.84       |
|          |         | 2480      | 2479.50        | -0.94       |

