



## Appendix A

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

**Product Name:** Bluetooth Soundbar

**Test Model:** SRA2080

#### Environmental Conditions

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





## A.1 20dB Emission Bandwidth

### Test Result

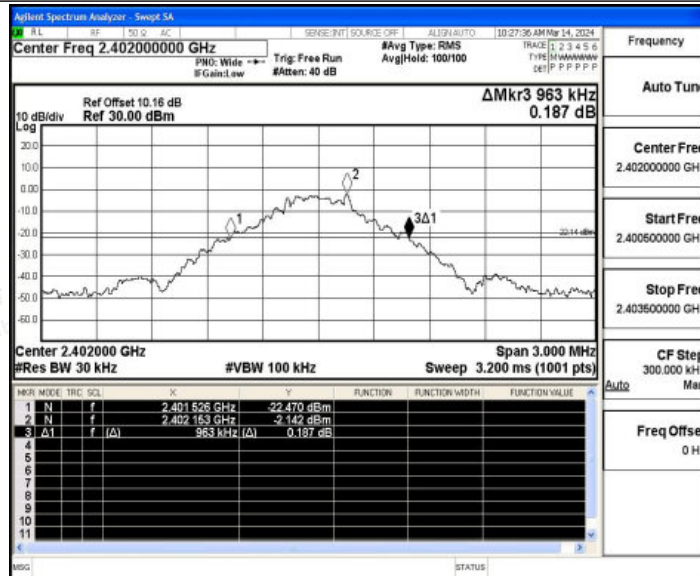
| TestMode | Antenna | Frequency[MHz] | 20db<br>EBW[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|----------------|------------------|----------|----------|------------|---------|
| DH5      | Ant1    | 2402           | 0.963            | 2401.526 | 2402.489 | ---        | ---     |
|          |         | 2441           | 1.038            | 2440.457 | 2441.495 | ---        | ---     |
|          |         | 2480           | 1.035            | 2479.454 | 2480.489 | ---        | ---     |
| 2DH5     | Ant1    | 2402           | 1.293            | 2401.349 | 2402.642 | ---        | ---     |
|          |         | 2441           | 1.296            | 2440.352 | 2441.648 | ---        | ---     |
|          |         | 2480           | 1.296            | 2479.352 | 2480.648 | ---        | ---     |



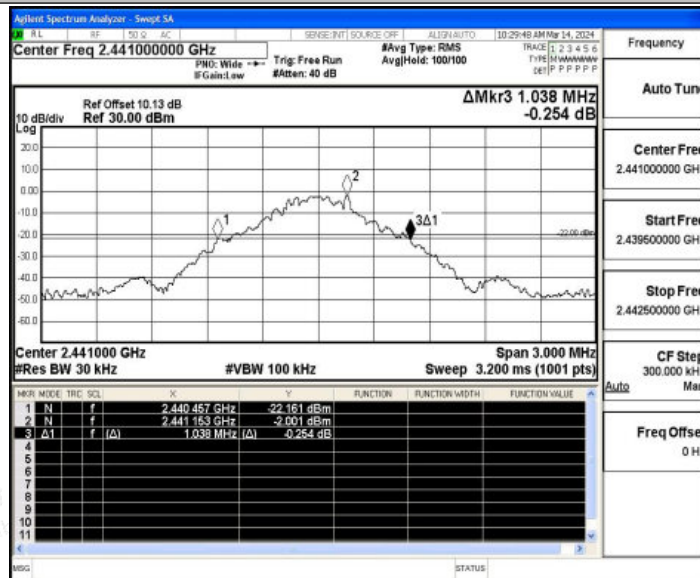


## Test Graphs

DH5\_Ant1\_2402

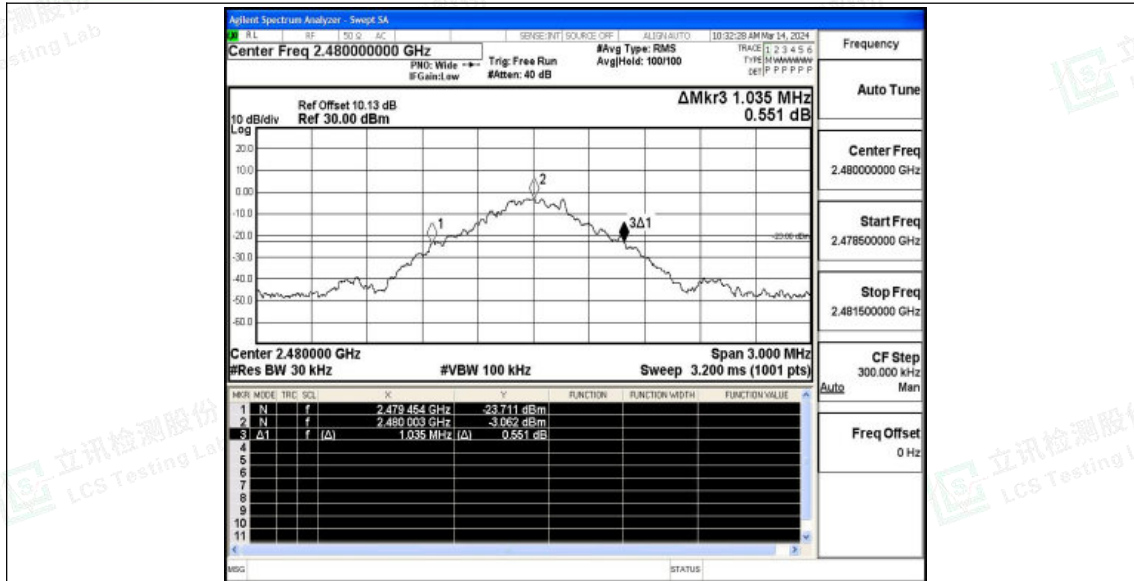


DH5\_Ant1\_2441

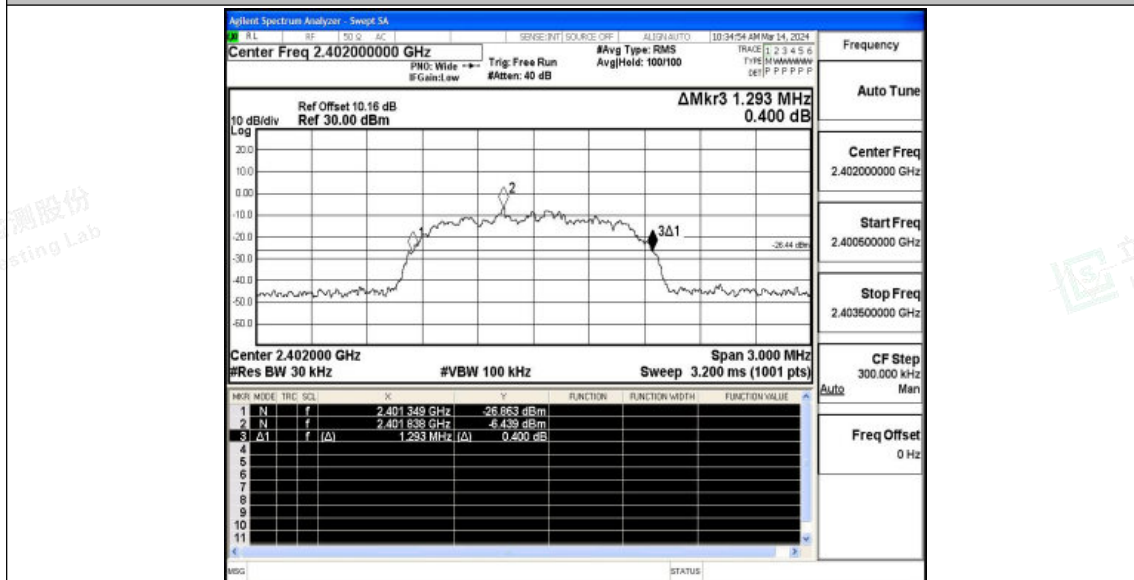


DH5\_Ant1\_2480



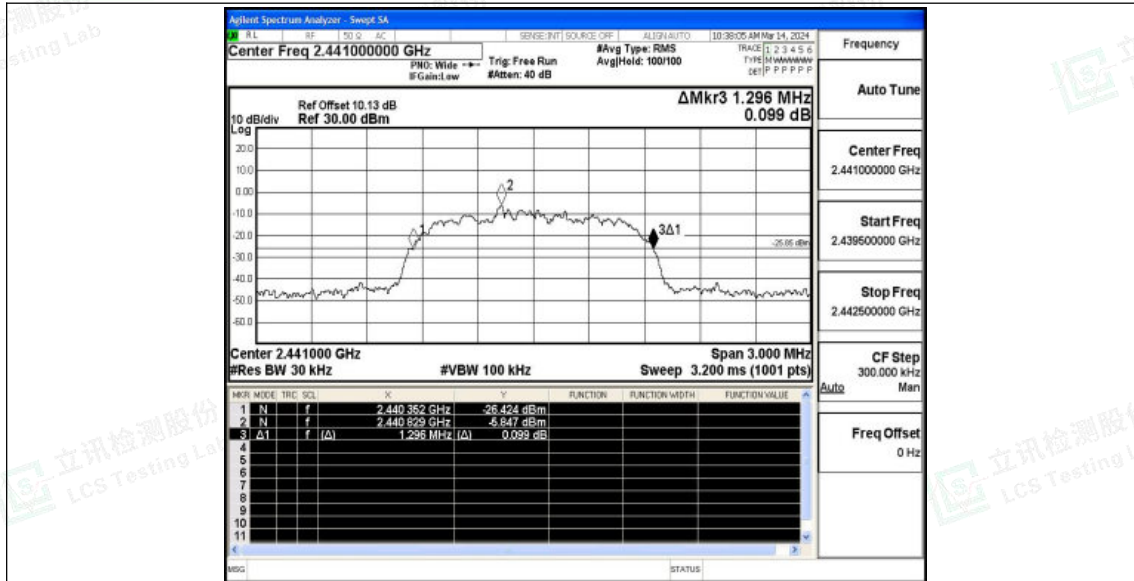


2DH5\_Ant1\_2402

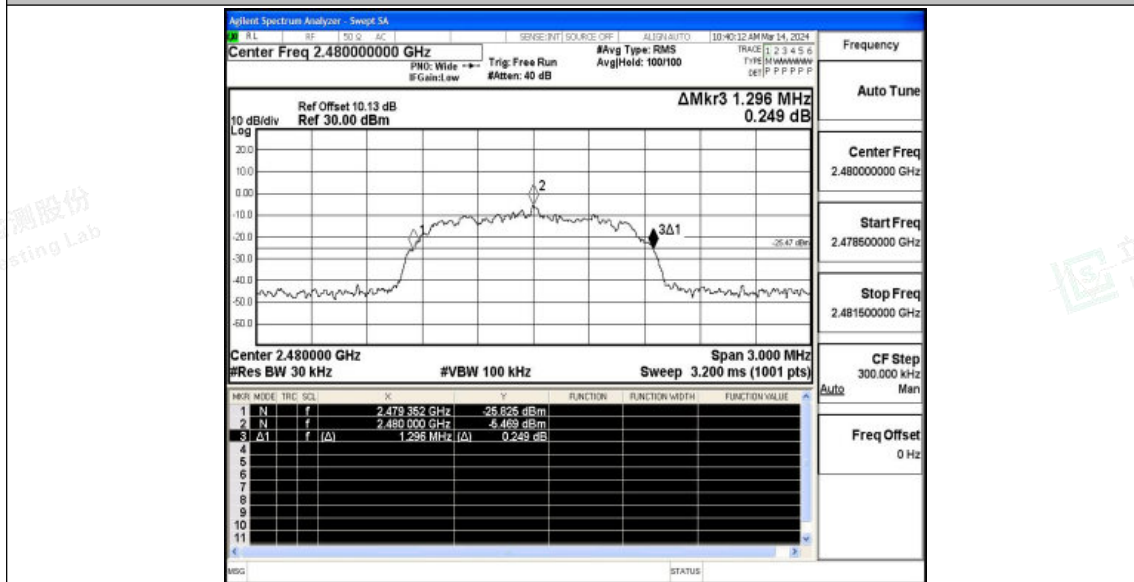


2DH5\_Ant1\_2441





2DH5\_Ant1\_2480





## A.2 Maximum conducted output power

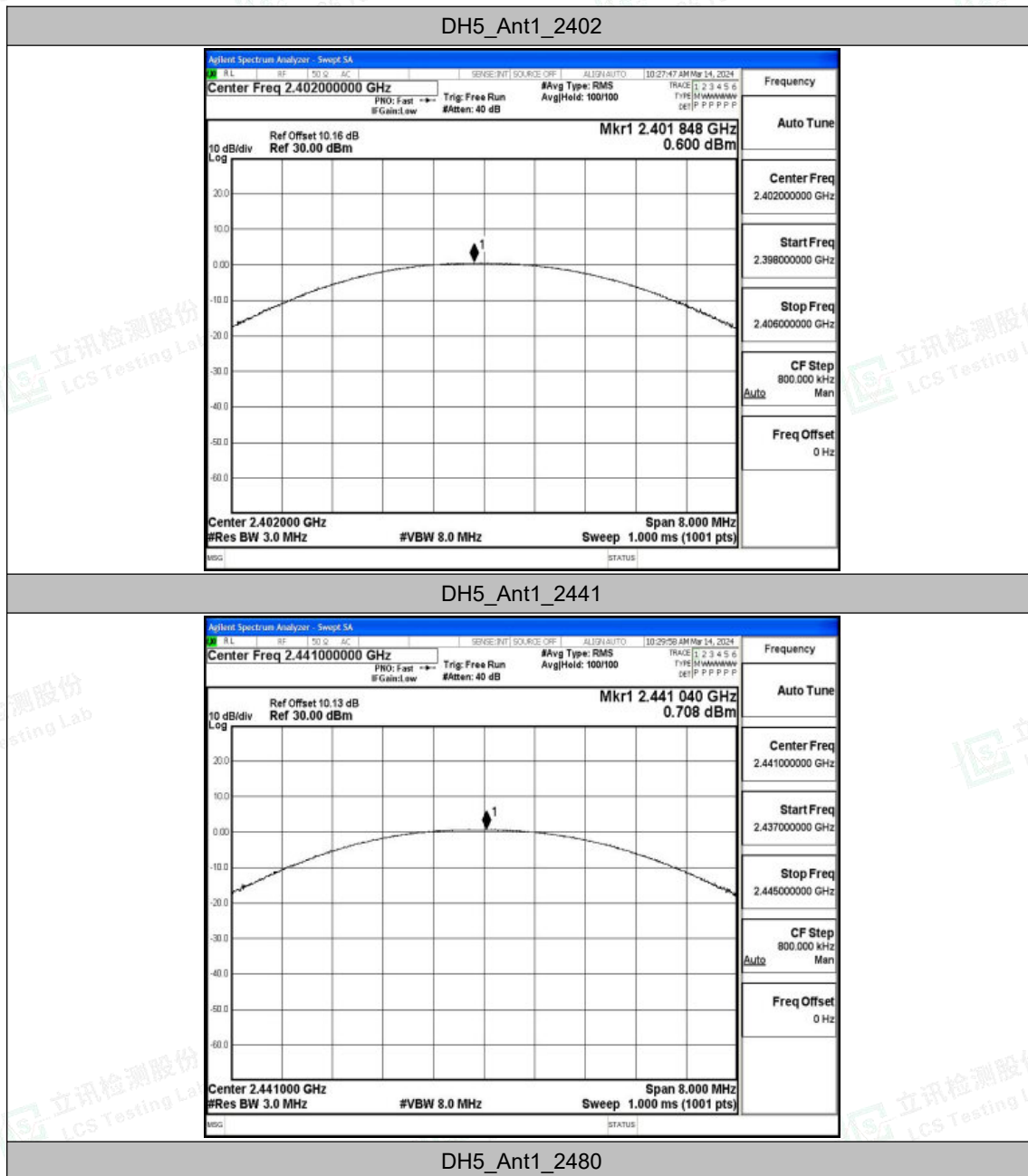
### Test Result Peak

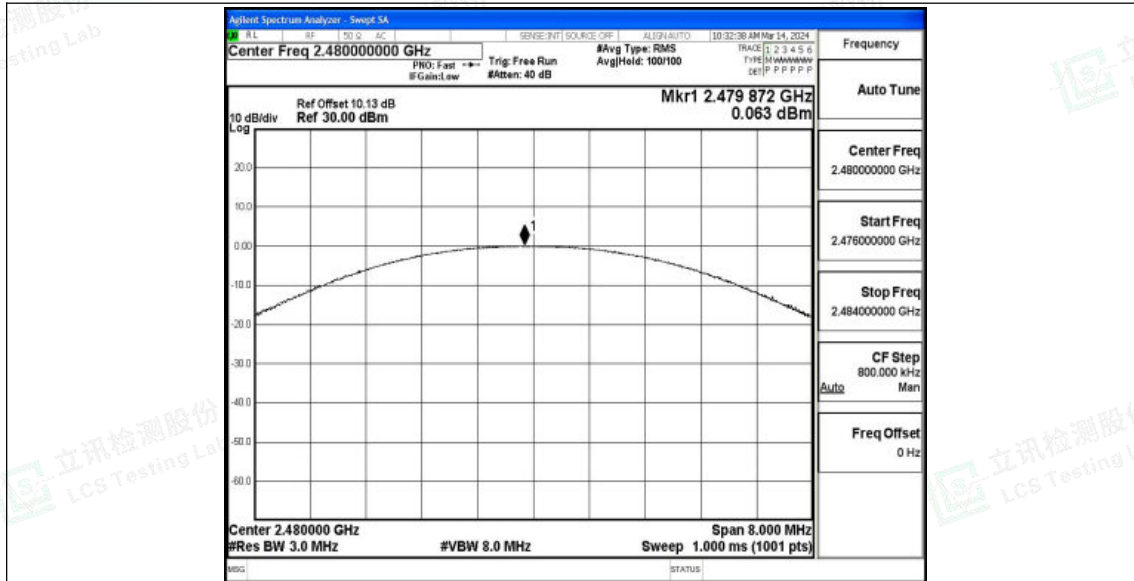
| Test Mode | Antenna | Frequency[MHz] | Conducted Peak Power[dBm] | Conducted Limit[dBm] | Verdict |
|-----------|---------|----------------|---------------------------|----------------------|---------|
| DH5       | Ant1    | 2402           | 0.60                      | ≤21                  | PASS    |
|           |         | 2441           | 0.71                      | ≤21                  | PASS    |
|           |         | 2480           | 0.06                      | ≤21                  | PASS    |
| 2DH5      | Ant1    | 2402           | -0.73                     | ≤21                  | PASS    |
|           |         | 2441           | -0.48                     | ≤21                  | PASS    |
|           |         | 2480           | -0.24                     | ≤21                  | PASS    |



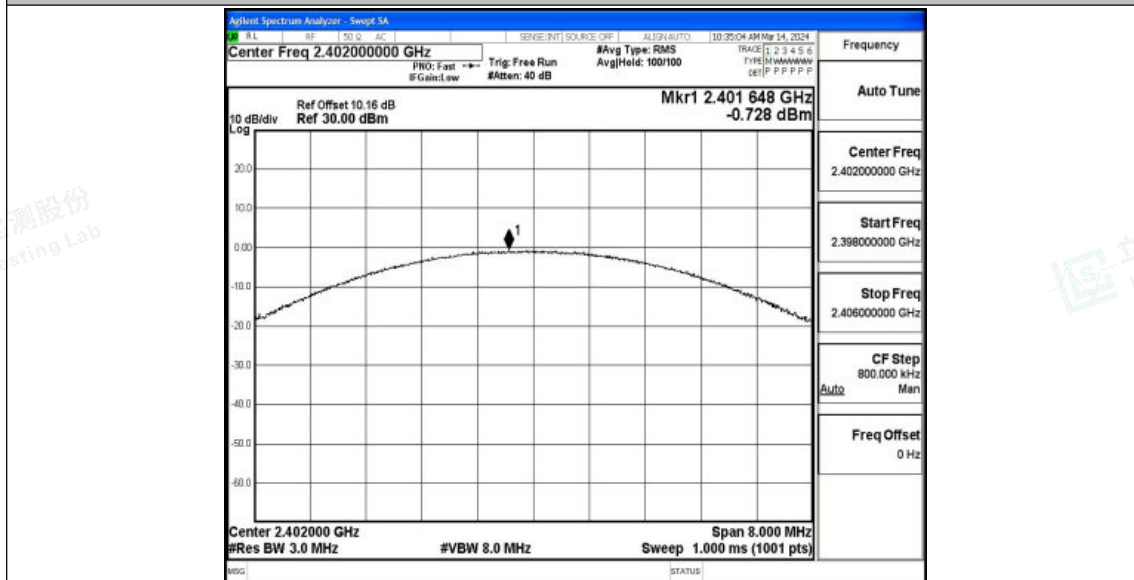


## Test Graphs



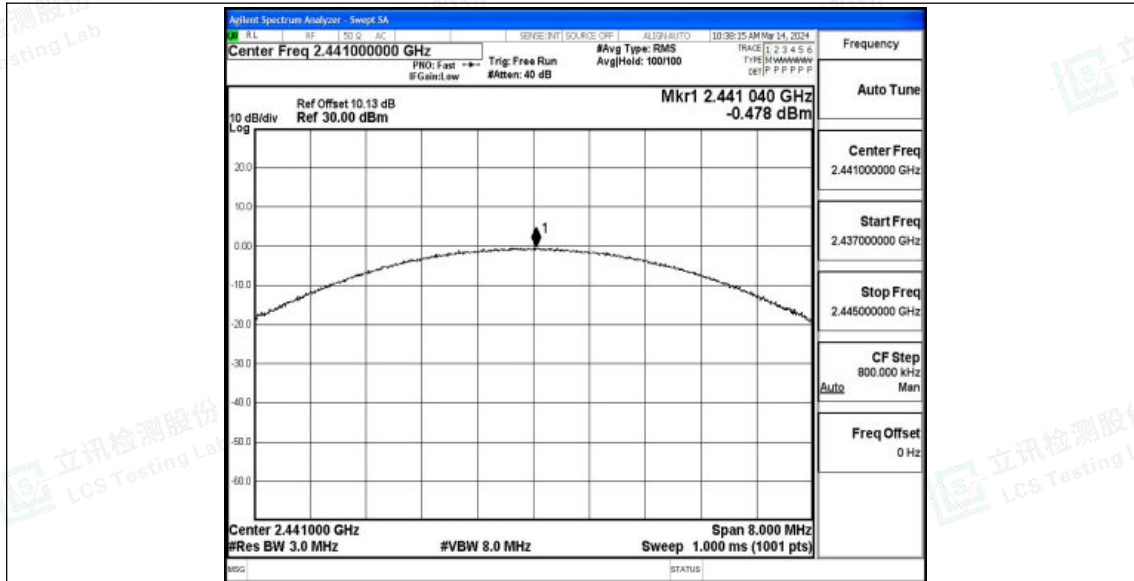


2DH5\_Ant1\_2402

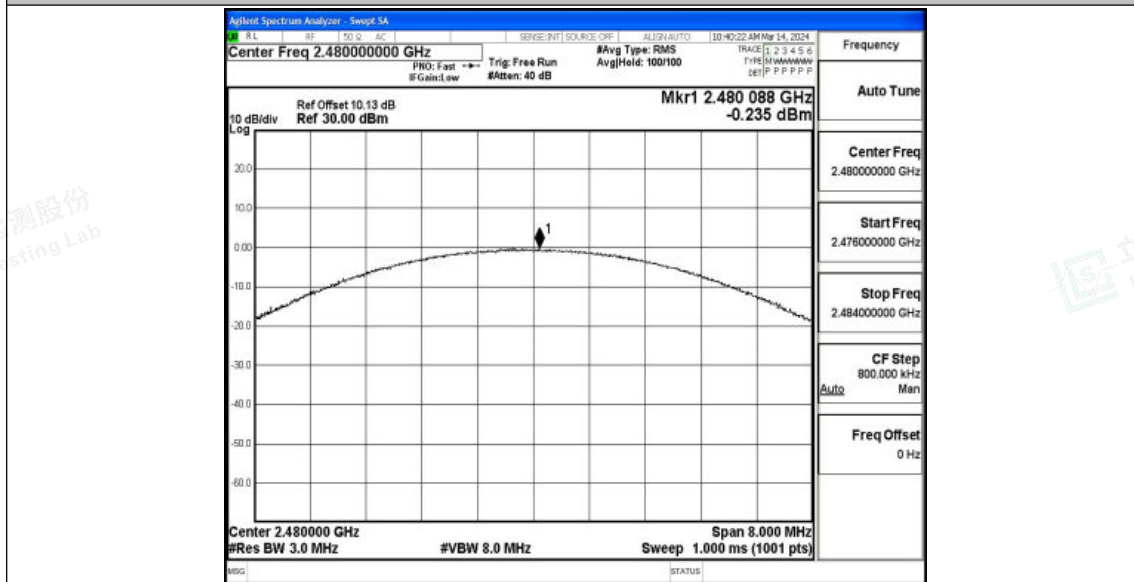


2DH5\_Ant1\_2441





2DH5\_Ant1\_2480





### A.3 Carrier frequency separation

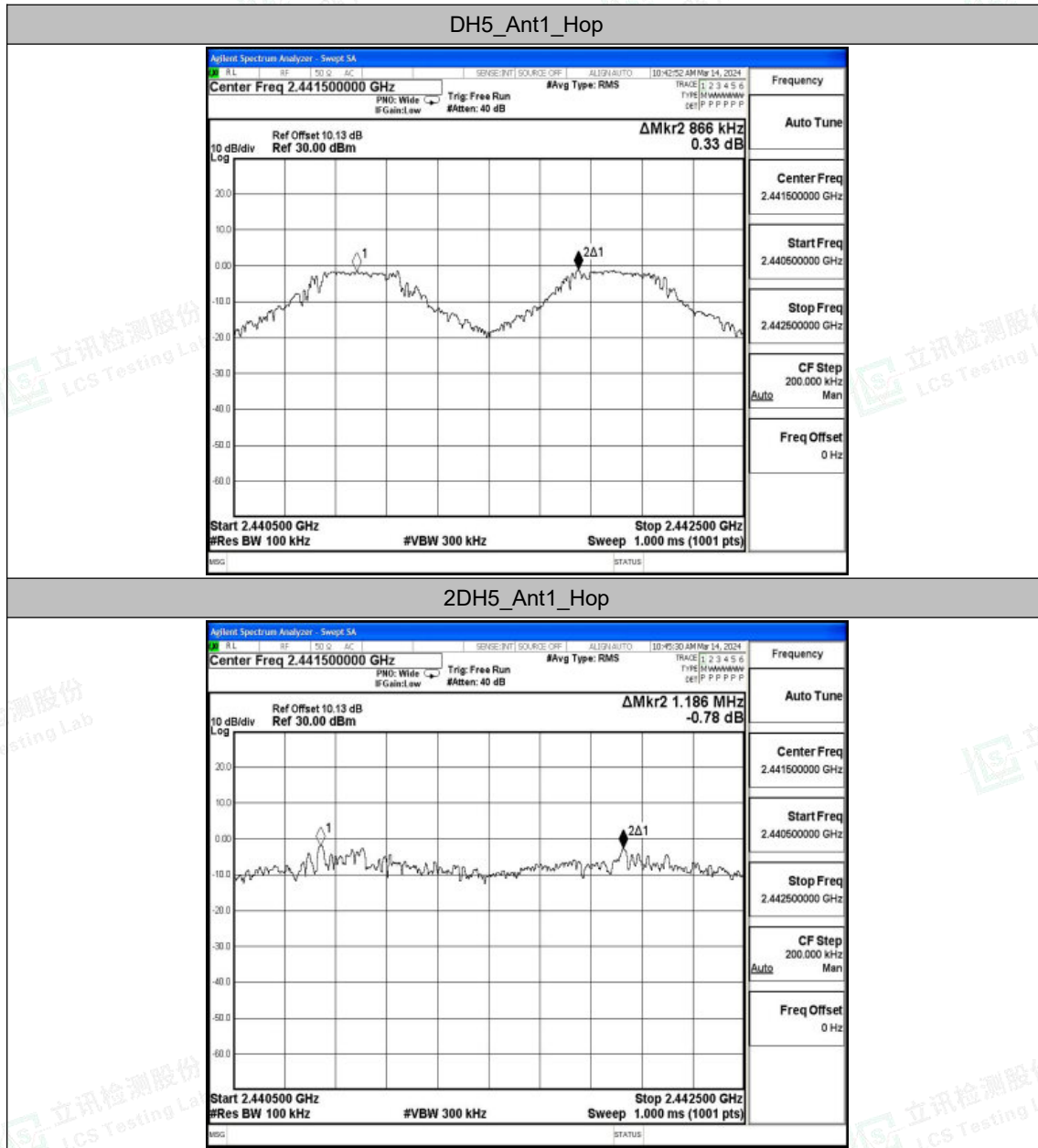
#### Test Result

| TestMode | Antenna | Frequency[MHz] | Result[MHz] | Limit[MHz] | Verdict |
|----------|---------|----------------|-------------|------------|---------|
| DH5      | Ant1    | Hop            | 0.866       | ≥0.692     | PASS    |
| 2DH5     | Ant1    | Hop            | 1.186       | ≥0.864     | PASS    |





## Test Graphs





### A.4 Time of occupancy

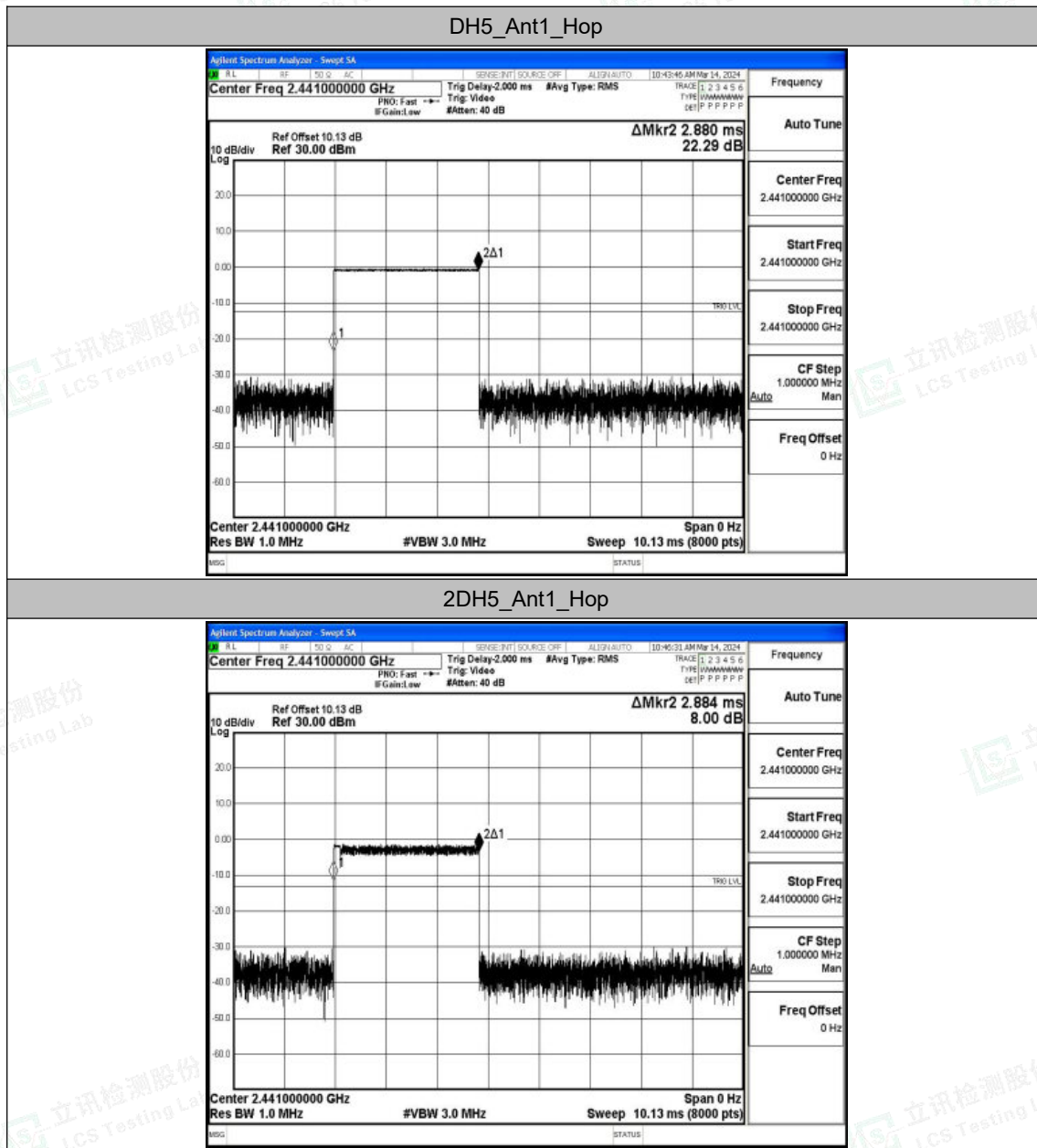
#### Test Result

| TestMode | Antenna | Frequency[MHz] | BurstWidth<br>[ms] | TotalHops<br>[Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|----------------|--------------------|--------------------|-----------|----------|---------|
| DH5      | Ant1    | Hop            | 2.880              | 106.67             | 0.307     | ≤0.4     | PASS    |
| 2DH5     | Ant1    | Hop            | 2.884              | 106.67             | 0.308     | ≤0.4     | PASS    |





## Test Graphs



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## A.5 Number of hopping channels

### Test Result

| TestMode | Antenna | Frequency[MHz] | Result[Num] | Limit[Num] | Verdict |
|----------|---------|----------------|-------------|------------|---------|
| DH5      | Ant1    | Hop            | 79          | ≥15        | PASS    |
| 2DH5     | Ant1    | Hop            | 79          | ≥15        | PASS    |





## Test Graphs



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## A.6 Band edge measurements

### Test Result

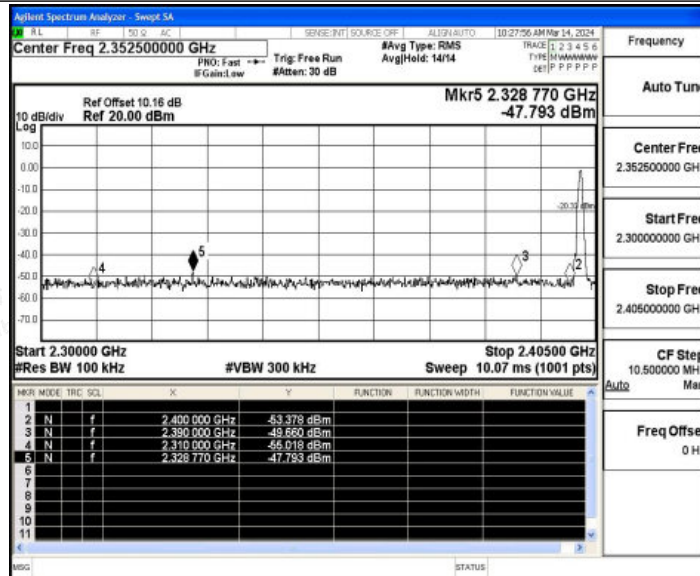
| TestMode | Antenna | ChName | Frequency[MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|--------|----------------|----------------|--------------|-------------|---------|
| DH5      | Ant1    | Low    | 2402           | -0.33          | -47.79       | ≤-20.33     | PASS    |
|          |         | High   | 2480           | -1.18          | -49.12       | ≤-21.18     | PASS    |
|          |         | Low    | Hop_2402       | -1.93          | -47.98       | ≤-21.93     | PASS    |
|          |         | High   | Hop_2480       | -0.77          | -47.88       | ≤-20.77     | PASS    |
| 2DH5     | Ant1    | Low    | 2402           | -2.71          | -49.25       | ≤-22.71     | PASS    |
|          |         | High   | 2480           | -1.72          | -48.17       | ≤-21.72     | PASS    |
|          |         | Low    | Hop_2402       | -2.98          | -47.63       | ≤-22.98     | PASS    |
|          |         | High   | Hop_2480       | -1.81          | -47.01       | ≤-21.81     | PASS    |



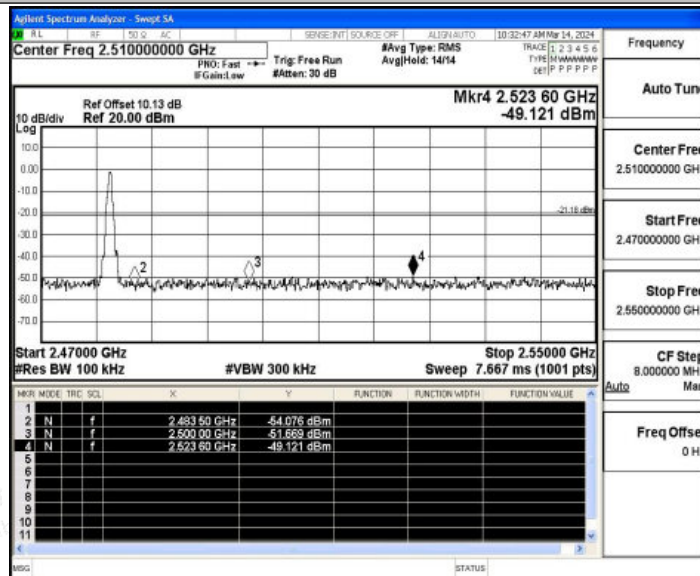


## Test Graphs

DH5\_Ant1\_Low\_2402

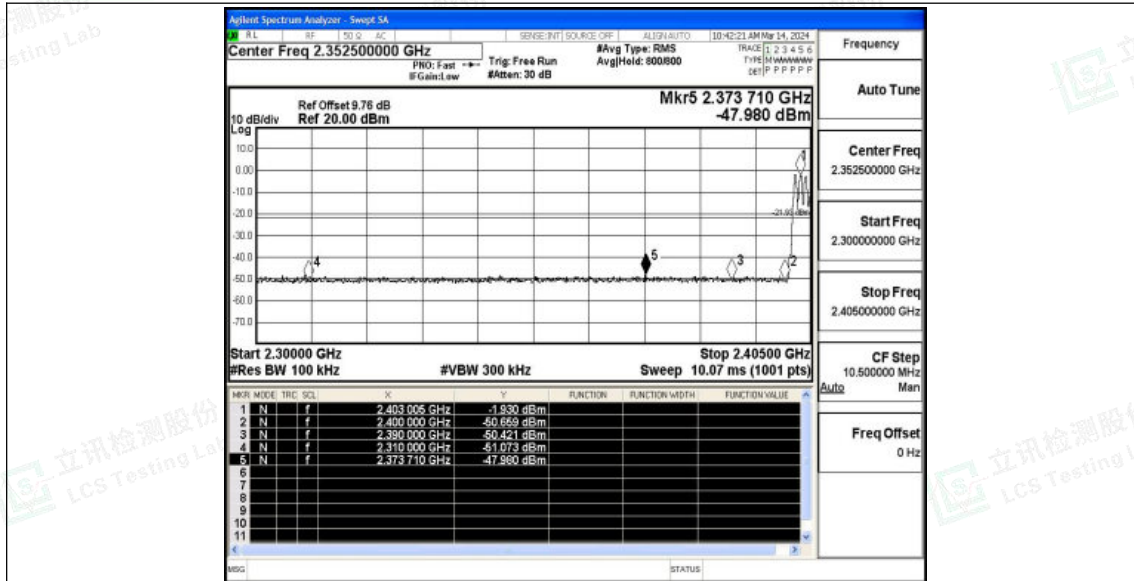


DH5\_Ant1\_High\_2480

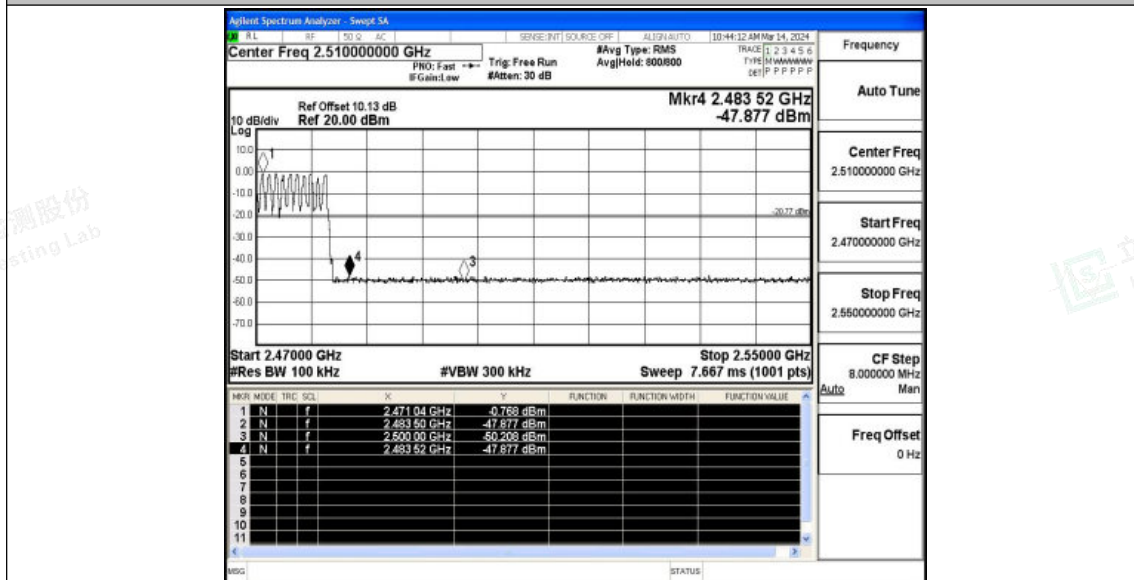


DH5\_Ant1\_Low\_Hop\_2402



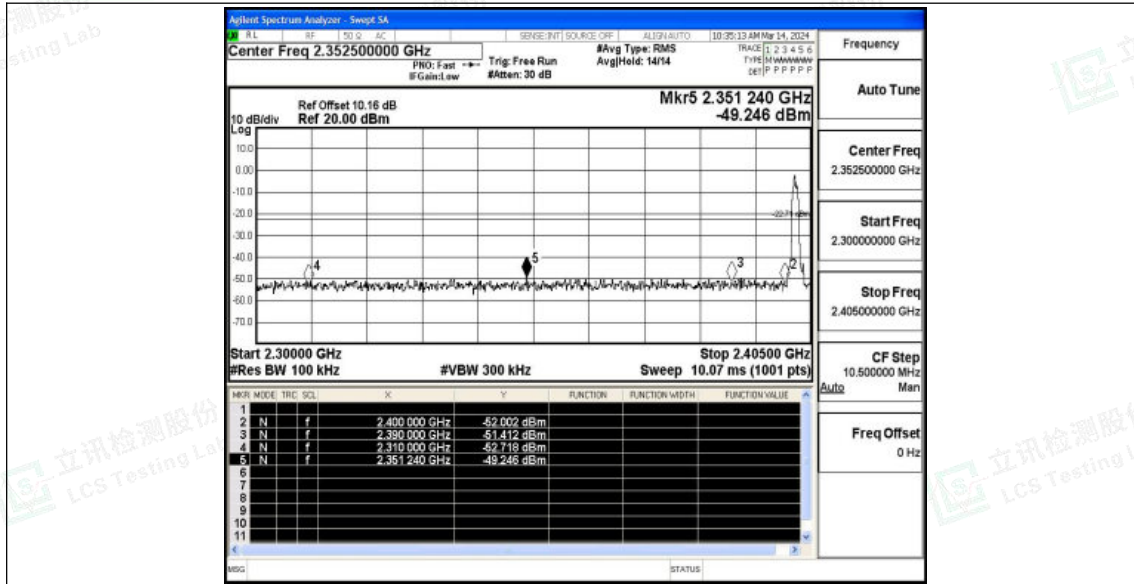


DH5\_Ant1\_High\_Hop\_2480

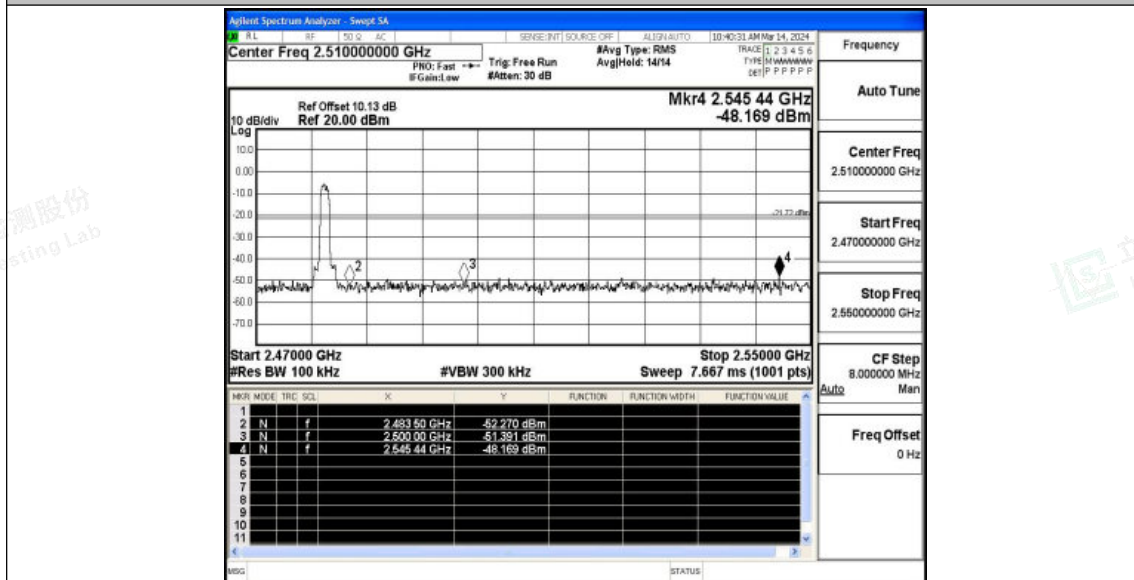


2DH5\_Ant1\_Low\_2402



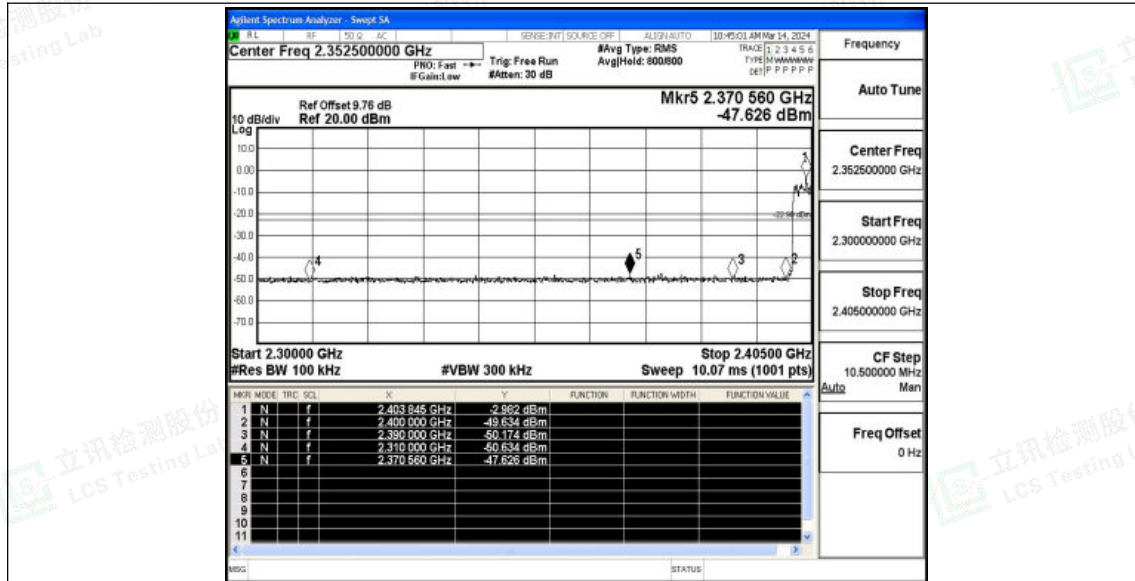


2DH5\_Ant1\_High\_2480

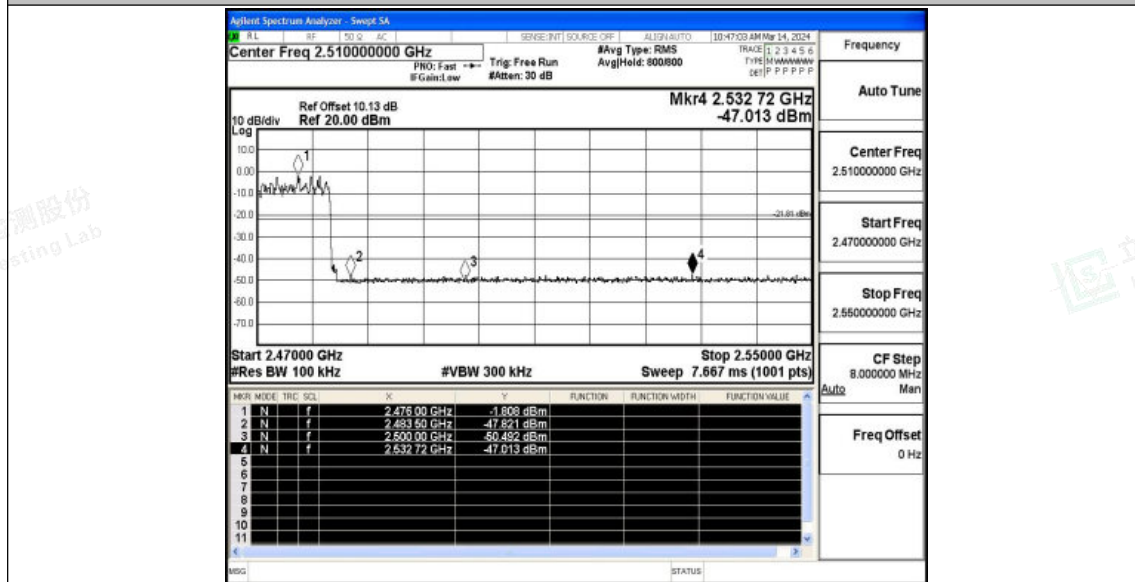


2DH5\_Ant1\_Low\_Hop\_2402





## 2DH5\_Ant1\_High\_Hop\_2480



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## A.7 Conducted Spurious Emission

### Test Result

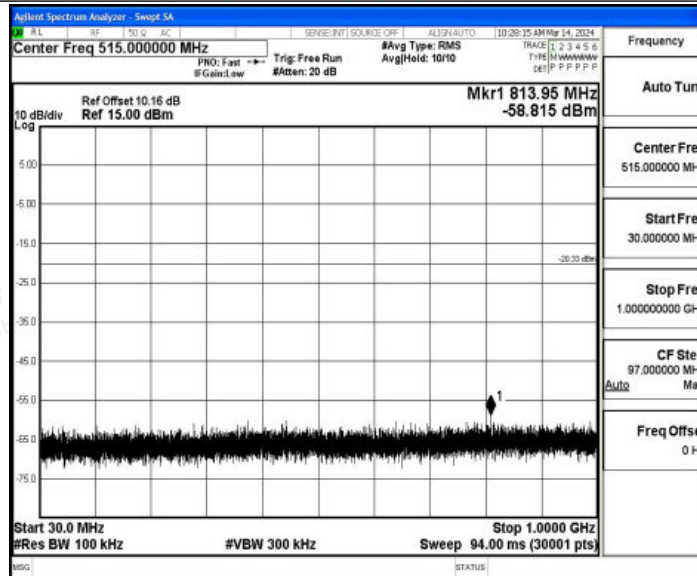
| TestMode | Antenna | Frequency[MHz] | FreqRange [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|----------------|-----------------|----------------|--------------|-------------|---------|
| DH5      | Ant1    | 2402           | 30~1000         | -0.33          | -58.82       | ≤-20.33     | PASS    |
|          |         |                | 1000~26500      | -0.33          | -47.11       | ≤-20.33     | PASS    |
|          |         | 2441           | 30~1000         | 0.04           | -60.06       | ≤-19.96     | PASS    |
|          |         |                | 1000~26500      | 0.04           | -47.2        | ≤-19.96     | PASS    |
|          |         | 2480           | 30~1000         | -1.18          | -59.41       | ≤-21.18     | PASS    |
|          |         |                | 1000~26500      | -1.18          | -47.13       | ≤-21.18     | PASS    |
| 2DH5     | Ant1    | 2402           | 30~1000         | -2.71          | -59.6        | ≤-22.71     | PASS    |
|          |         |                | 1000~26500      | -2.71          | -47.4        | ≤-22.71     | PASS    |
|          |         | 2441           | 30~1000         | -5.30          | -59.67       | ≤-25.3      | PASS    |
|          |         |                | 1000~26500      | -5.30          | -47.25       | ≤-25.3      | PASS    |
|          |         | 2480           | 30~1000         | -1.72          | -59.92       | ≤-21.72     | PASS    |
|          |         |                | 1000~26500      | -1.72          | -46.7        | ≤-21.72     | PASS    |



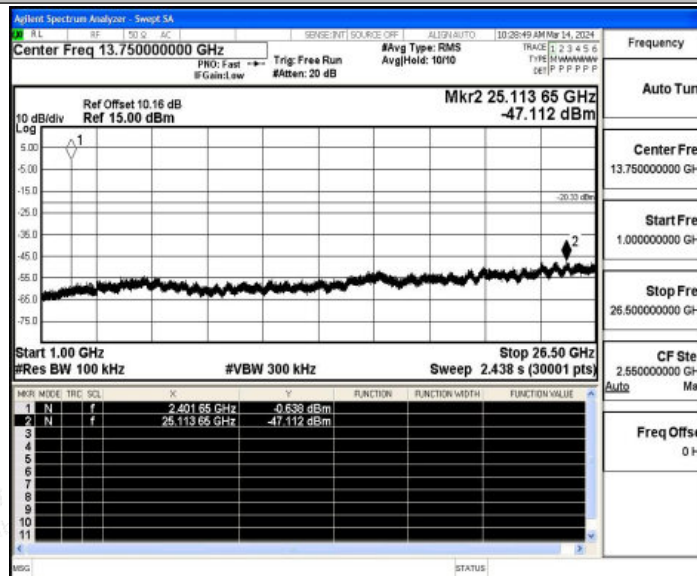


## Test Graphs

DH5\_Ant1\_2402\_30~1000



DH5\_Ant1\_2402\_1000~26500



DH5\_Ant1\_2441\_30~1000

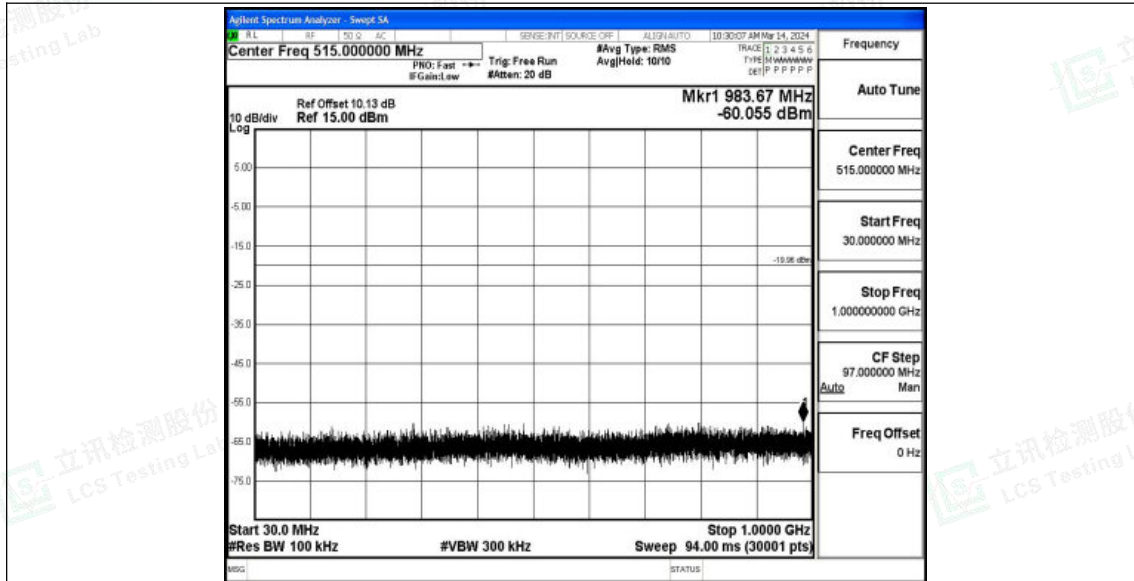


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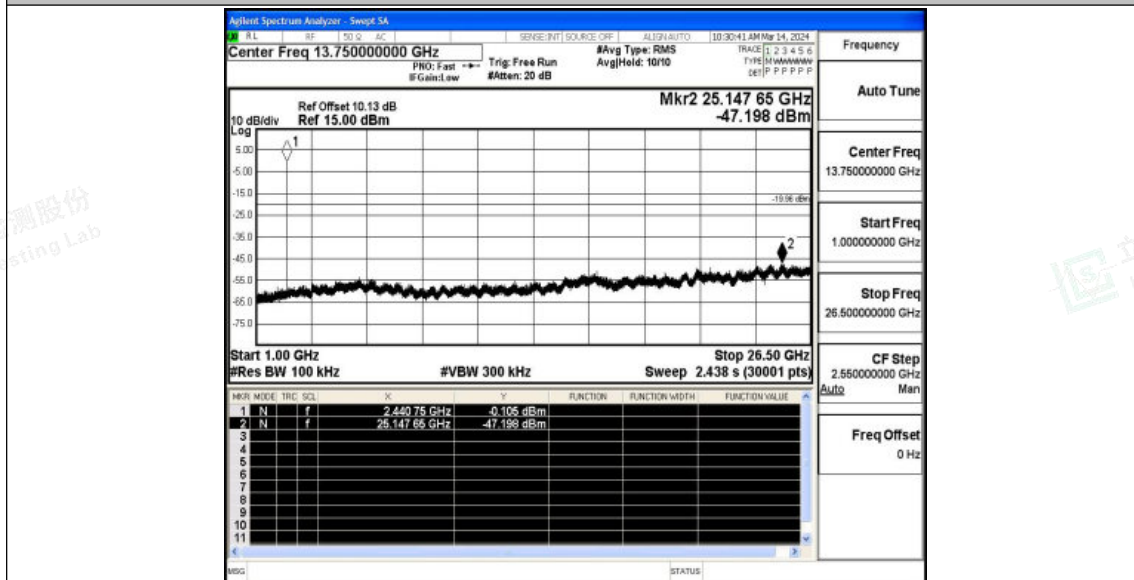
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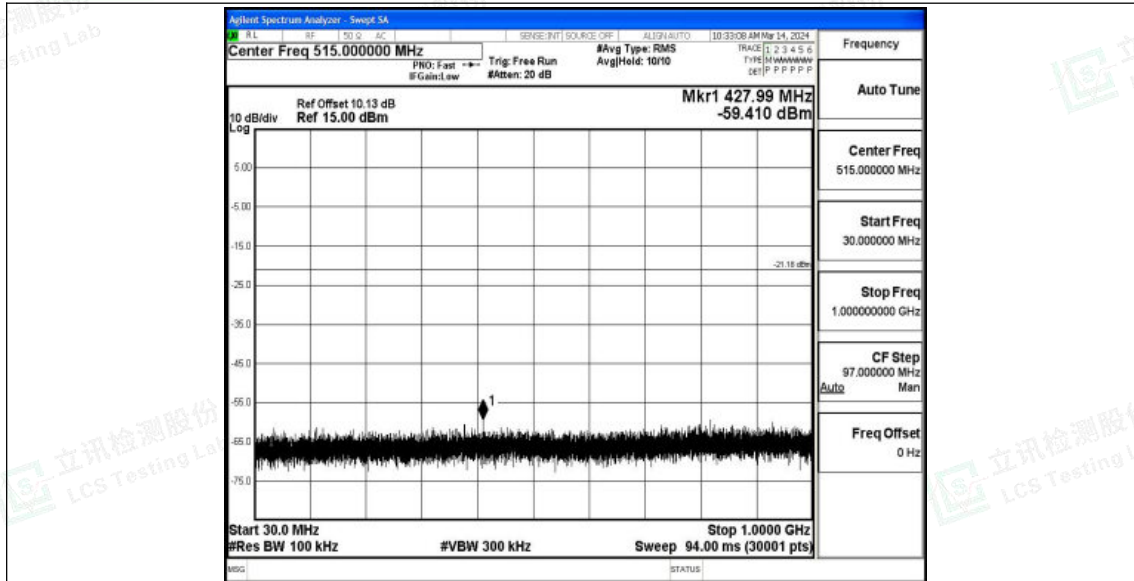


DH5\_Ant1\_2441\_1000~26500

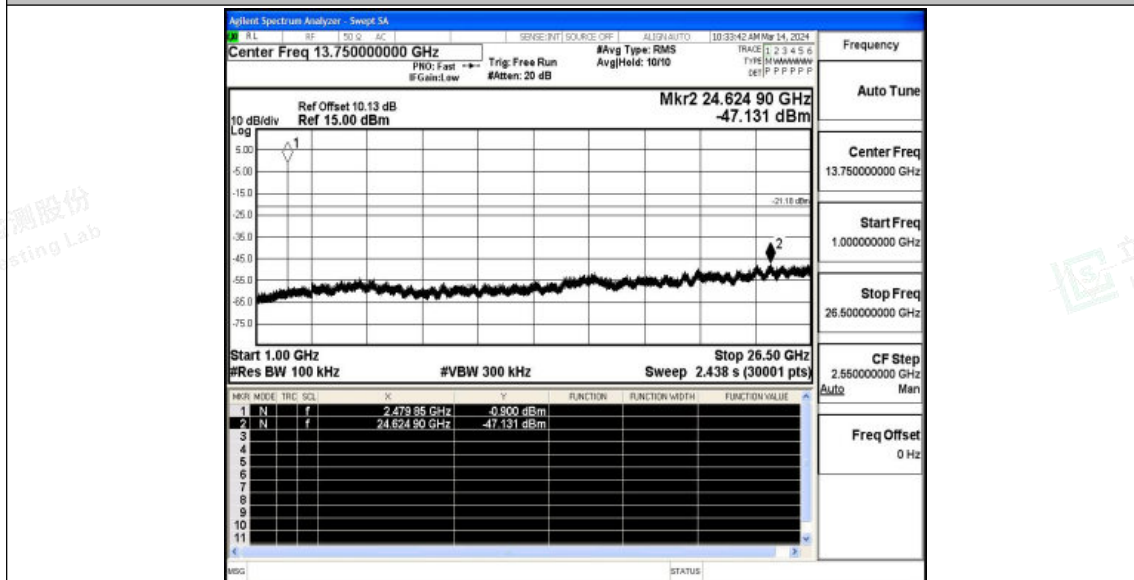


DH5\_Ant1\_2480\_30~1000



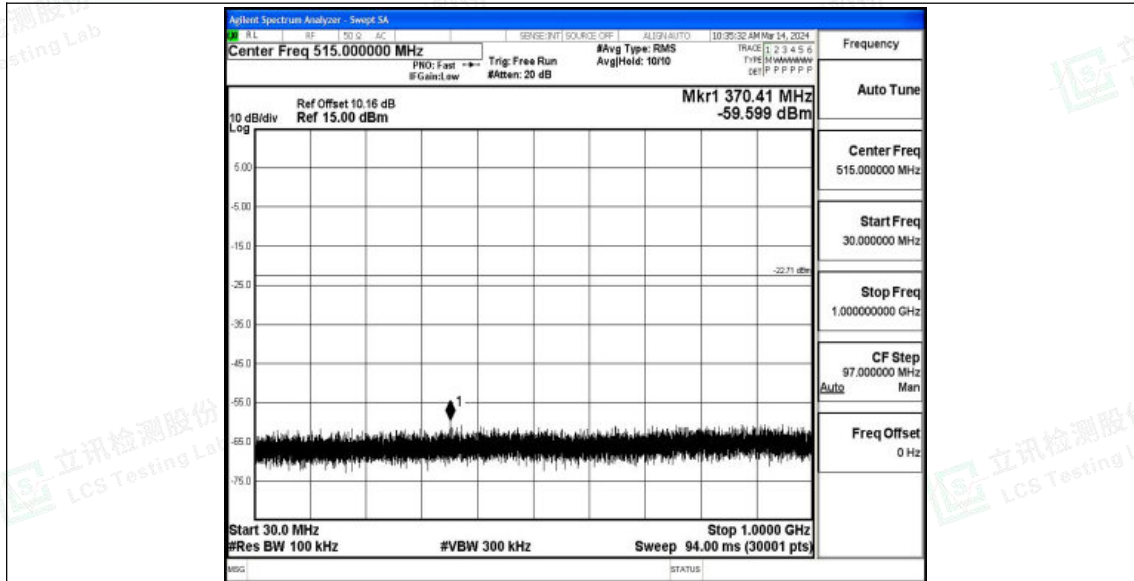


DH5\_Ant1\_2480\_1000~26500

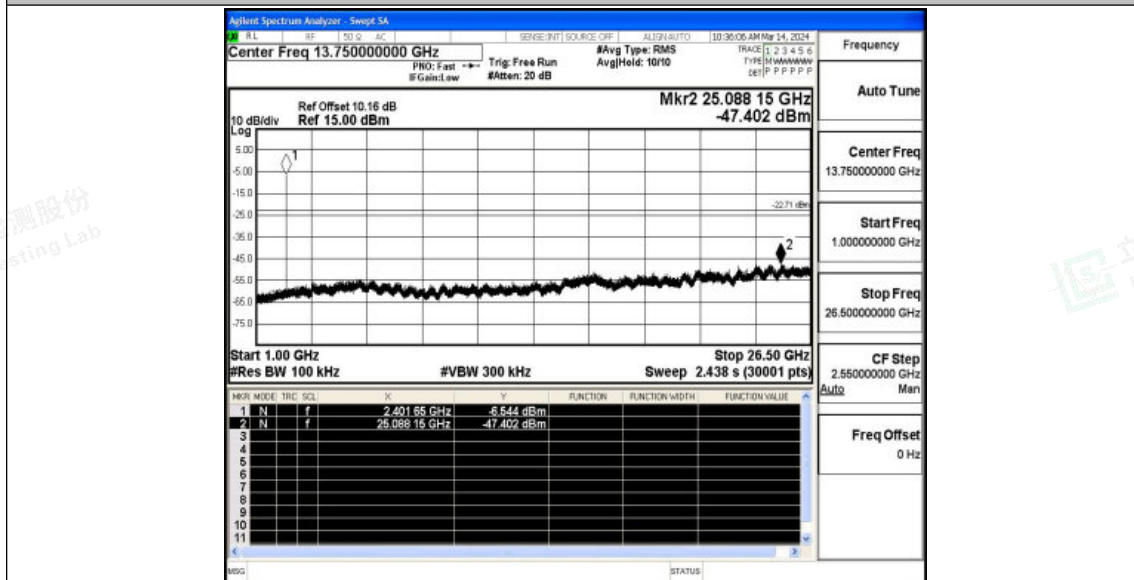


2DH5\_Ant1\_2402\_30~1000



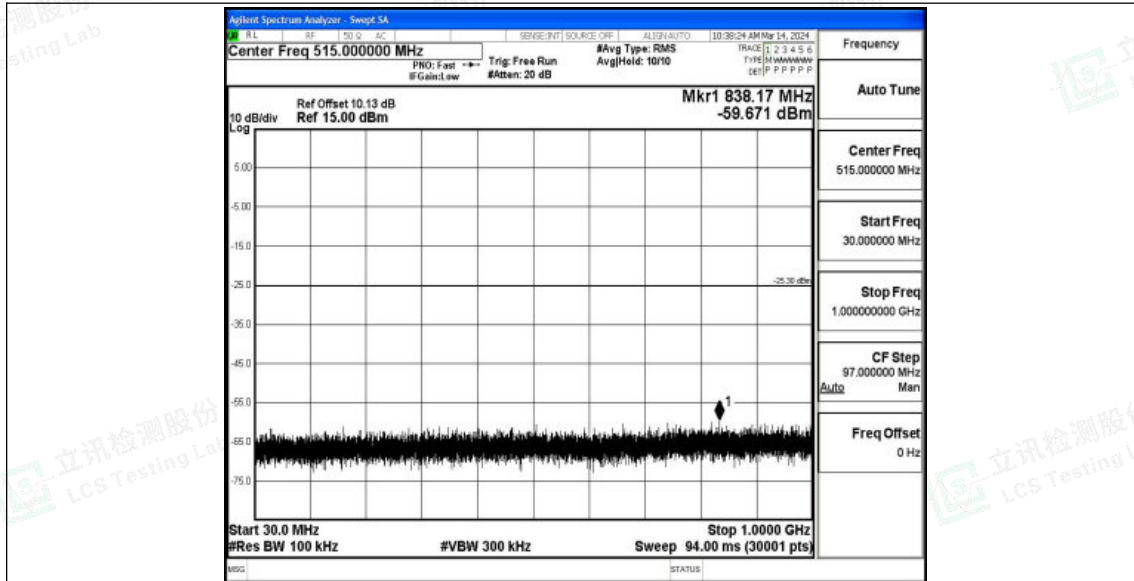


2DH5\_Ant1\_2402\_1000~26500

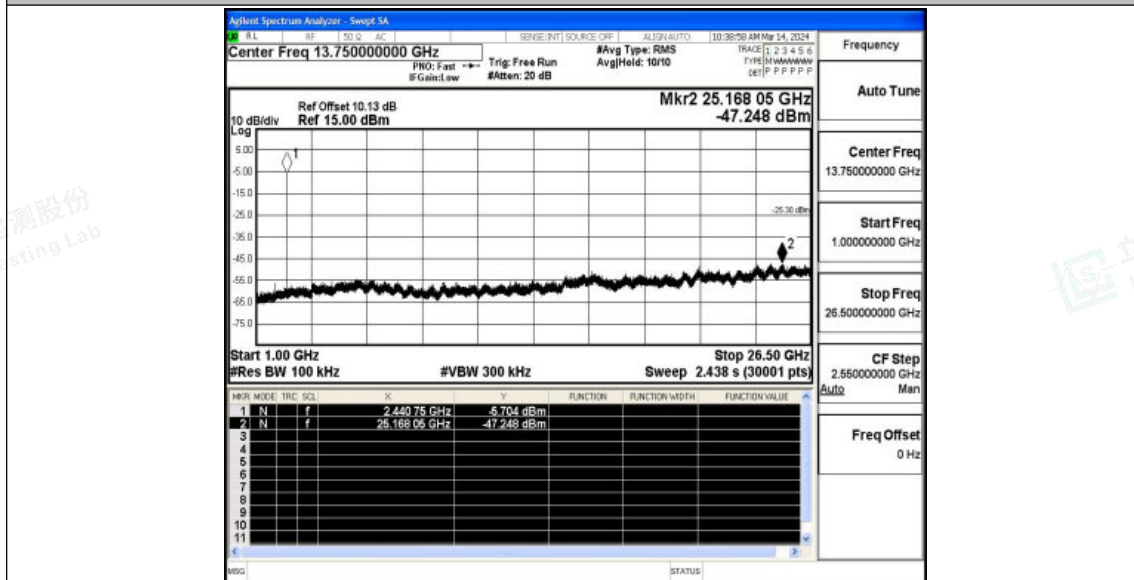


2DH5\_Ant1\_2441\_30~1000



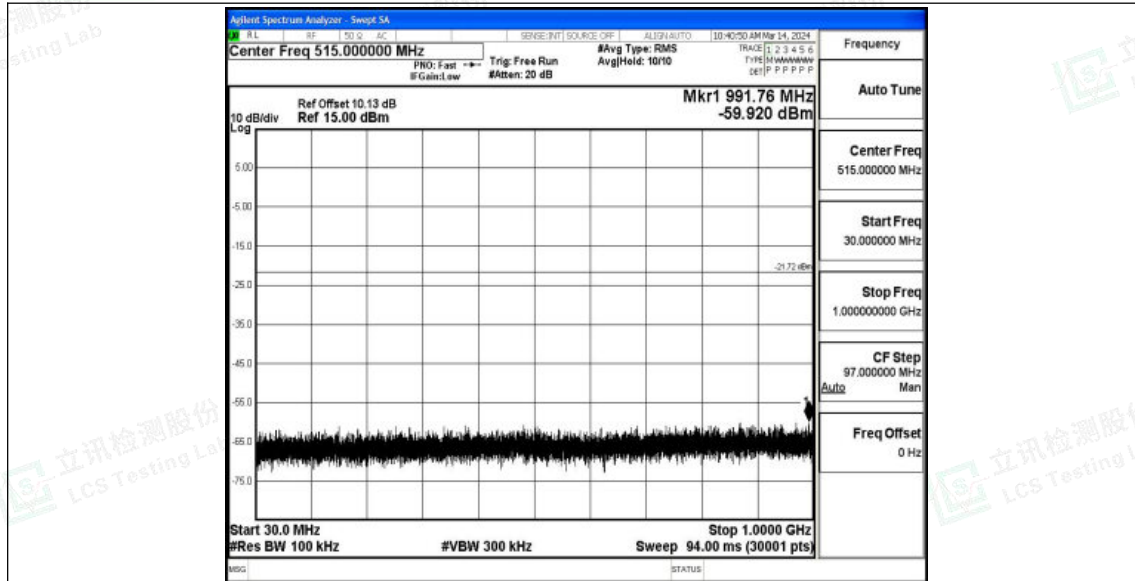


2DH5\_Ant1\_2441\_1000~26500

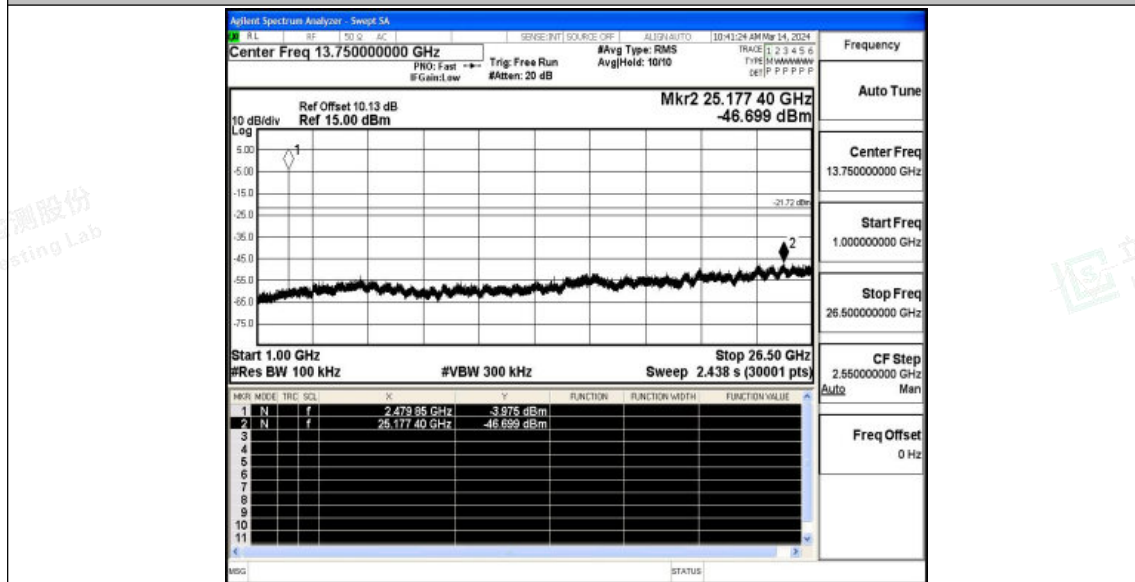


2DH5\_Ant1\_2480\_30~1000





2DH5\_Ant1\_2480\_1000~26500





## Reference Level

### Test Result

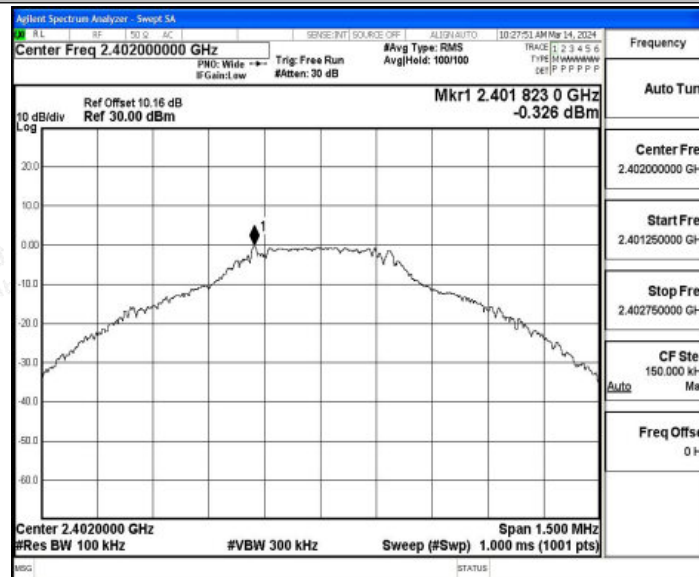
| TestMode | Antenna | ChName | Frequency[MHz] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|--------|----------------|--------------|-------------|---------|
| DH5      | Ant1    | 2402   | 2401.82        | -0.33        | ---         | PASS    |
|          |         | 2441   | 2441.16        | 0.04         | ---         | PASS    |
|          |         | 2480   | 2479.99        | -1.18        | ---         | PASS    |
| 2DH5     | Ant1    | 2402   | 2402.15        | -2.71        | ---         | PASS    |
|          |         | 2441   | 2441.02        | -5.30        | ---         | PASS    |
|          |         | 2480   | 2479.82        | -1.72        | ---         | PASS    |



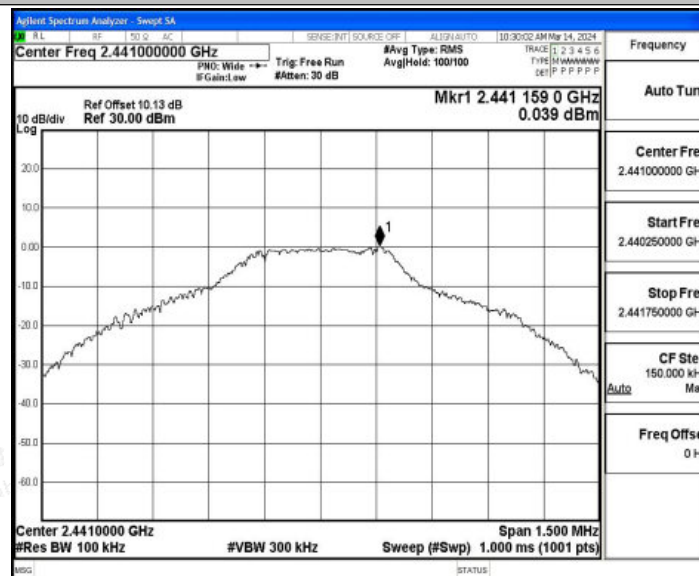


## Test Graphs

DH5\_Ant1\_2402



DH5\_Ant1\_2441



DH5\_Ant1\_2480

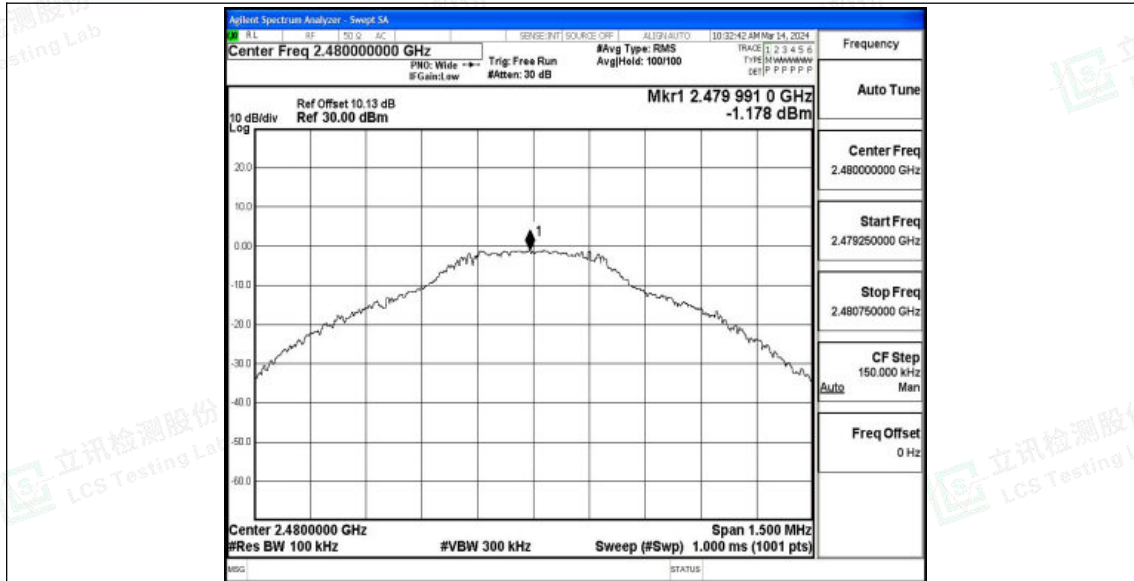


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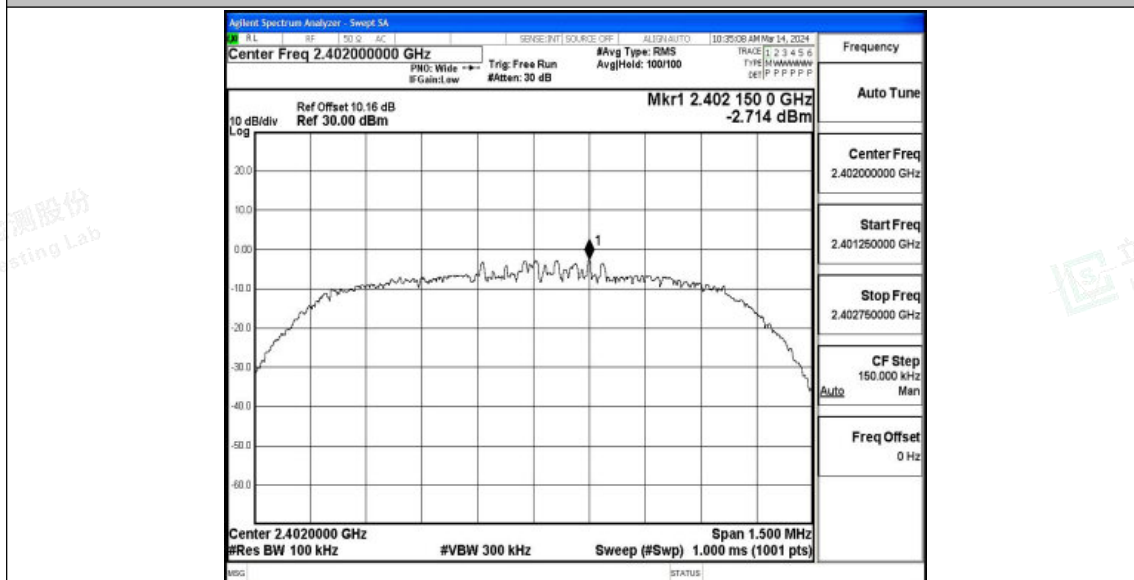
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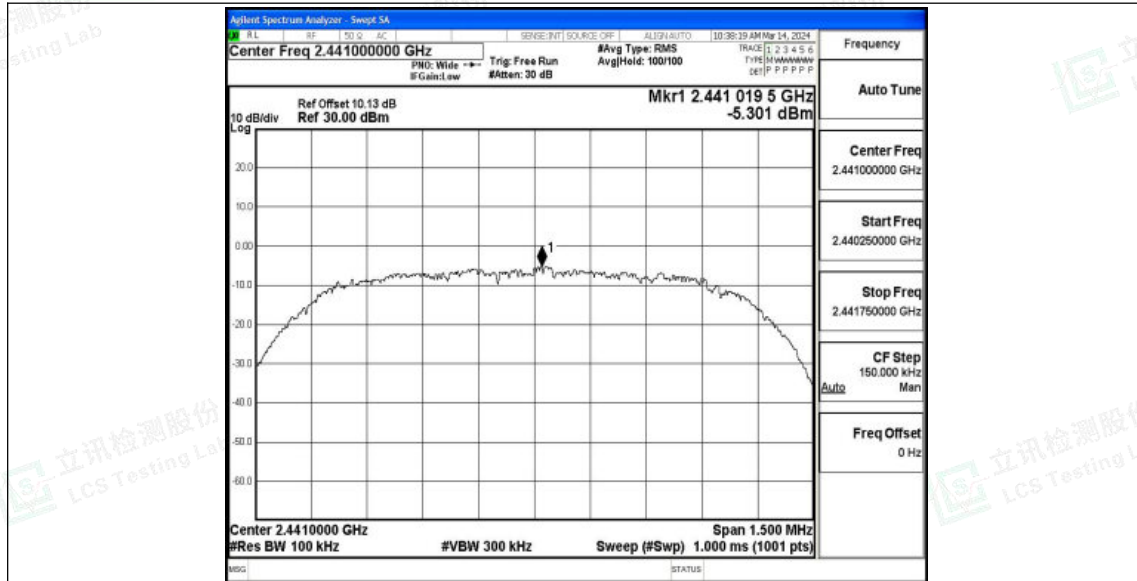


2DH5\_Ant1\_2402

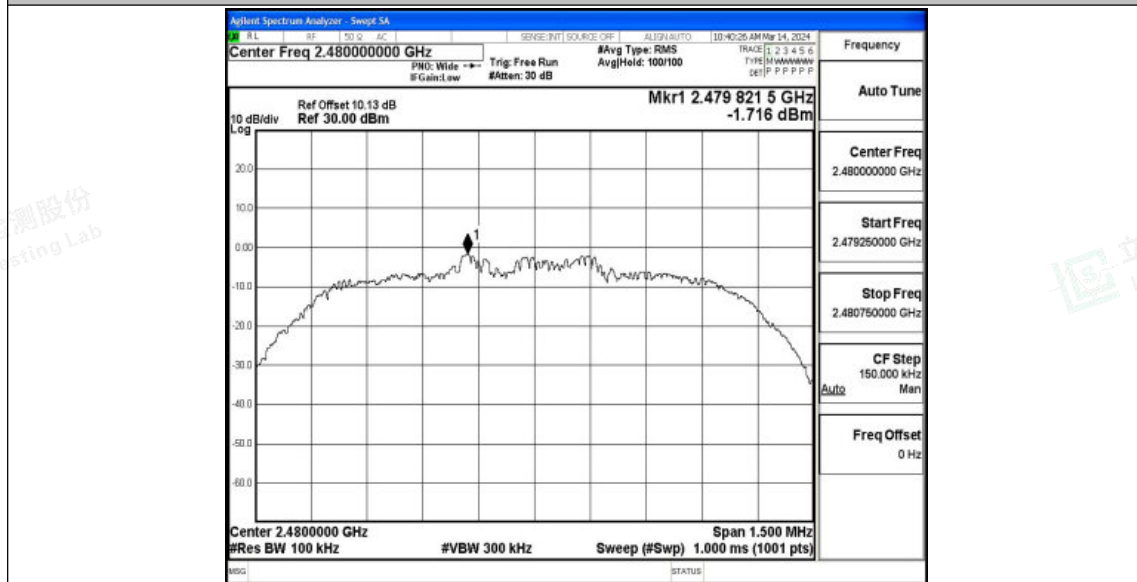


2DH5\_Ant1\_2441





2DH5\_Ant1\_2480







## A.8 Duty Cycle

### Test Result

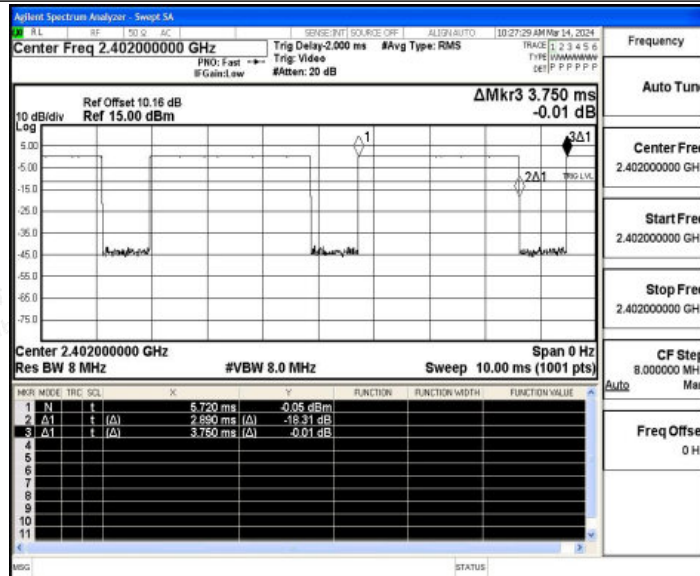
| TestMode | Antenna | Frequency[MHz] | ON Time[ms] | Period[ms] | Duty Cycle[%] | Duty Cycle Factor[dB] | 1/T Factor[kHz] |
|----------|---------|----------------|-------------|------------|---------------|-----------------------|-----------------|
| DH5      | Ant1    | 2402           | 2.89        | 3.75       | 77.07         | 1.13                  | 0.35            |
|          |         | 2441           | 2.88        | 3.75       | 76.80         | 1.15                  | 0.35            |
|          |         | 2480           | 2.89        | 3.75       | 77.07         | 1.13                  | 0.35            |
| 2DH5     | Ant1    | 2402           | 2.89        | 3.75       | 77.07         | 1.13                  | 0.35            |
|          |         | 2441           | 2.89        | 3.75       | 77.07         | 1.13                  | 0.35            |
|          |         | 2480           | 2.89        | 3.75       | 77.07         | 1.13                  | 0.35            |



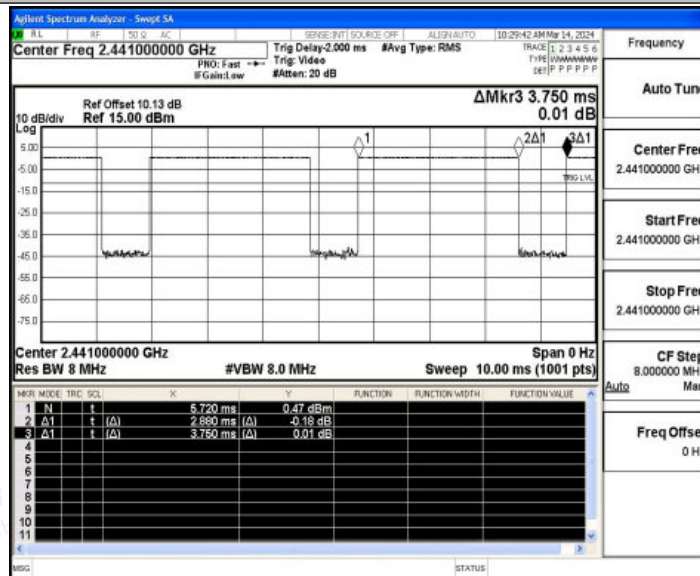


## Test Graphs

DH5\_Ant1\_2402

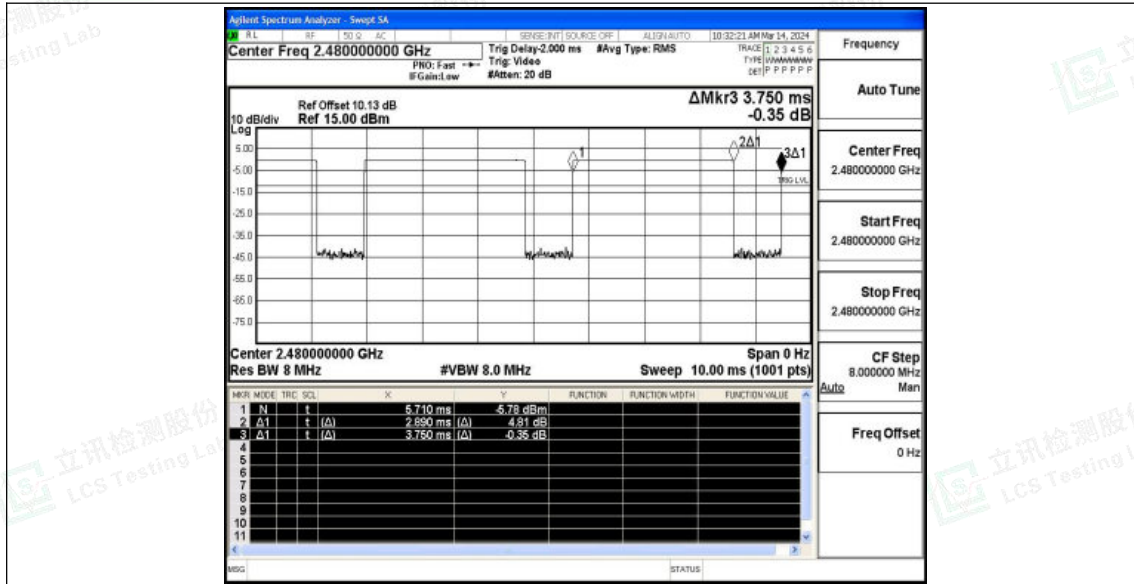


DH5\_Ant1\_2441

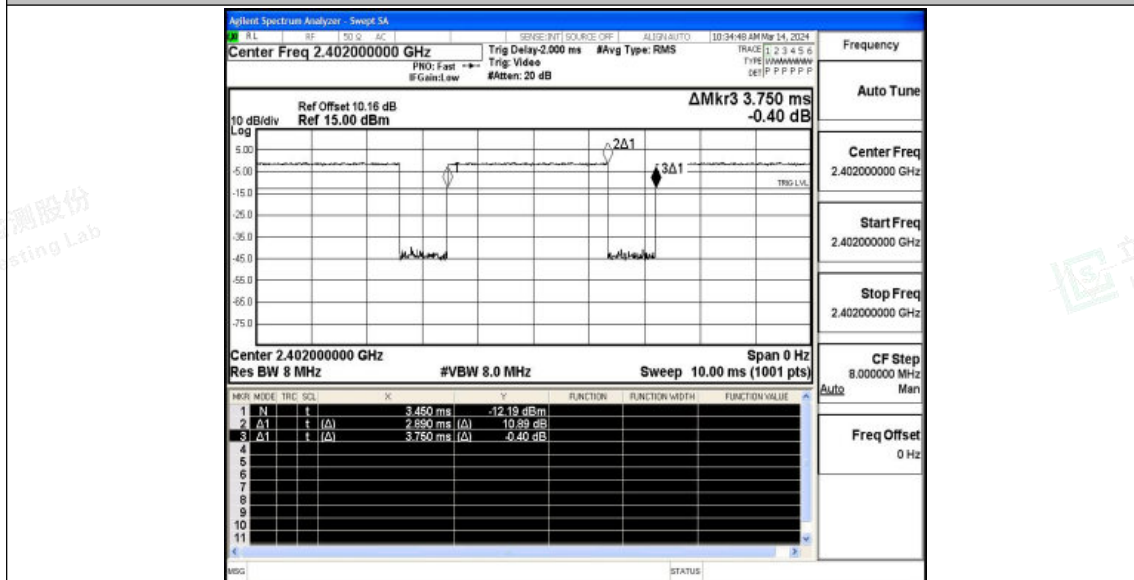


DH5\_Ant1\_2480



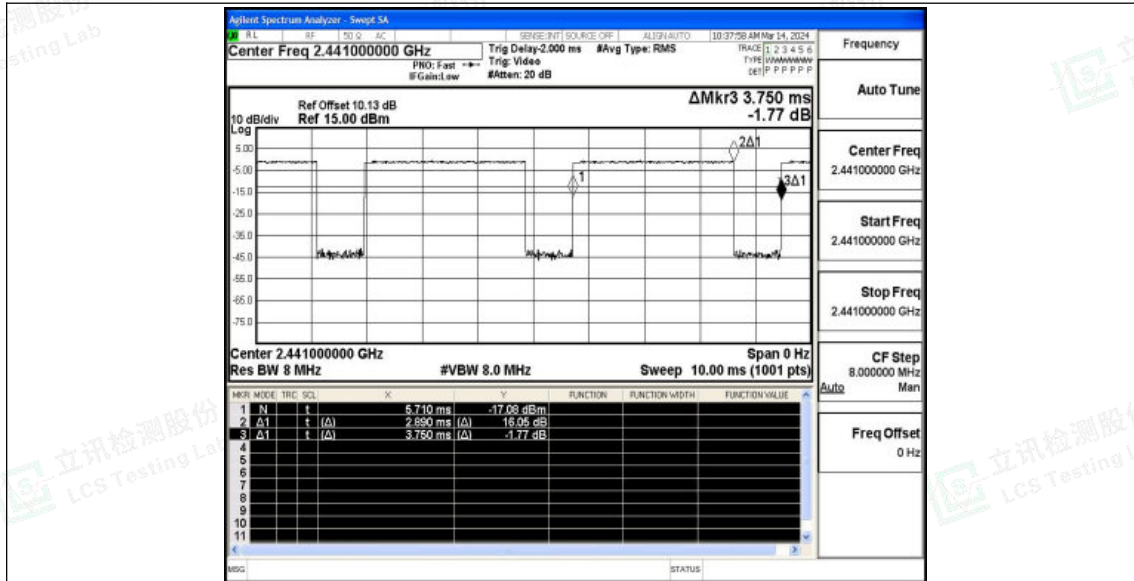


2DH5\_Ant1\_2402

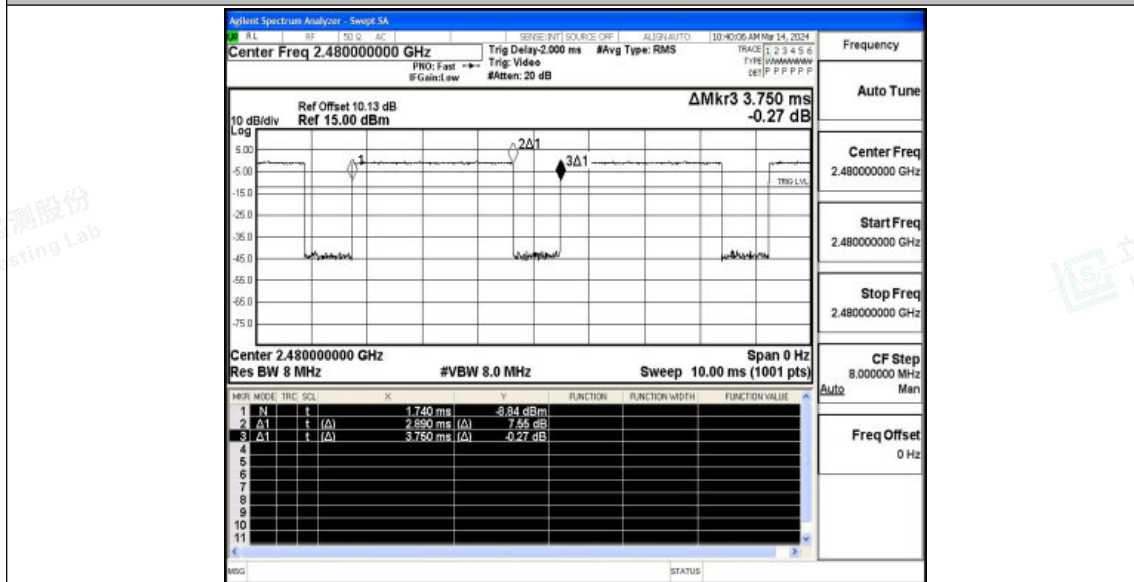


2DH5\_Ant1\_2441





2DH5\_Ant1\_2480



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## A.9 Emissions in Restricted Bands

### Test Result

| TestMode | Antenna | ChName | Frequenc<br>y[MHz] | Detector | Freq<br>[MHz] | Result<br>[dBm] | Limit<br>[dBm] | Result<br>[dBuV/m] | Limit<br>[dBuV/m] | Verdict |
|----------|---------|--------|--------------------|----------|---------------|-----------------|----------------|--------------------|-------------------|---------|
| DH5      | Ant1    | Low    | 2402               | AV       | 2310.000      | -47.75          | ≤-41.20        | 47.45              | ≤54               | PASS    |
|          |         |        |                    | AV       | 2364.785      | -45.93          | ≤-41.20        | 49.27              | ≤54               | PASS    |
|          |         |        |                    | AV       | 2390.000      | -47.2           | ≤-41.20        | 48.00              | ≤54               | PASS    |
|          |         |        |                    | Peak     | 2310.000      | -40.34          | ≤-21.20        | 54.86              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2364.050      | -36.82          | ≤-21.20        | 58.38              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2390.000      | -39.93          | ≤-21.20        | 55.27              | ≤74               | PASS    |
|          |         | High   | 2480               | AV       | 2483.500      | -46.49          | ≤-41.20        | 48.71              | ≤54               | PASS    |
|          |         |        |                    | AV       | 2498.960      | -45.94          | ≤-41.20        | 49.26              | ≤54               | PASS    |
|          |         |        |                    | AV       | 2500.000      | -46.86          | ≤-41.20        | 48.34              | ≤54               | PASS    |
|          |         |        |                    | Peak     | 2483.500      | -39.04          | ≤-21.20        | 56.16              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2488.240      | -36.69          | ≤-21.20        | 58.51              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2500.000      | -38.06          | ≤-21.20        | 57.14              | ≤74               | PASS    |
|          |         | Low    | Hop_240<br>2       | Peak     | 2310.000      | -40.07          | ≤-21.20        | 55.13              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2344.835      | -37.03          | ≤-21.20        | 58.17              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2390.000      | -40.34          | ≤-21.20        | 54.86              | ≤74               | PASS    |
|          |         | High   | Hop_248<br>0       | Peak     | 2483.500      | -40.35          | ≤-21.20        | 54.85              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2496.480      | -37.67          | ≤-21.20        | 57.53              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2500.000      | -39.65          | ≤-21.20        | 55.55              | ≤74               | PASS    |
| 2DH5     | Ant1    | Low    | 2402               | AV       | 2310.000      | -47.21          | ≤-41.20        | 47.99              | ≤54               | PASS    |
|          |         |        |                    | AV       | 2323.835      | -45.95          | ≤-41.20        | 49.25              | ≤54               | PASS    |
|          |         |        |                    | AV       | 2390.000      | -46.84          | ≤-41.20        | 48.36              | ≤54               | PASS    |
|          |         |        |                    | Peak     | 2310.000      | -40.05          | ≤-21.20        | 55.15              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2373.500      | -36.06          | ≤-21.20        | 59.14              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2390.000      | -39.4           | ≤-21.20        | 55.80              | ≤74               | PASS    |
|          |         | High   | 2480               | AV       | 2483.500      | -46.9           | ≤-41.20        | 48.30              | ≤54               | PASS    |
|          |         |        |                    | AV       | 2499.840      | -45.82          | ≤-41.20        | 49.38              | ≤54               | PASS    |
|          |         |        |                    | AV       | 2500.000      | -46.62          | ≤-41.20        | 48.58              | ≤54               | PASS    |
|          |         |        |                    | Peak     | 2483.500      | -39.01          | ≤-21.20        | 56.19              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2497.120      | -37.05          | ≤-21.20        | 58.15              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2500.000      | -39.44          | ≤-21.20        | 55.76              | ≤74               | PASS    |
|          |         | Low    | Hop_240<br>2       | Peak     | 2310.000      | -40.28          | ≤-21.20        | 54.92              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2370.455      | -37.45          | ≤-21.20        | 57.75              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2390.000      | -40.03          | ≤-21.20        | 55.17              | ≤74               | PASS    |
|          |         | High   | Hop_248<br>0       | Peak     | 2483.500      | -39.87          | ≤-21.20        | 55.33              | ≤74               | PASS    |
|          |         |        |                    | Peak     | 2496.000      | -36.75          | ≤-21.20        | 58.45              | ≤74               | PASS    |



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|  |  |  |      |          |        |         |       |     |      |
|--|--|--|------|----------|--------|---------|-------|-----|------|
|  |  |  | Peak | 2500.000 | -37.25 | ≤-21.20 | 57.95 | ≤74 | PASS |
|--|--|--|------|----------|--------|---------|-------|-----|------|

Note:

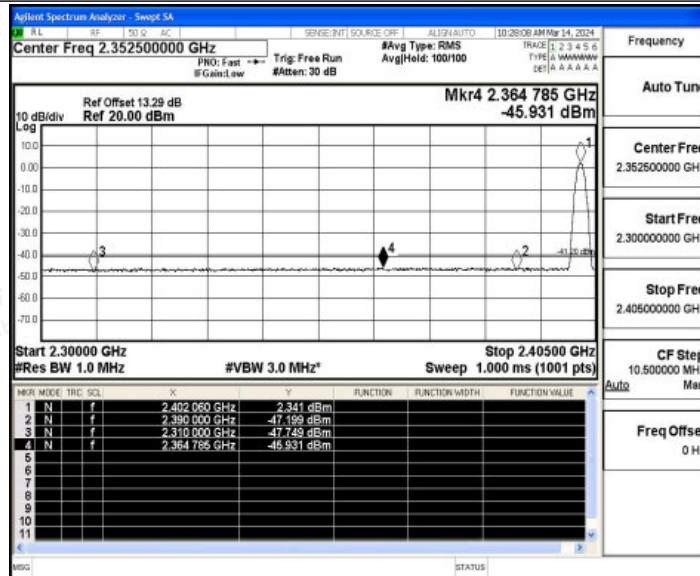
1. The Antenna Gain is compensated in the graph. The Correction Factor is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



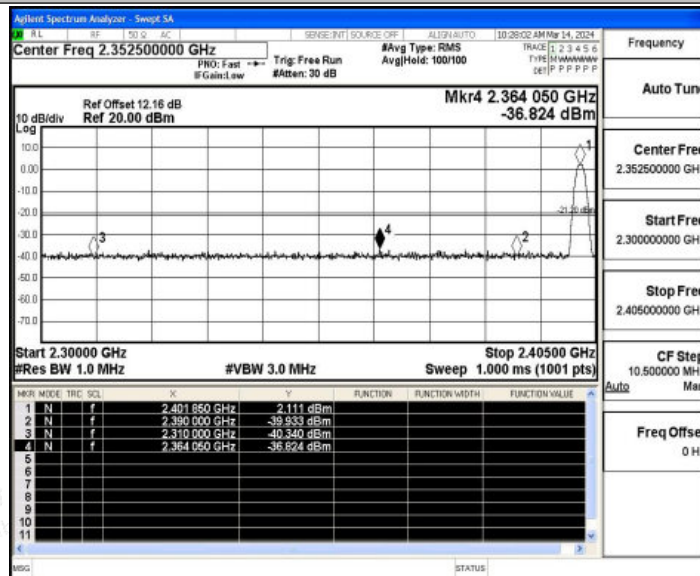


## Test Graphs

DH5\_Ant1\_Low\_2402\_AV



DH5\_Ant1\_Low\_2402\_Peak



DH5\_Ant1\_High\_2480\_AV

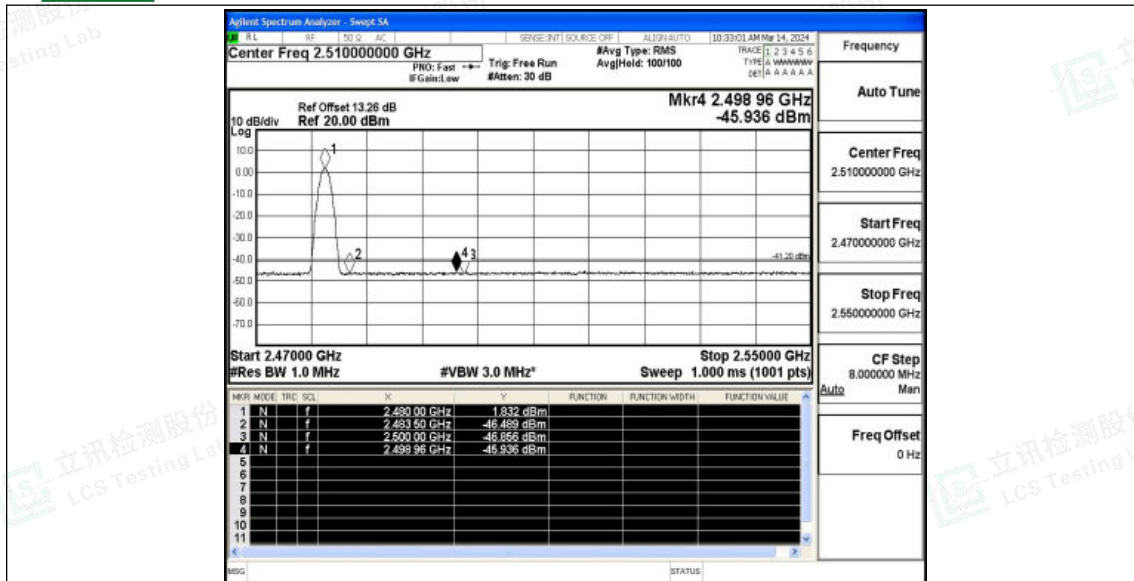


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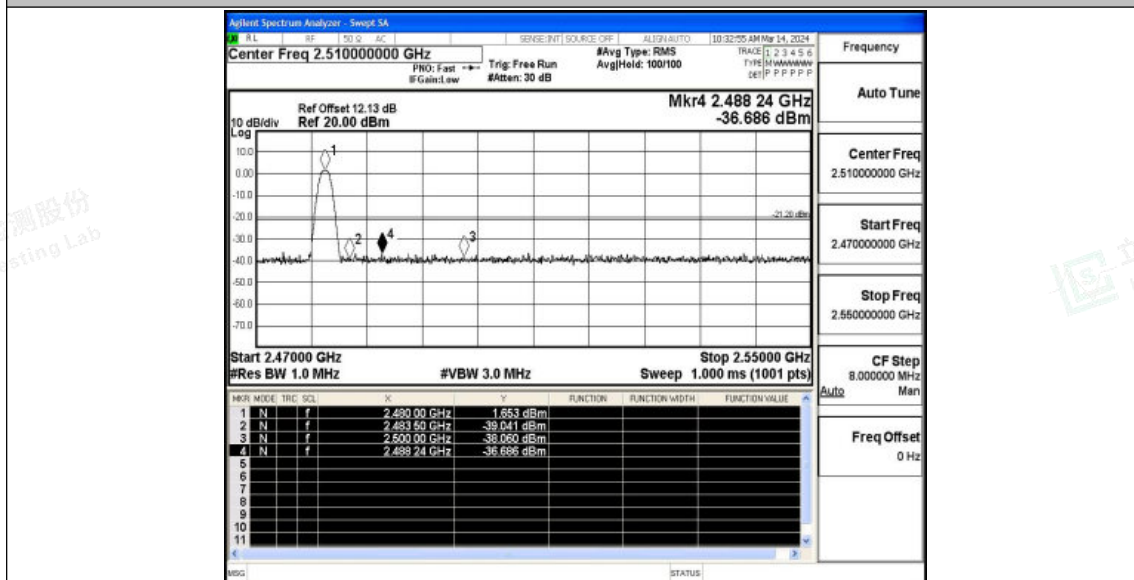
Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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Scan code to check authenticity

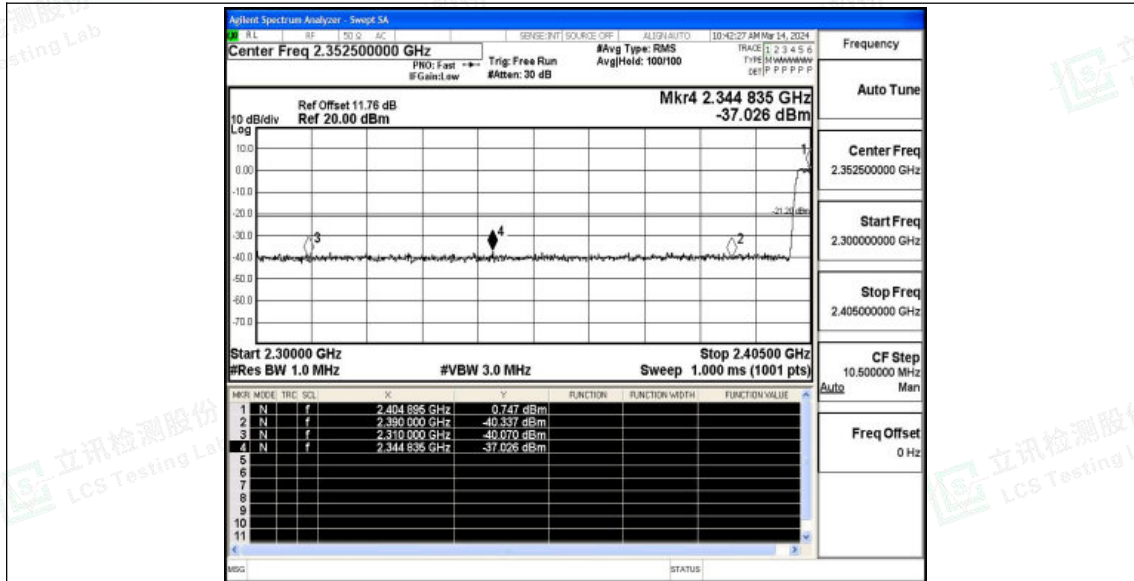


DH5\_Ant1\_High\_2480\_Peak

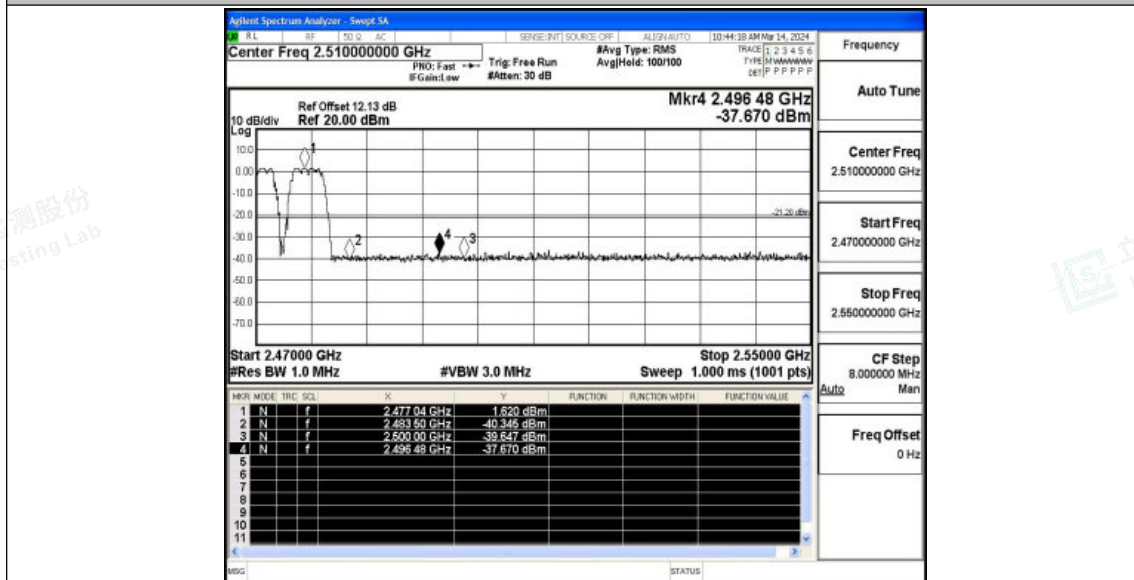


DH5\_Ant1\_Low\_Hop\_2402\_Peak



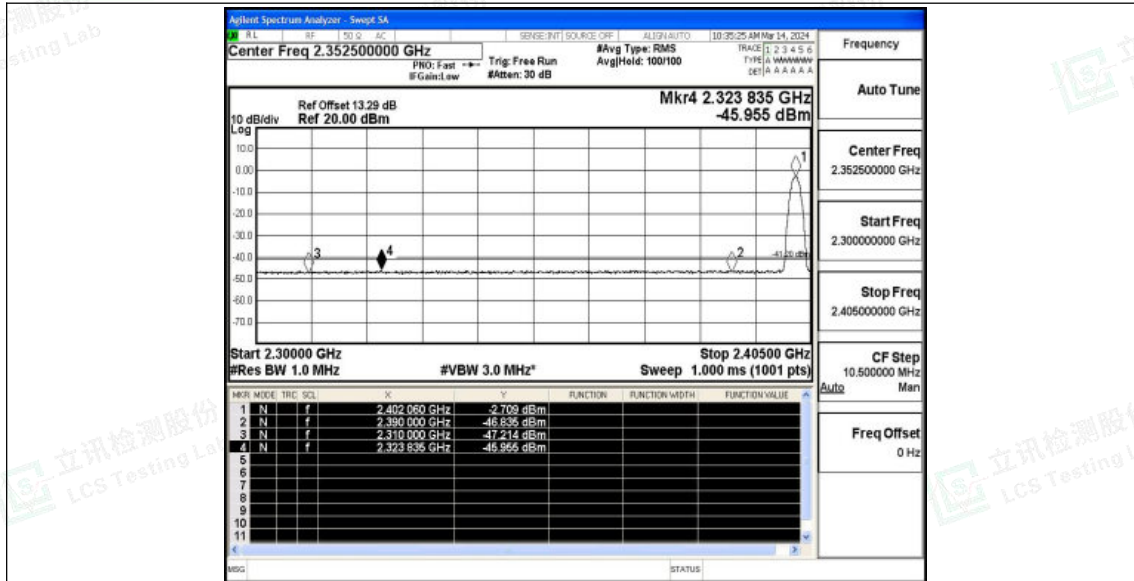


DH5\_Ant1\_High\_Hop\_2480\_Peak

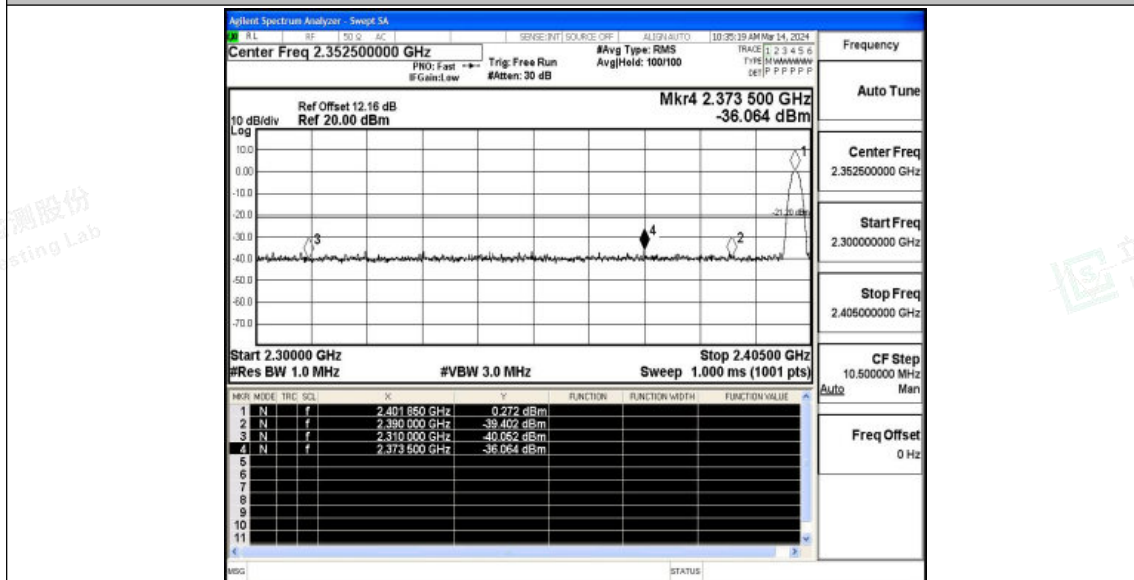


2DH5\_Ant1\_Low\_2402\_AV



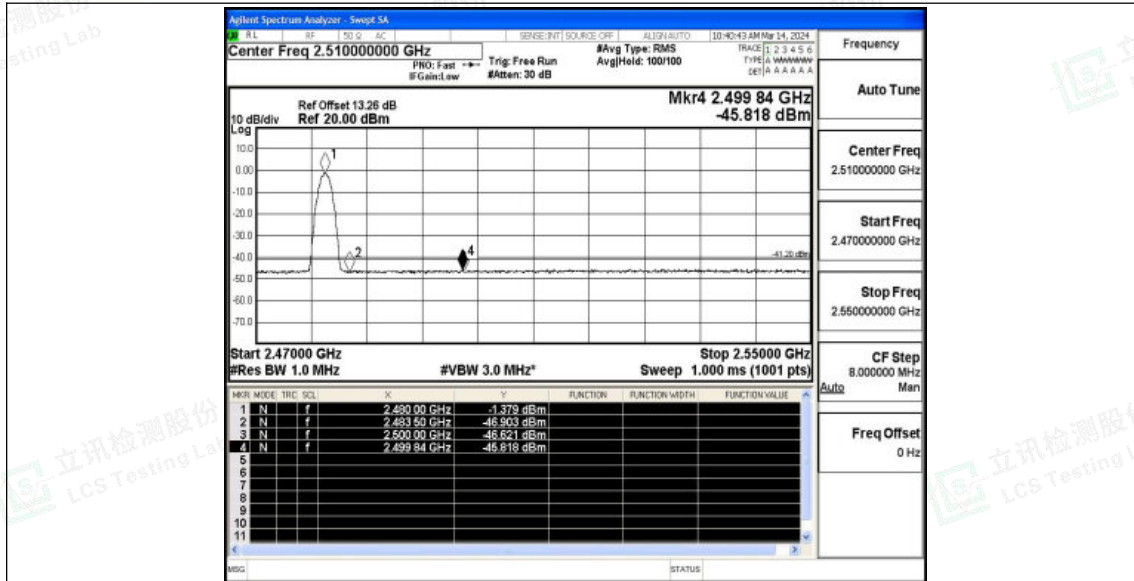


2DH5\_Ant1\_Low\_2402\_Peak

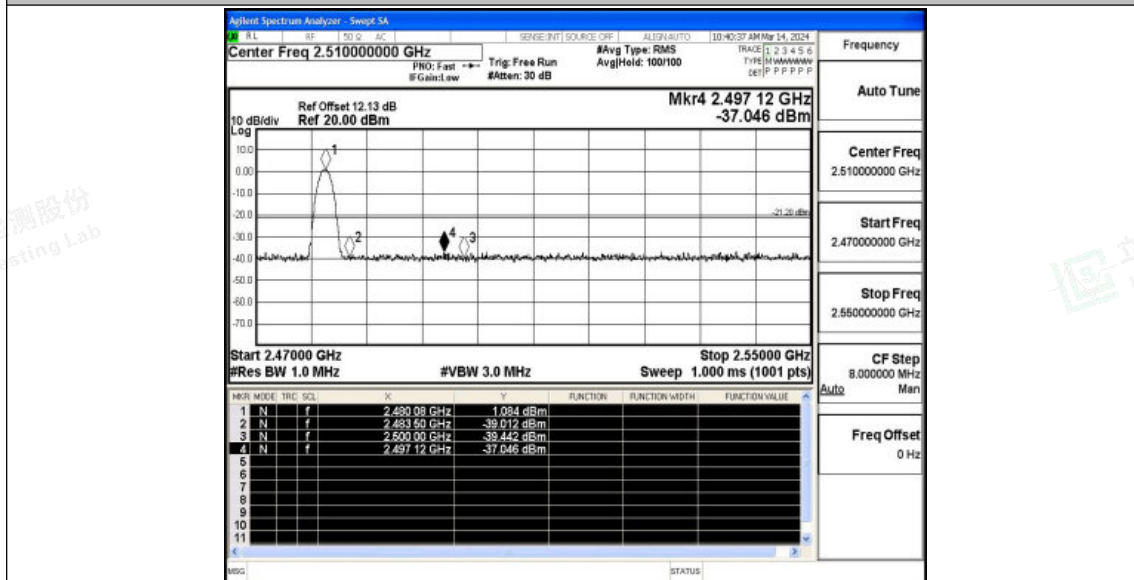


2DH5\_Ant1\_High\_2480\_AV



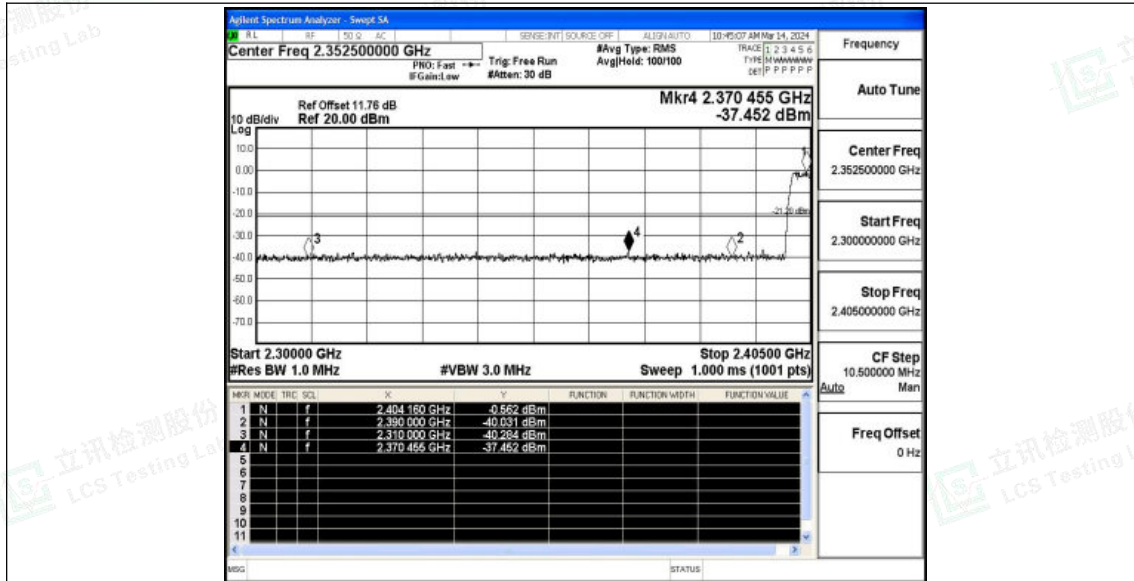


2DH5\_Ant1\_High\_2480\_Peak



2DH5\_Ant1\_Low\_Hop\_2402\_Peak





2DH5\_Ant1\_High\_Hop\_2480\_Peak

