



## Appendix A

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

Product Name: Mini Keyboard

Test Model: MK623Pro

#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 23.8°C    |
| Relative Humidity: | 52.3%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Jerry Chu |
| Supervised by:     | Nick Peng |



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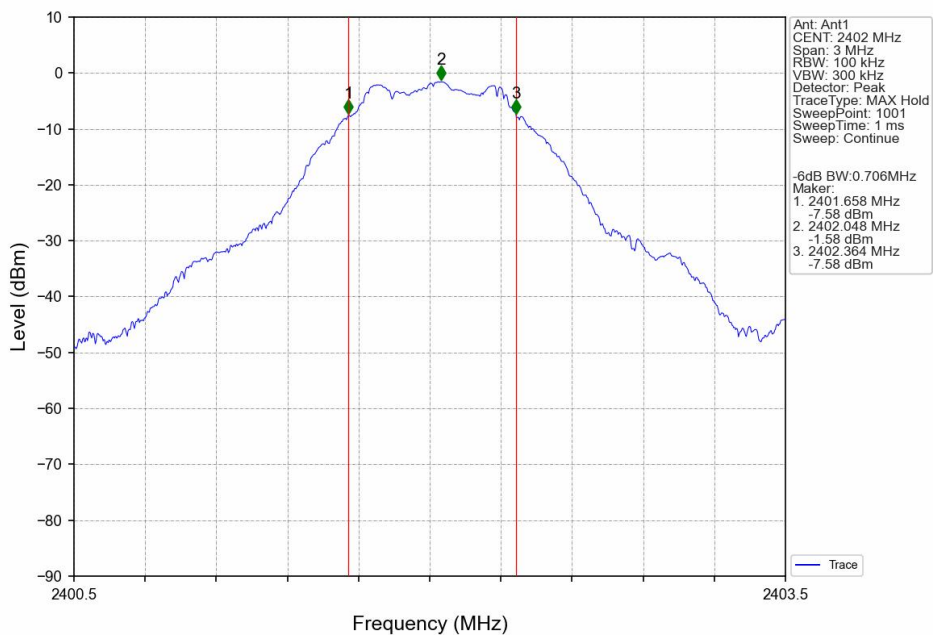
## A.1 -6dB Bandwidth

| Mode | TX Type | Frequency (MHz) | ANT | 6dB Bandwidth (MHz) |            | Verdict |
|------|---------|-----------------|-----|---------------------|------------|---------|
|      |         |                 |     | Result              | Limit      |         |
| 1M   | SISO    | 2402            | 1   | 0.706               | $\geq 0.5$ | Pass    |
|      |         | 2440            | 1   | 0.728               | $\geq 0.5$ | Pass    |
|      |         | 2480            | 1   | 0.707               | $\geq 0.5$ | Pass    |
| 2M   | SISO    | 2402            | 1   | 1.181               | $\geq 0.5$ | Pass    |
|      |         | 2440            | 1   | 1.256               | $\geq 0.5$ | Pass    |
|      |         | 2480            | 1   | 1.199               | $\geq 0.5$ | Pass    |

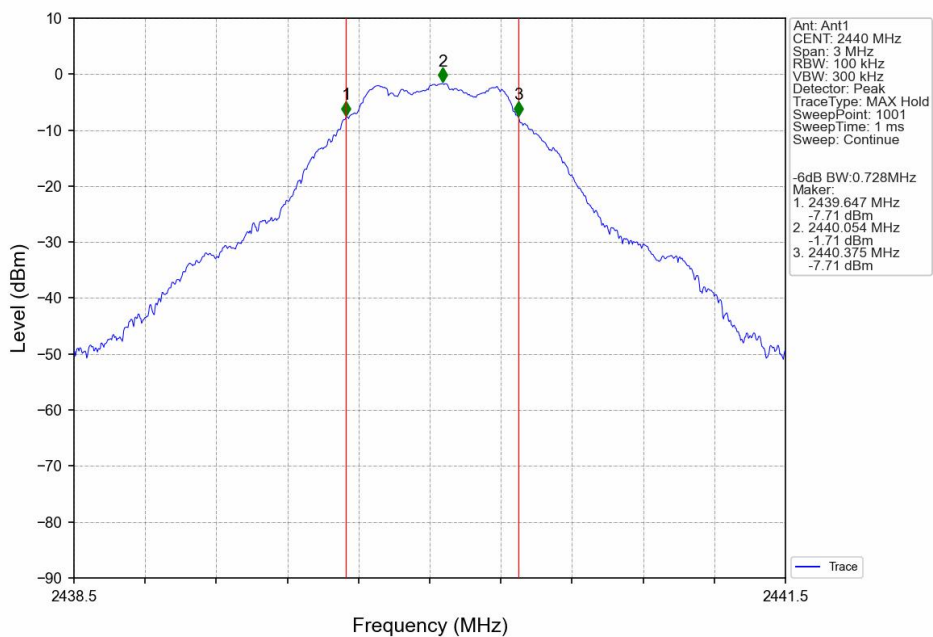




1M\_LCH\_2402MHz\_Ant1\_NTNV

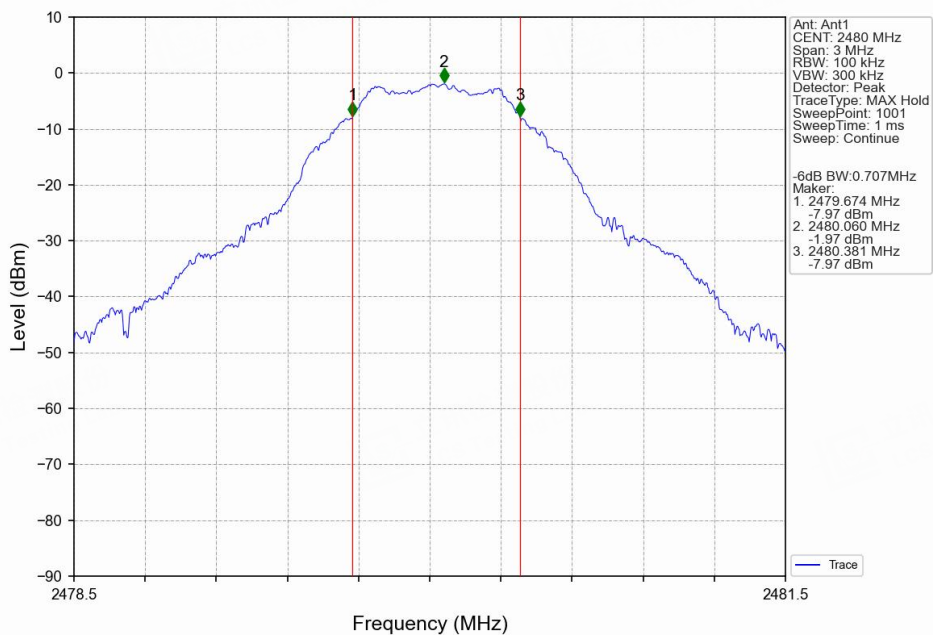


1M\_MCH\_2440MHz\_Ant1\_NTNV

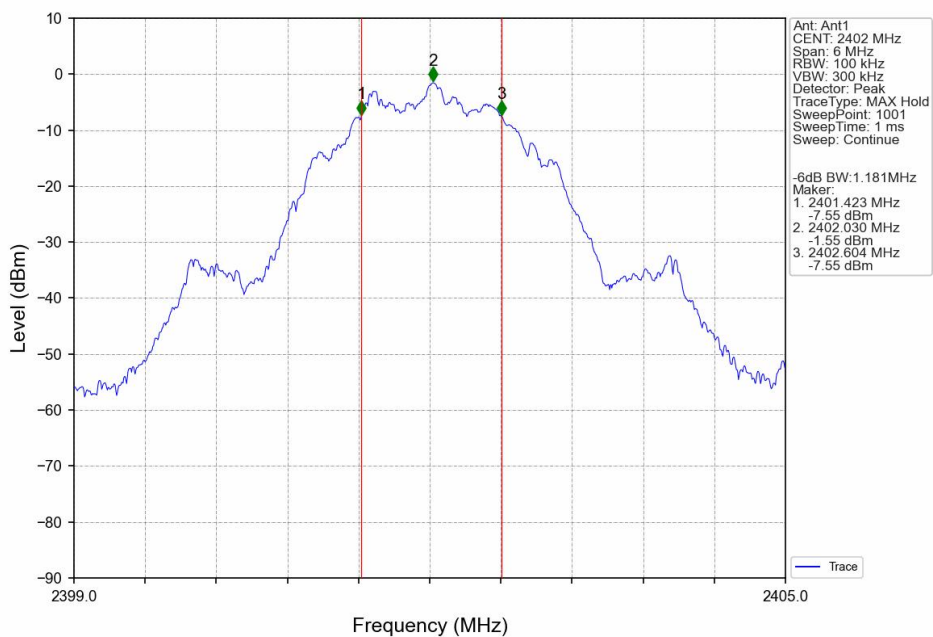




1M\_HCH\_2480MHz\_Ant1\_NTNV

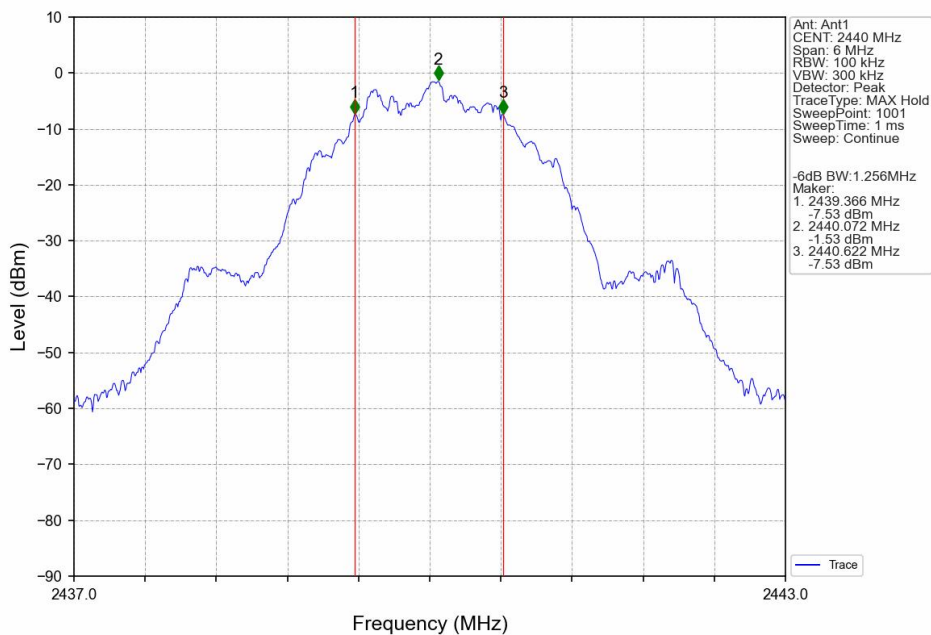


2M\_LCH\_2402MHz\_Ant1\_NTNV

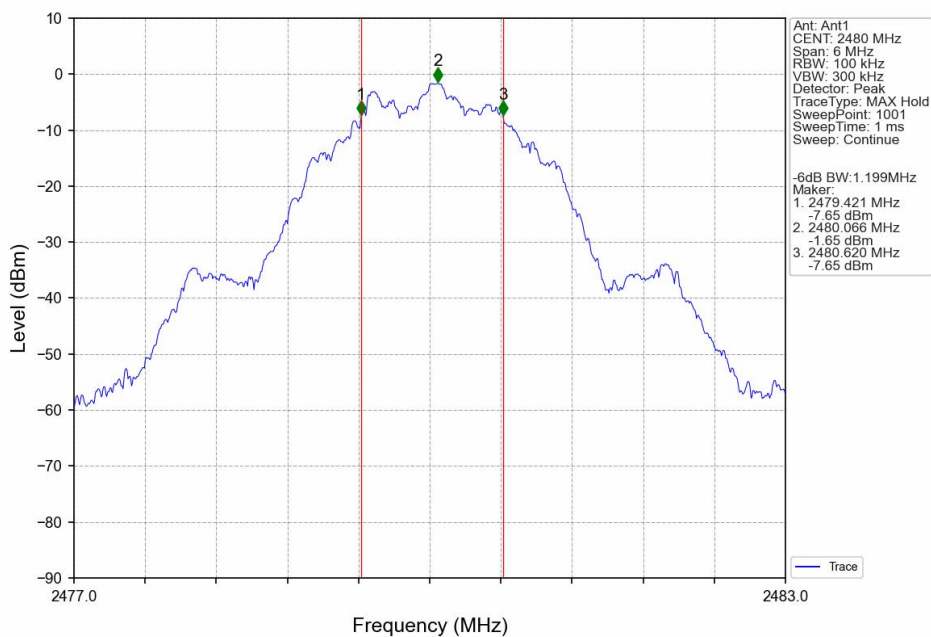




2M\_MCH\_2440MHz\_Ant1\_NTNV



2M\_HCH\_2480MHz\_Ant1\_NTNV





## A.2 Maximum Peak Conducted Output Power

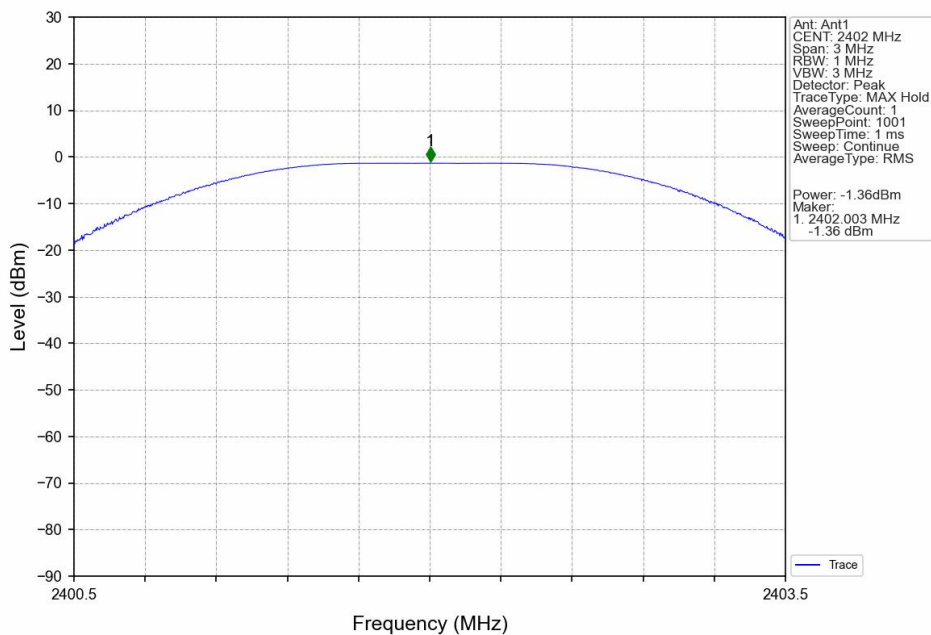
| Mode | TX Type | Frequency (MHz) | Maximum Peak Conducted Output Power (dBm) |       | Verdict |
|------|---------|-----------------|-------------------------------------------|-------|---------|
|      |         |                 | ANT1                                      | Limit |         |
| 1M   | SISO    | 2402            | -1.36                                     | <=30  | Pass    |
|      |         | 2440            | -1.30                                     | <=30  | Pass    |
|      |         | 2480            | -1.49                                     | <=30  | Pass    |
| 2M   | SISO    | 2402            | -1.25                                     | <=30  | Pass    |
|      |         | 2440            | -1.17                                     | <=30  | Pass    |
|      |         | 2480            | -1.33                                     | <=30  | Pass    |



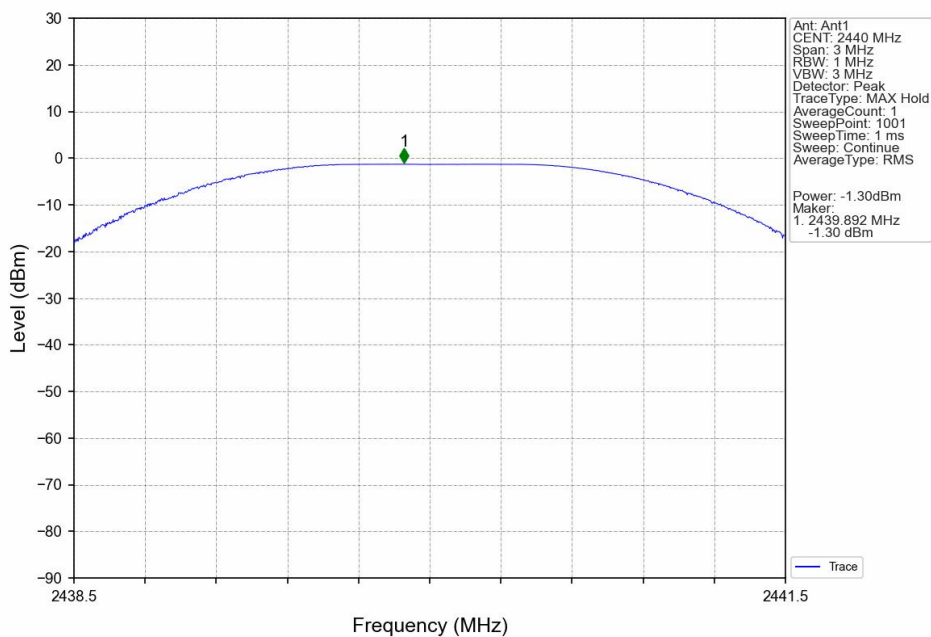
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1M\_LCH\_2402MHz\_Ant1\_NTNV

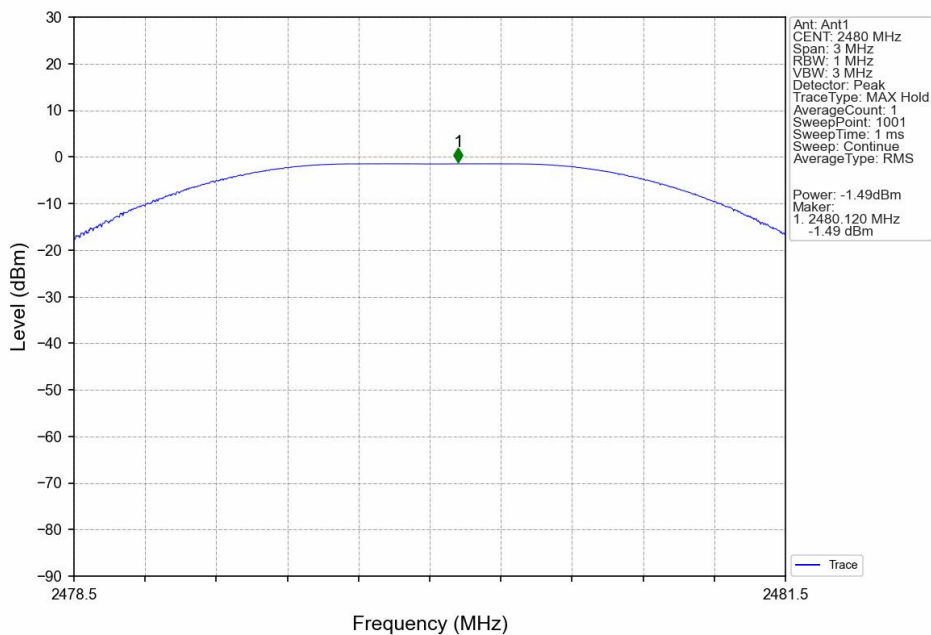


1M\_MCH\_2440MHz\_Ant1\_NTNV

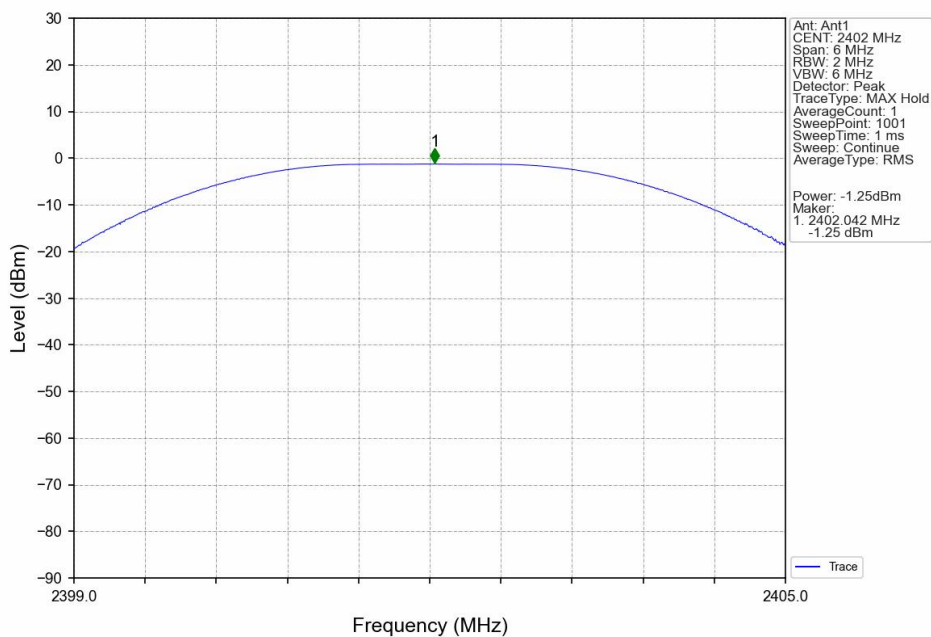




1M\_HCH\_2480MHz\_Ant1\_NTNV

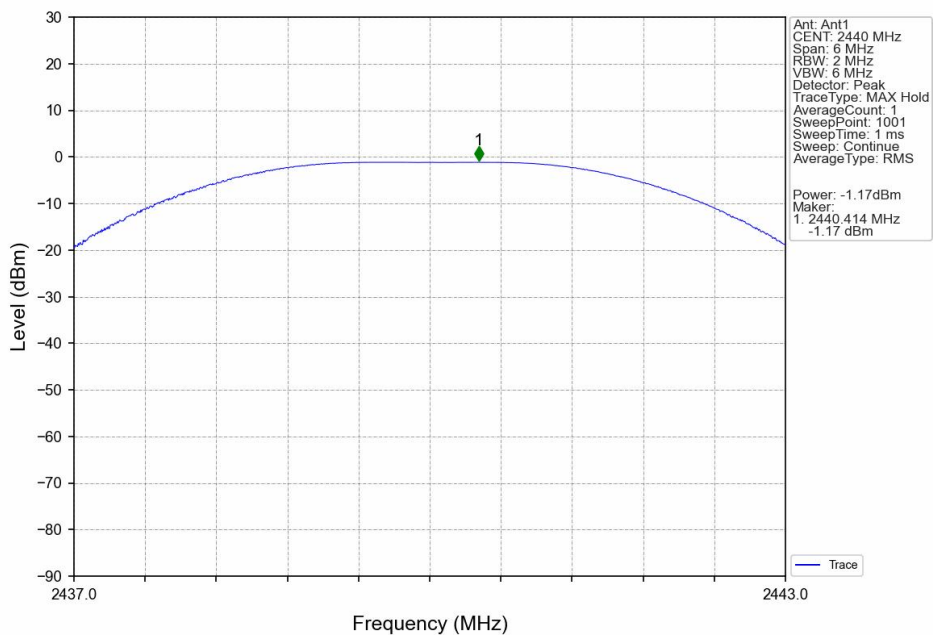


2M\_LCH\_2402MHz\_Ant1\_NTNV

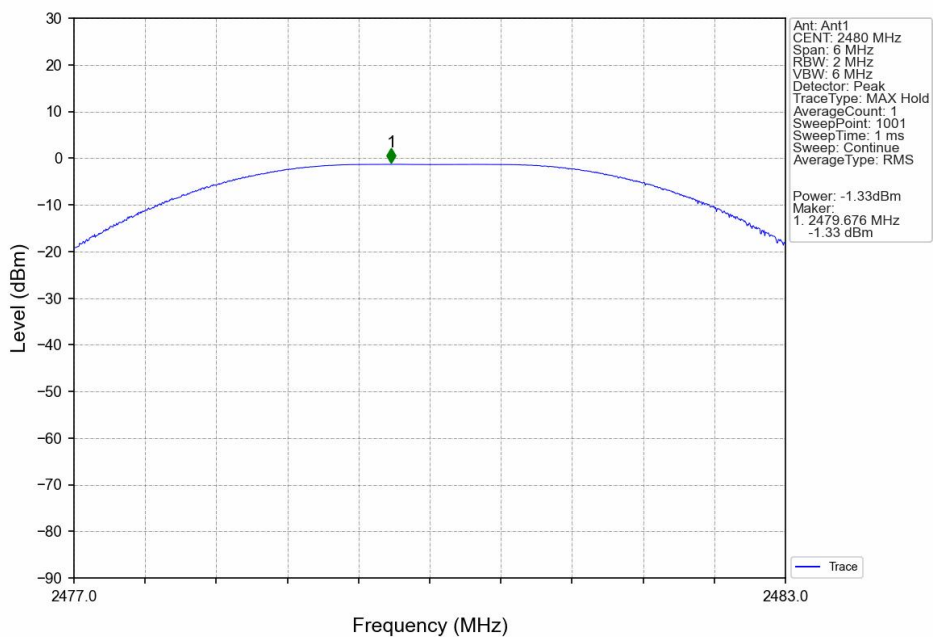




2M\_MCH\_2440MHz\_Ant1\_NTNV



2M\_HCH\_2480MHz\_Ant1\_NTNV

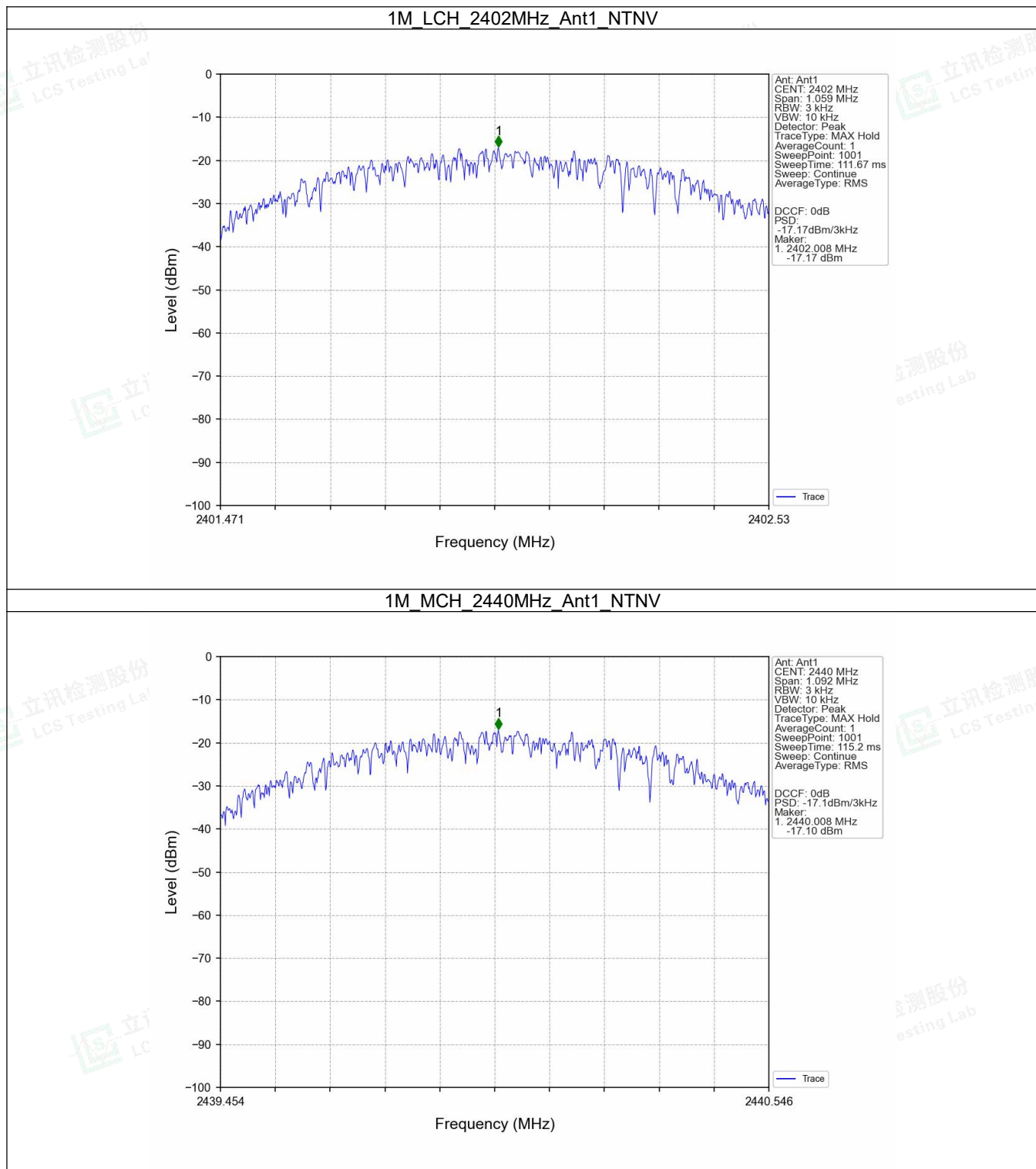




### A.3 Maximum Power Spectral Density

| Mode | TX Type | Frequency (MHz) | Maximum PSD (dBm/3kHz) |       | Verdict |
|------|---------|-----------------|------------------------|-------|---------|
|      |         |                 | ANT1                   | Limit |         |
| 1M   | SISO    | 2402            | -17.17                 | <=8   | Pass    |
|      |         | 2440            | -17.10                 | <=8   | Pass    |
|      |         | 2480            | -15.80                 | <=8   | Pass    |
| 2M   | SISO    | 2402            | -19.59                 | <=8   | Pass    |
|      |         | 2440            | -19.18                 | <=8   | Pass    |
|      |         | 2480            | -19.32                 | <=8   | Pass    |



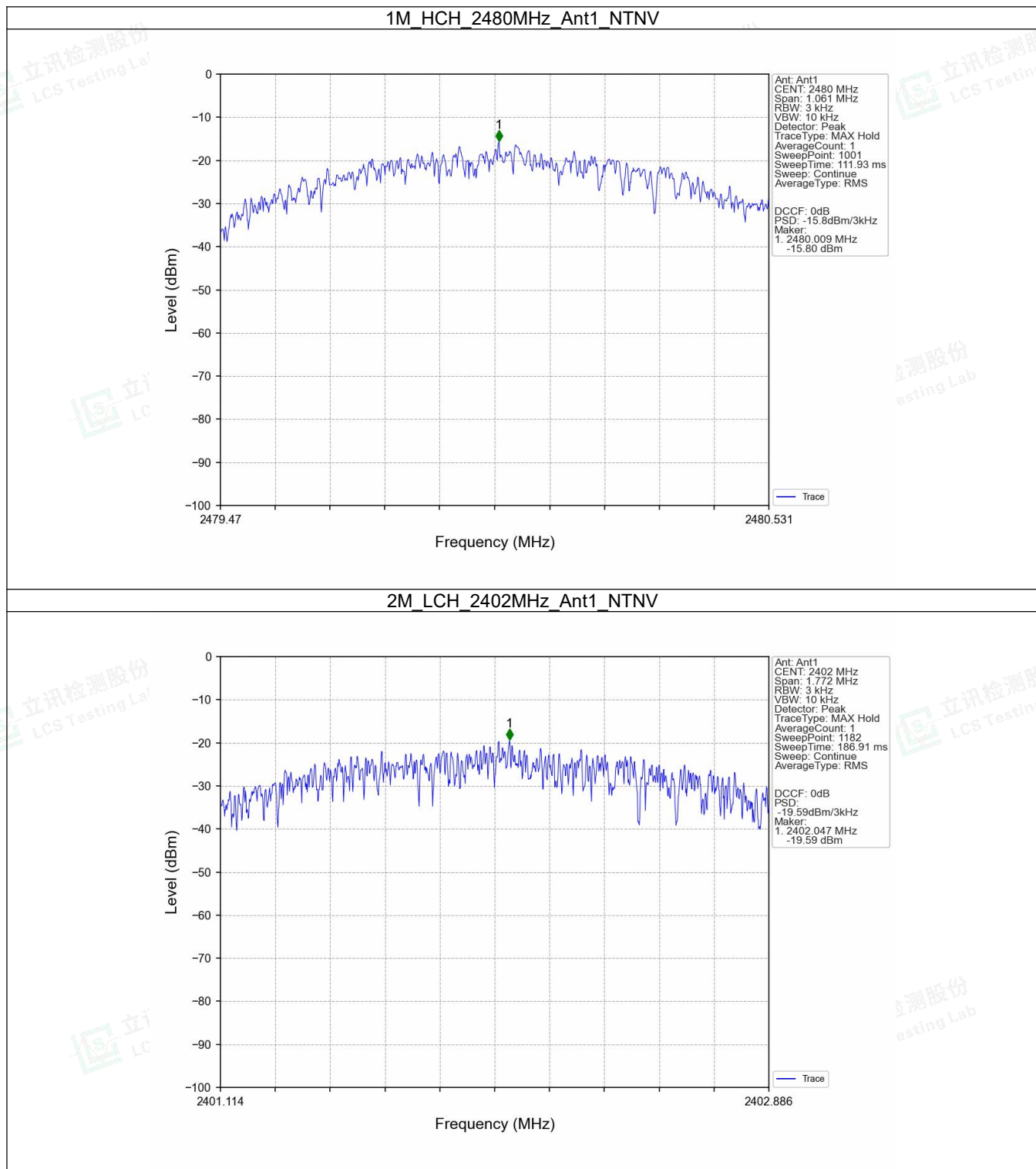


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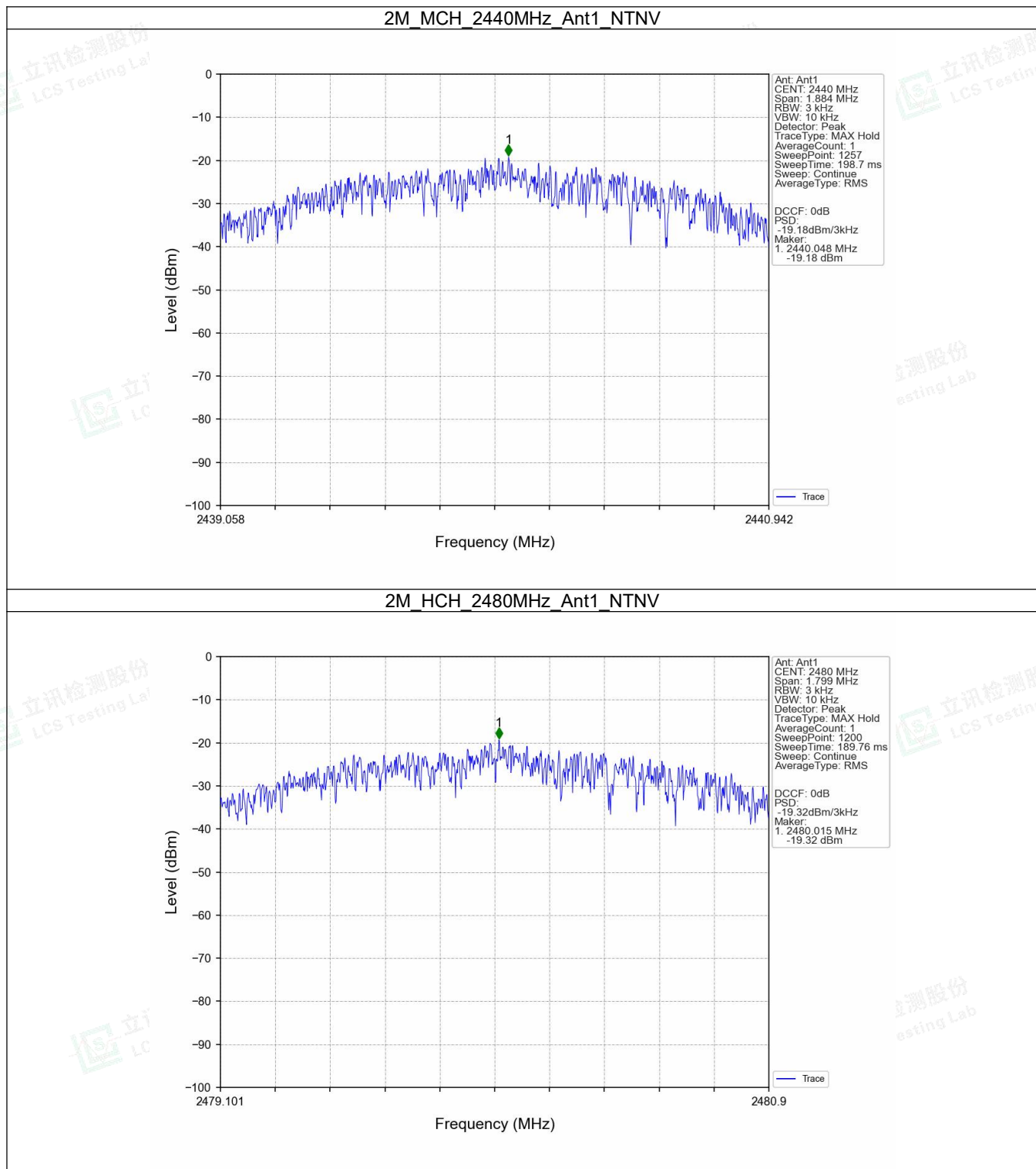


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## A.4 Band Edge

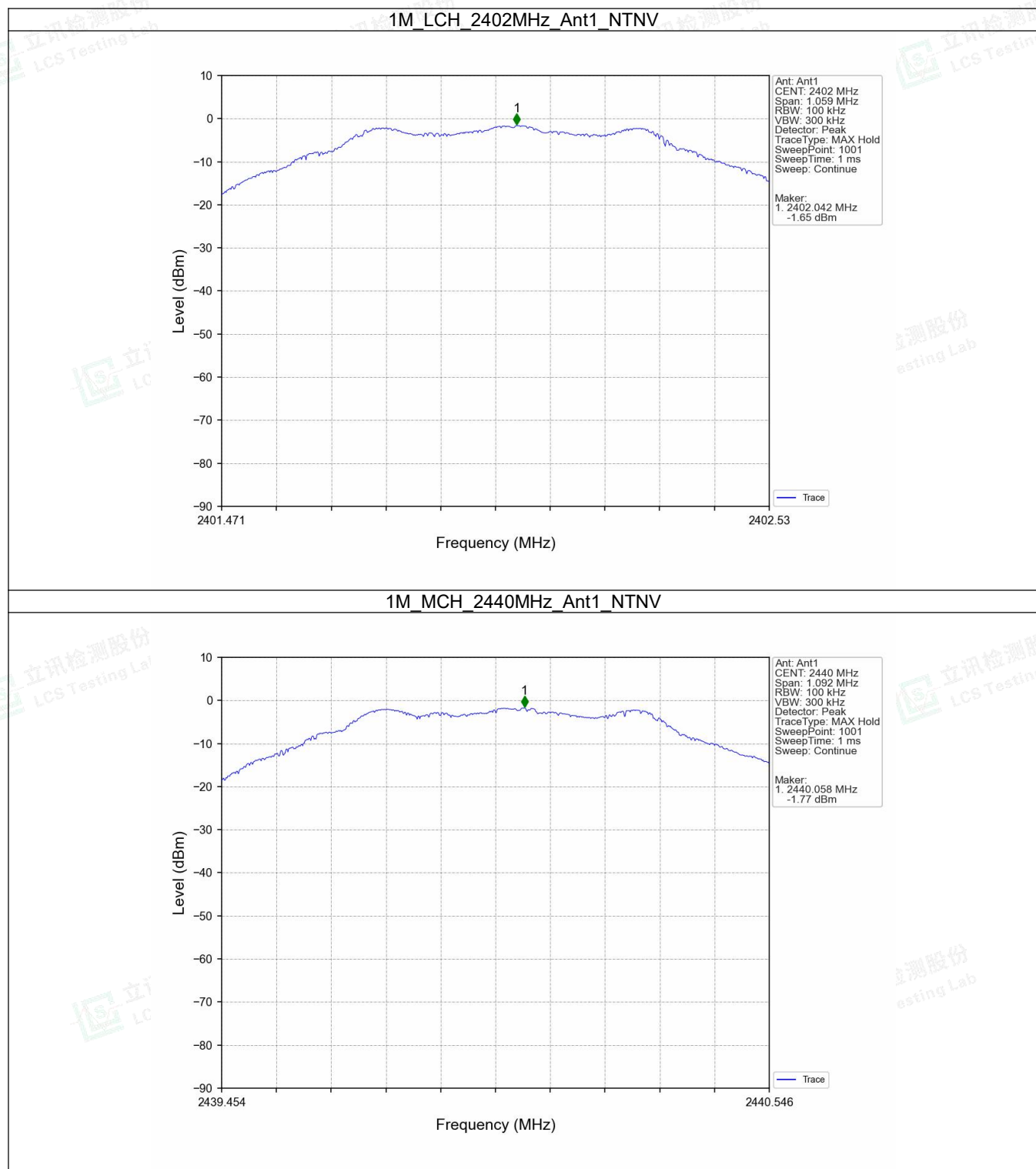
| Mode | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|------|---------|-----------------|-----|--------------------------|-------------|---------|
| 1M   | SISO    | 2402            | 1   | -1.65                    | -21.65      | Pass    |
|      |         | 2440            | 1   | -1.65                    | -21.65      | Pass    |
|      |         | 2480            | 1   | -1.65                    | -21.65      | Pass    |
| 2M   | SISO    | 2402            | 1   | -1.61                    | -21.61      | Pass    |
|      |         | 2440            | 1   | -1.61                    | -21.61      | Pass    |
|      |         | 2480            | 1   | -1.61                    | -21.61      | Pass    |

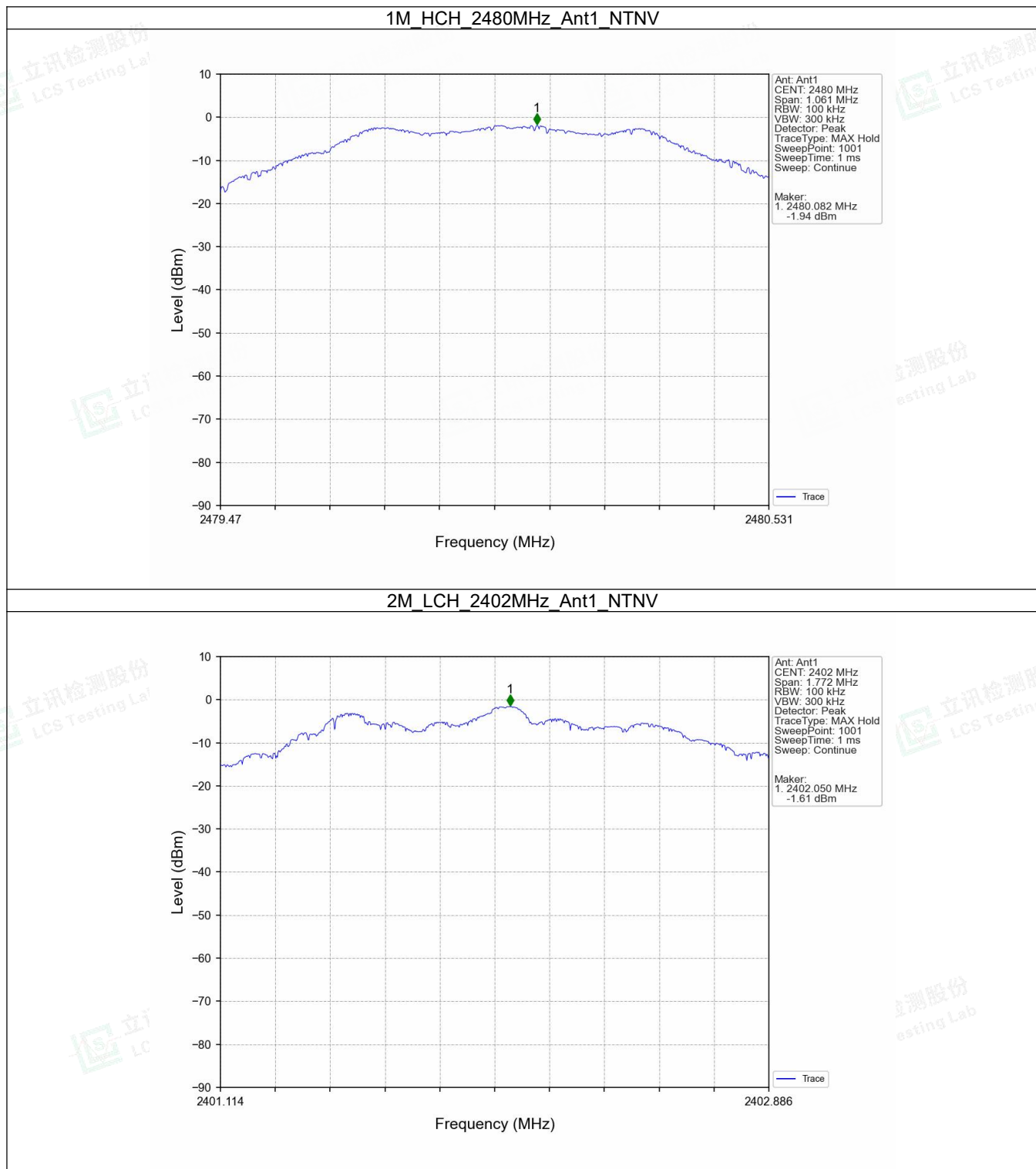
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.





## Ref





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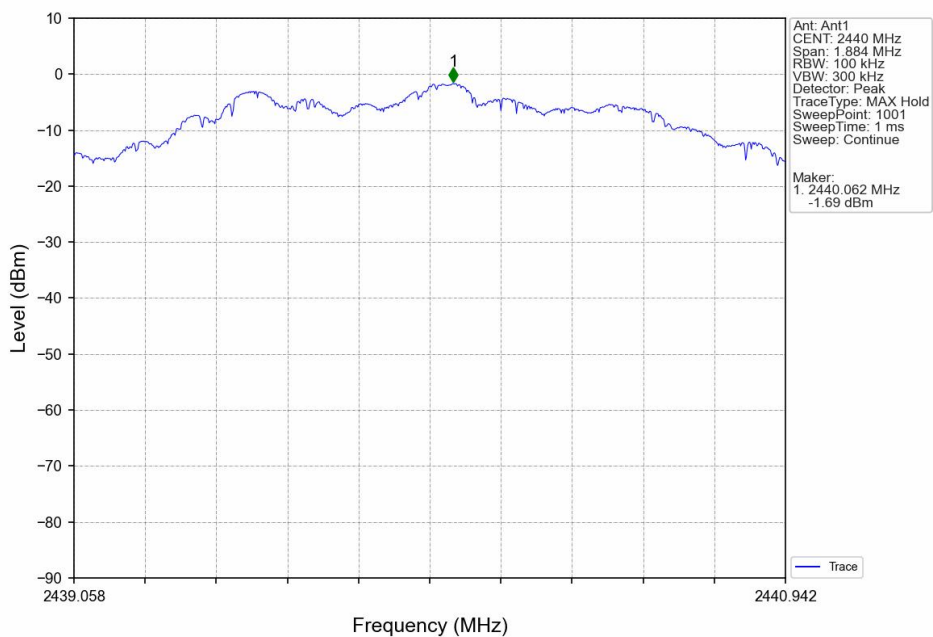
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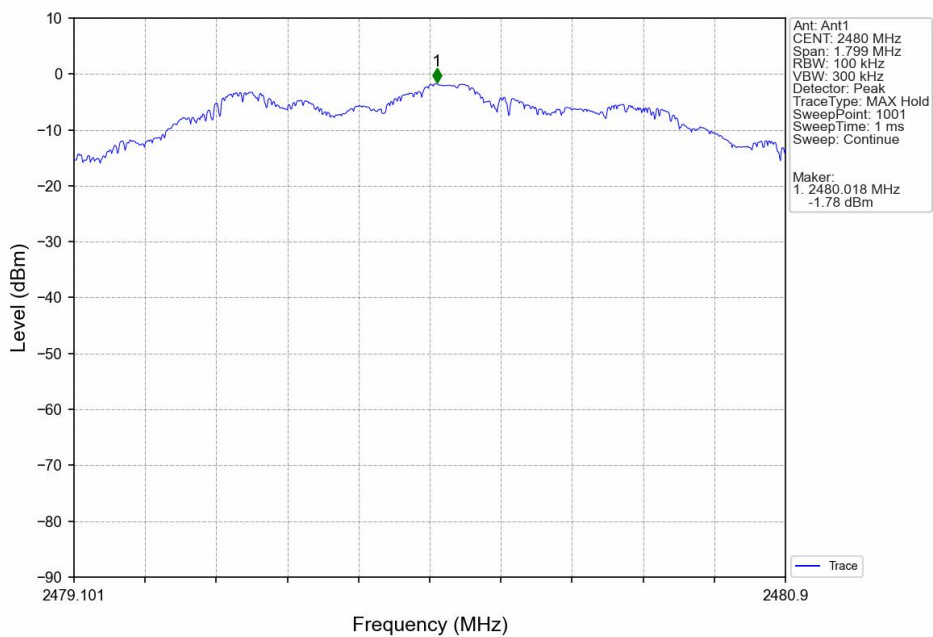
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2M\_MCH\_2440MHz\_Ant1\_NTNV



2M\_HCH\_2480MHz\_Ant1\_NTNV

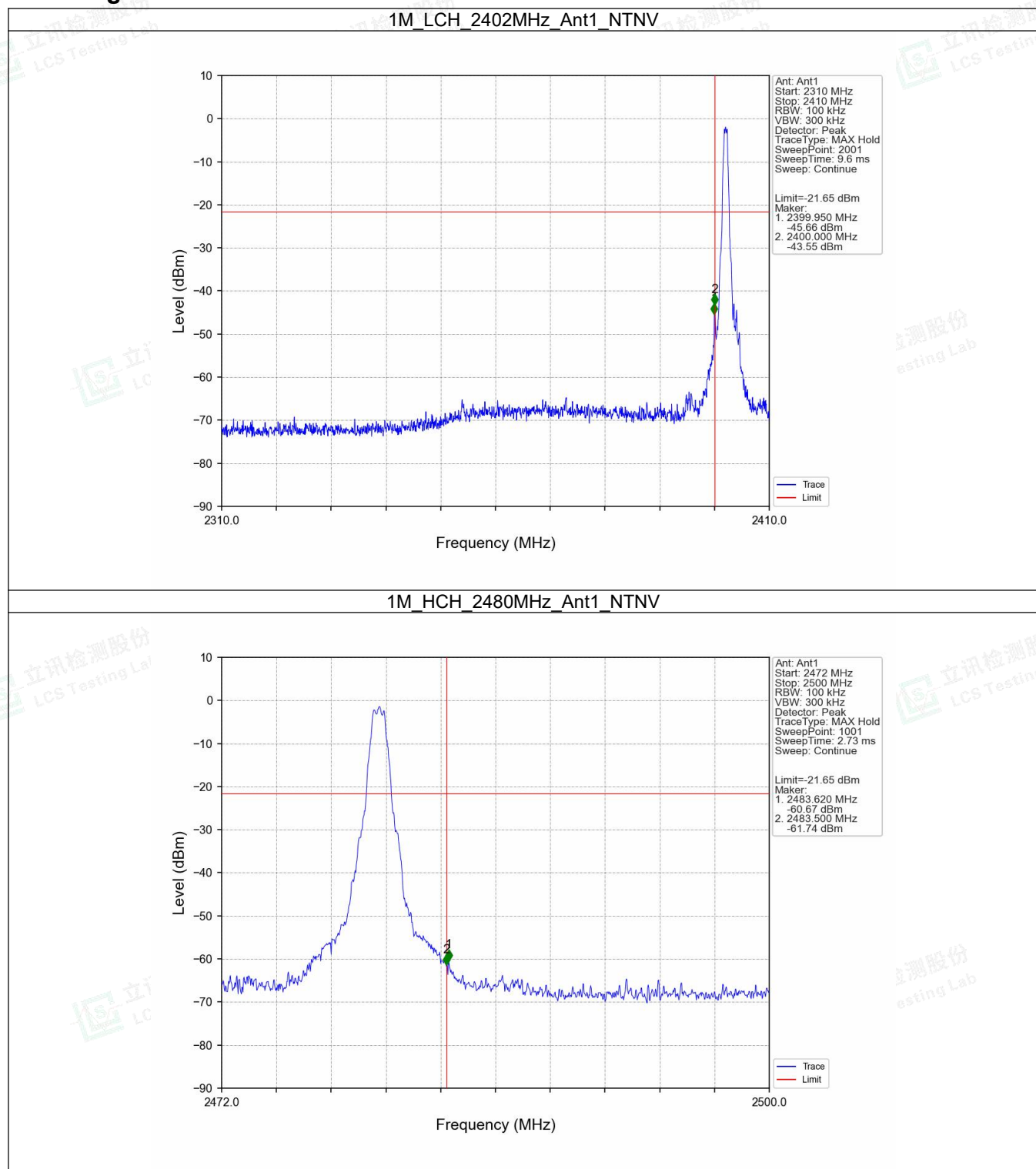


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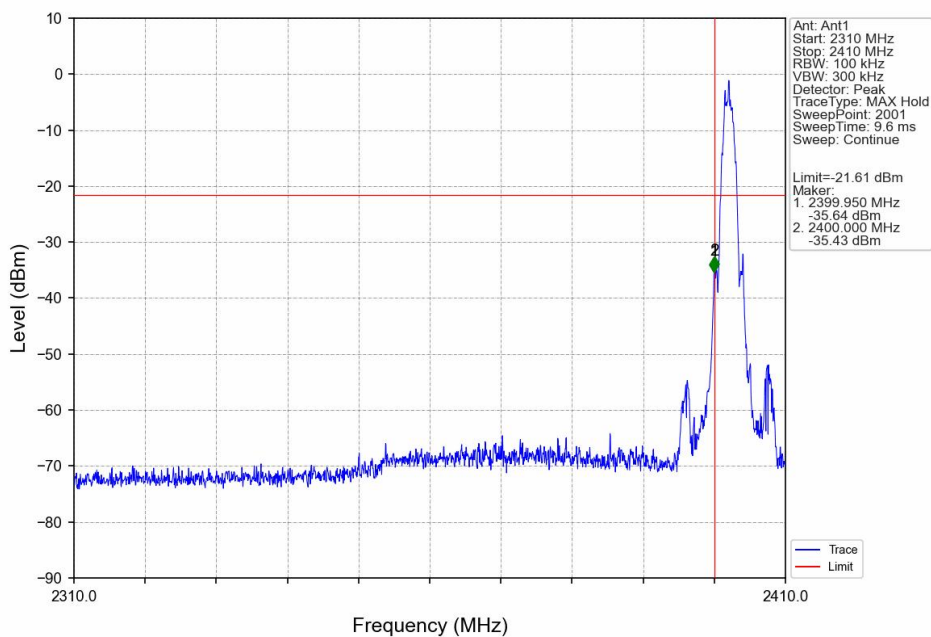
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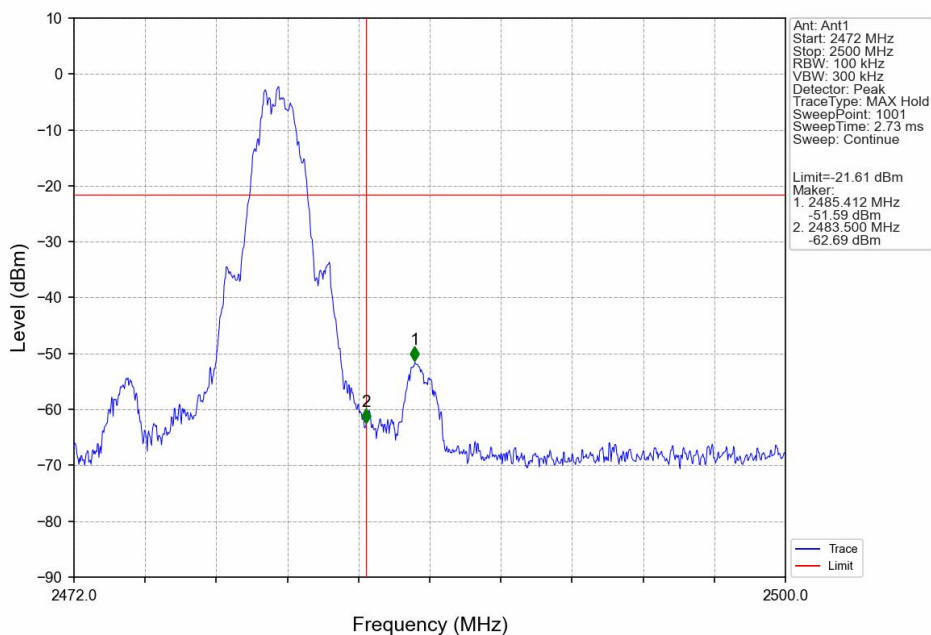
**Band Edge**



## 2M\_LCH\_2402MHz\_Ant1\_NTNV



## 2M\_HCH\_2480MHz\_Ant1\_NTNV



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## A.5 Conducted RF Spurious Emission

| Mode | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) |
|------|---------|-----------------|-----|--------------------------|
| 1M   | SISO    | 2402            | 1   | -1.65                    |
|      |         | 2440            | 1   | -1.77                    |
|      |         | 2480            | 1   | -1.94                    |
| 2M   | SISO    | 2402            | 1   | -1.61                    |
|      |         | 2440            | 1   | -1.69                    |
|      |         | 2480            | 1   | -1.78                    |

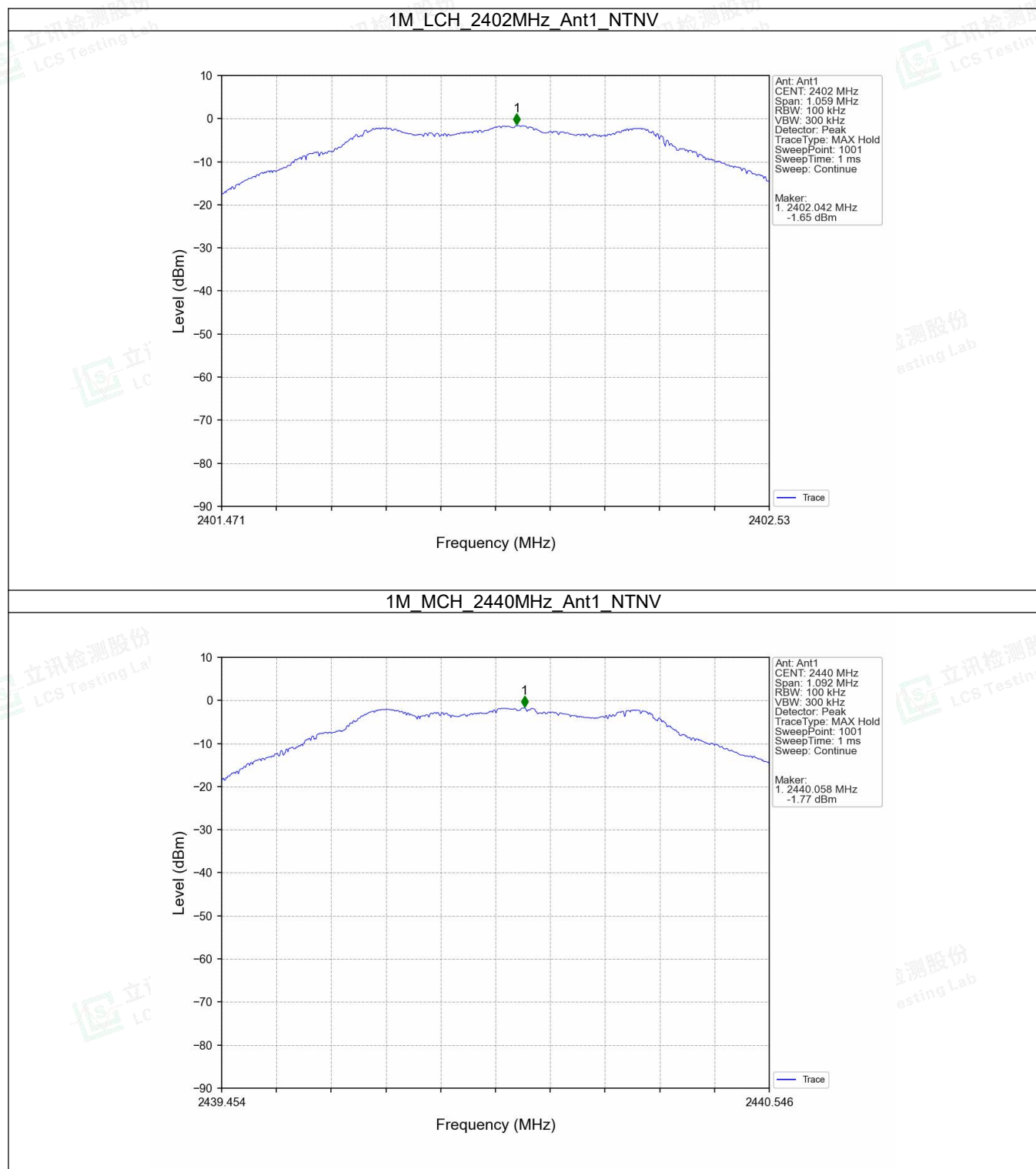
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.



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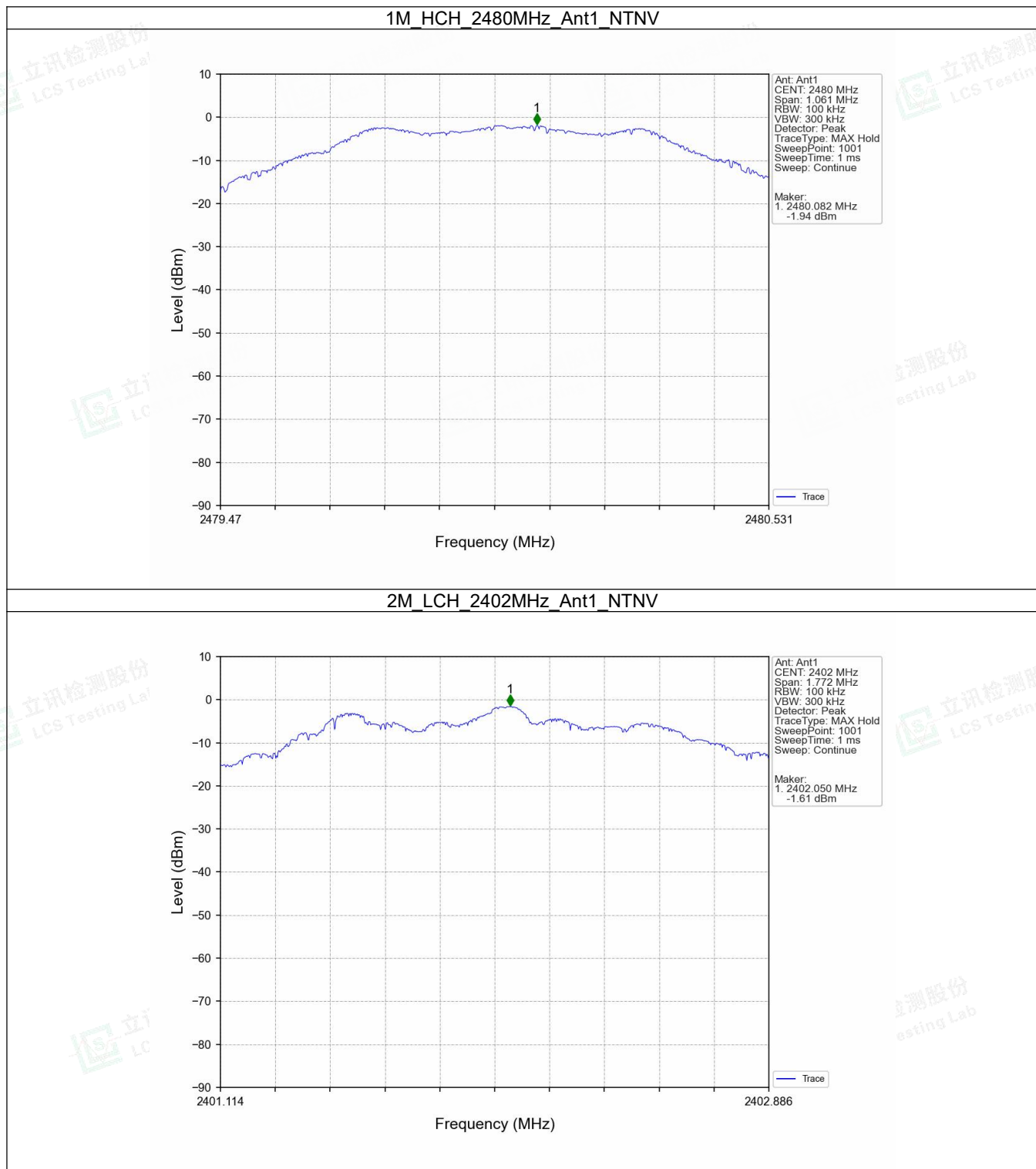


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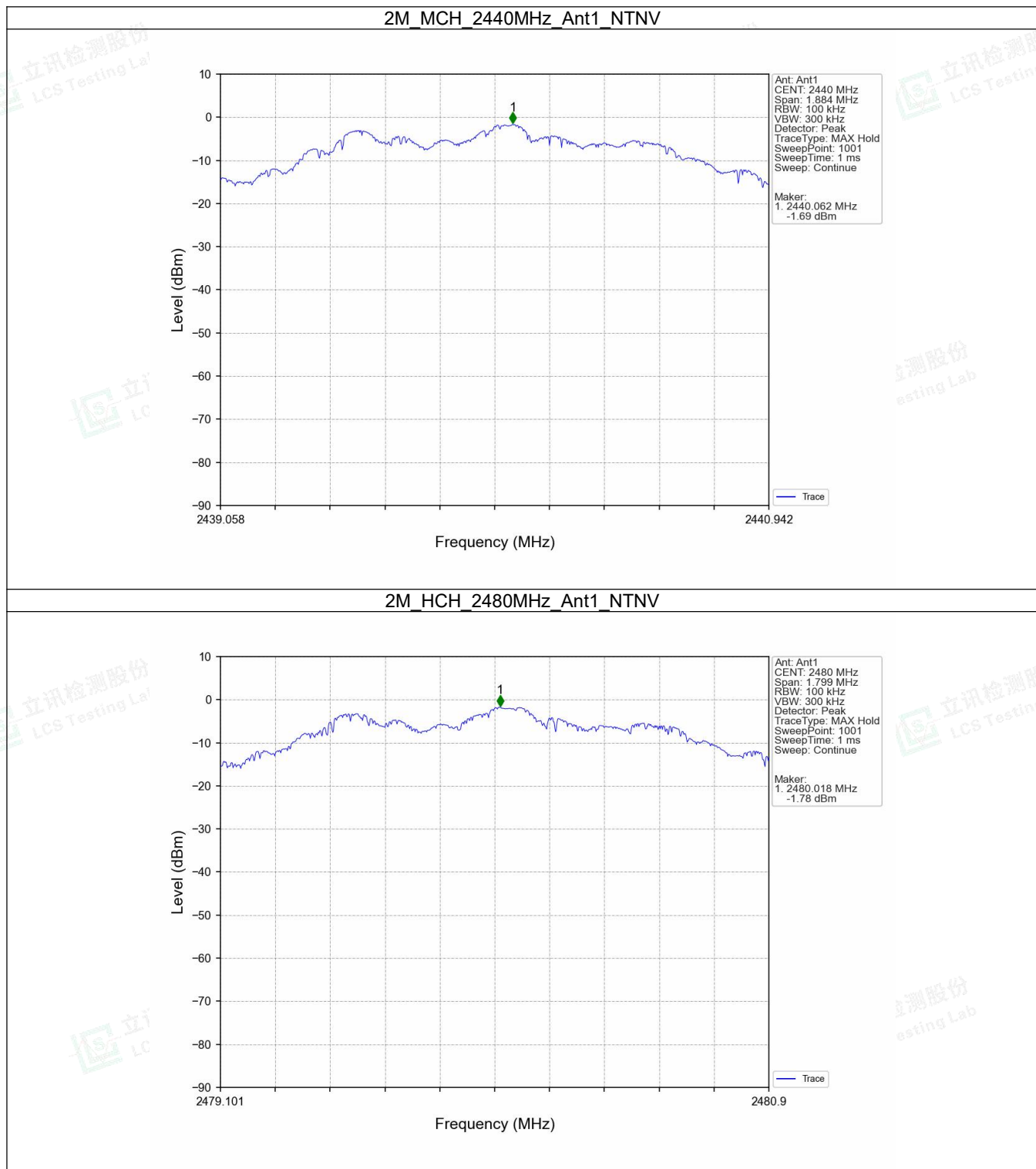


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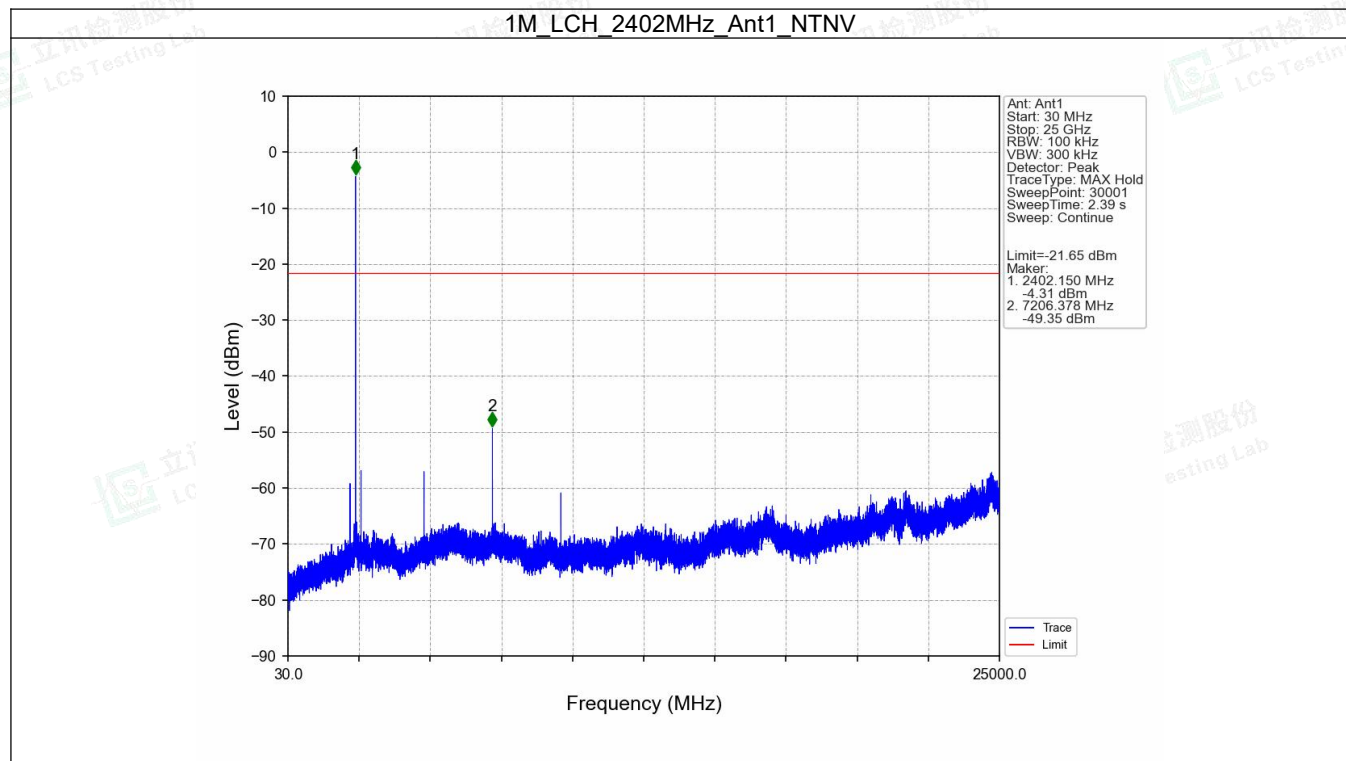
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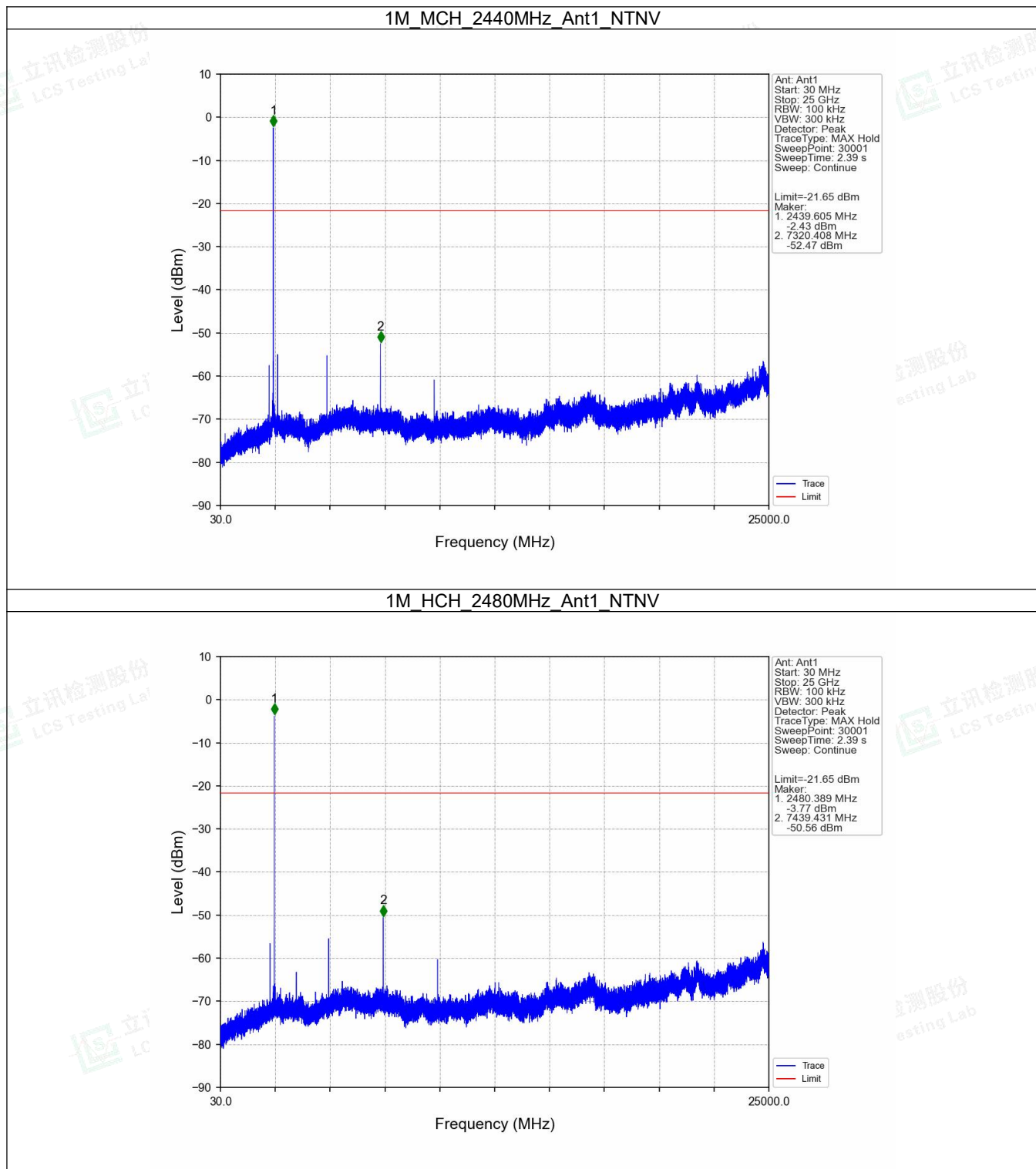
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## CSE





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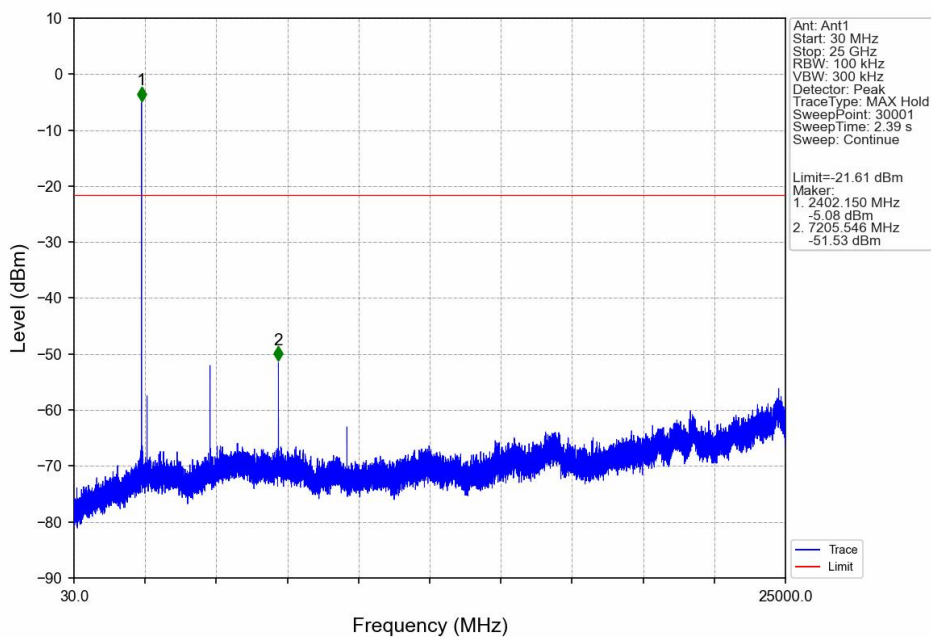
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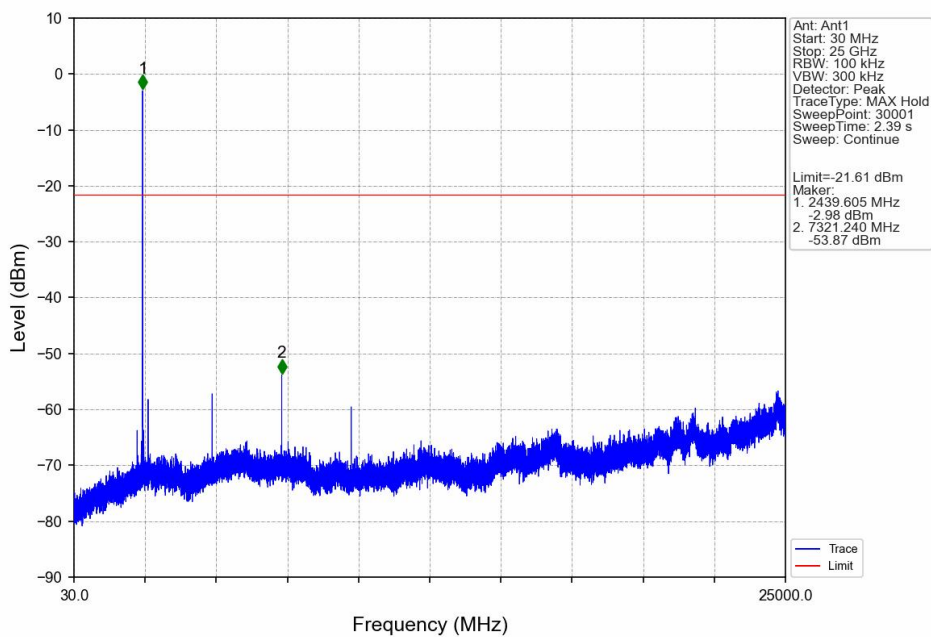
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## 2M\_LCH\_2402MHz\_Ant1\_NTNV



## 2M\_MCH\_2440MHz\_Ant1\_NTNV

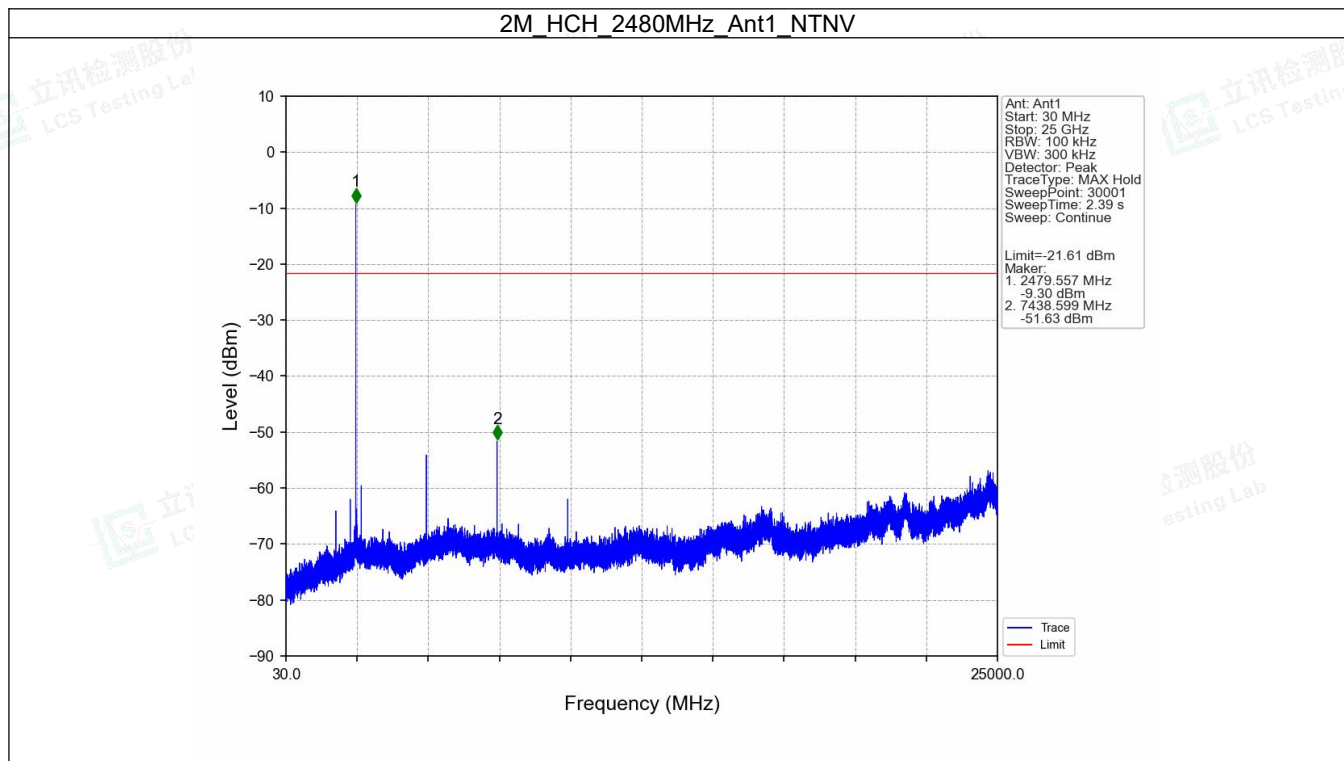


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## A.6 Duty Cycle

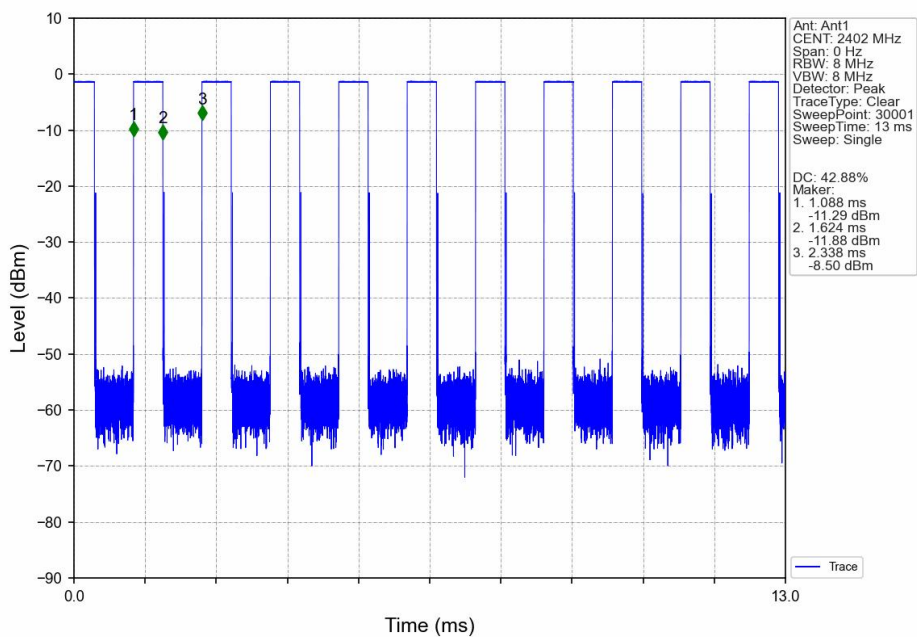
| Ant1 |         |                 |           |             |                |                                   |                       |
|------|---------|-----------------|-----------|-------------|----------------|-----------------------------------|-----------------------|
| Mode | TX Type | Frequency (MHz) | T_on (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | Max. DC Variation (%) |
| 1M   | SISO    | 2402            | 0.536     | 1.250       | 42.88          | 3.68                              | 0.01                  |
|      |         | 2440            | 0.537     | 1.250       | 42.96          | 3.67                              | 0.01                  |
|      |         | 2480            | 0.536     | 1.250       | 42.88          | 3.68                              | 0.01                  |
| 2M   | SISO    | 2402            | 0.281     | 1.250       | 22.48          | 6.48                              | 0.03                  |
|      |         | 2440            | 0.281     | 1.250       | 22.48          | 6.48                              | 0.03                  |
|      |         | 2480            | 0.281     | 1.250       | 22.48          | 6.48                              | 0.03                  |



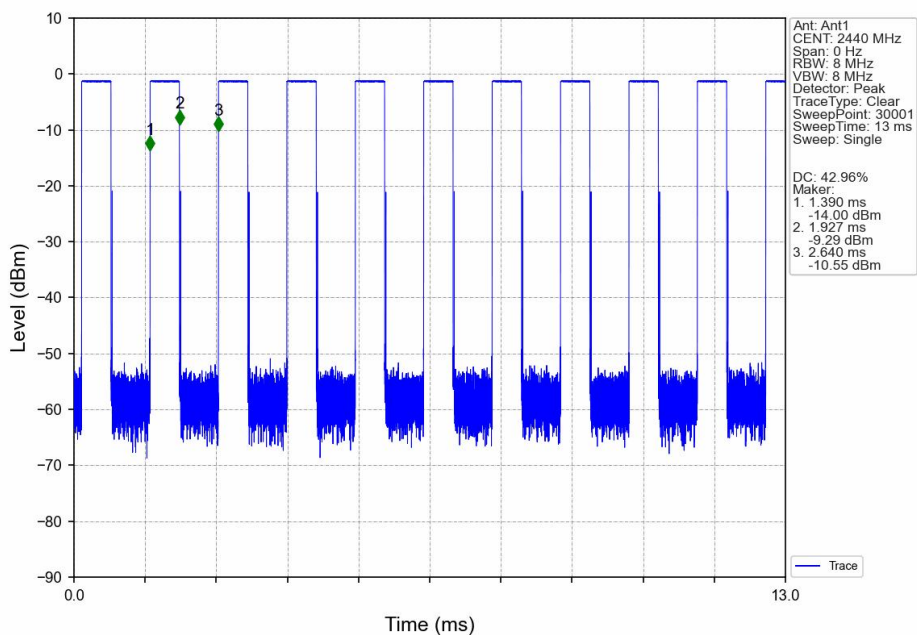
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## 1M\_MCH\_2440MHz\_Ant1\_NTNV

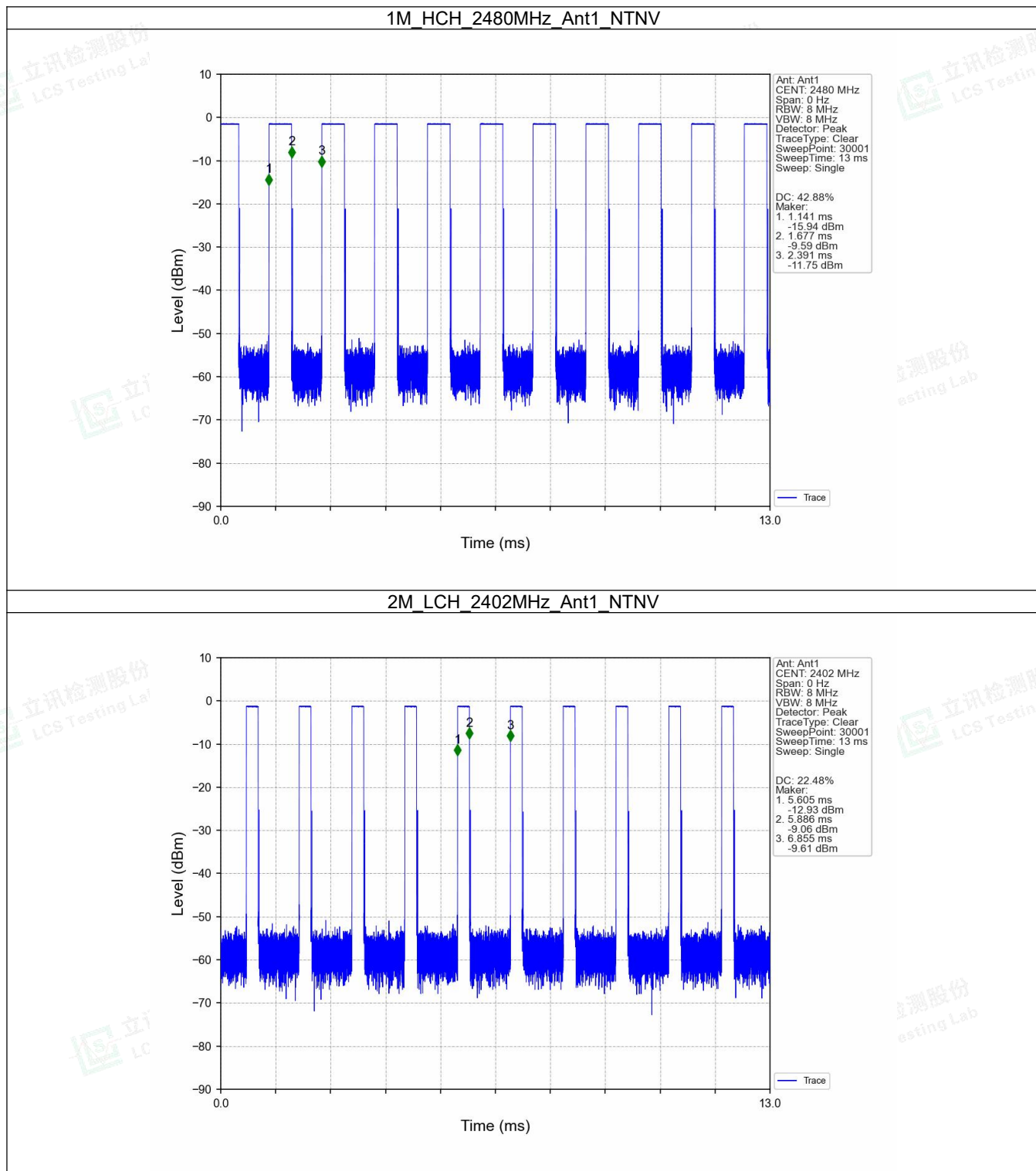


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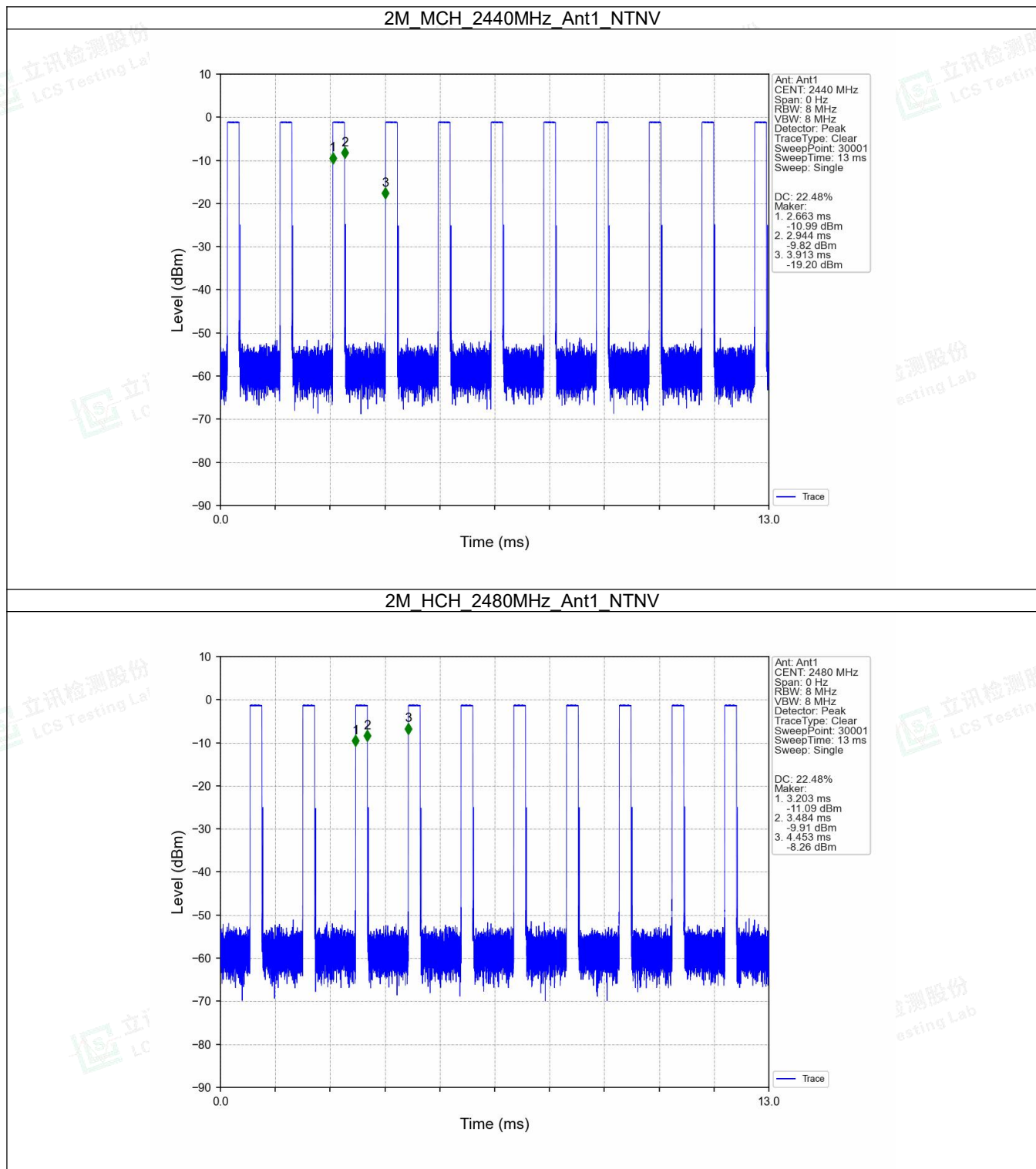


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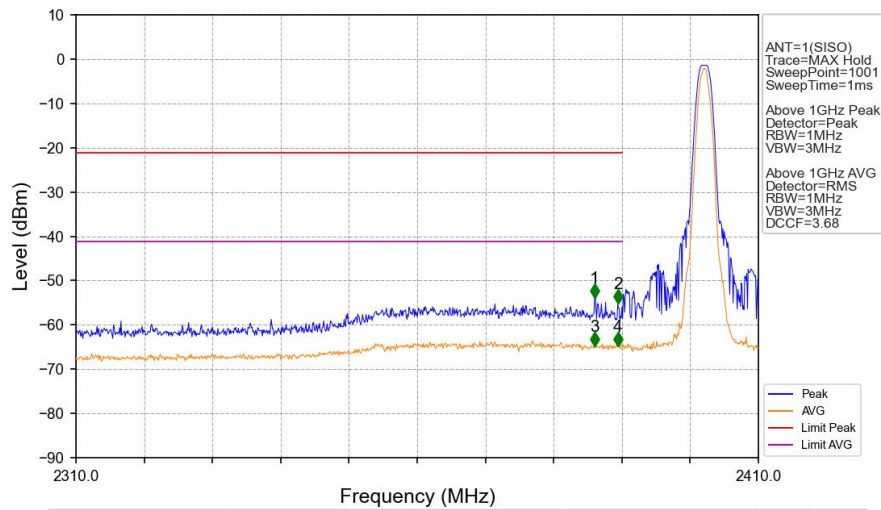
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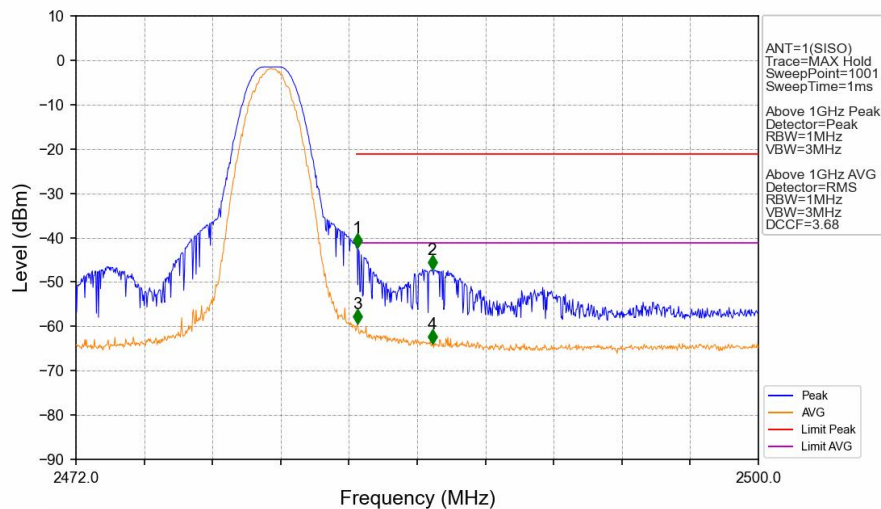
## A.7 Restrict Band

1M\_LCH\_2402MHz\_Ant1\_NTNV



| No | Frequency (MHz) | Level (dBm) | Limit (dBm) | Margin (dB) | Status | Remark | No | Frequency (MHz) | Level (dBm) | Limit (dBm) | Margin (dB) | Status | Remark |
|----|-----------------|-------------|-------------|-------------|--------|--------|----|-----------------|-------------|-------------|-------------|--------|--------|
| 1  | 2386.000        | -53.80      | -21.20      | 32.60       | Pass   | Peak   | 3  | 2386.000        | -64.83      | -41.20      | 23.64       | Pass   | AVG    |
| 2  | 2389.400        | -55.19      | -21.20      | 33.99       | Pass   | Peak   | 4  | 2389.400        | -64.85      | -41.20      | 23.65       | Pass   | AVG    |

1M\_HCH\_2480MHz\_Ant1\_NTNV

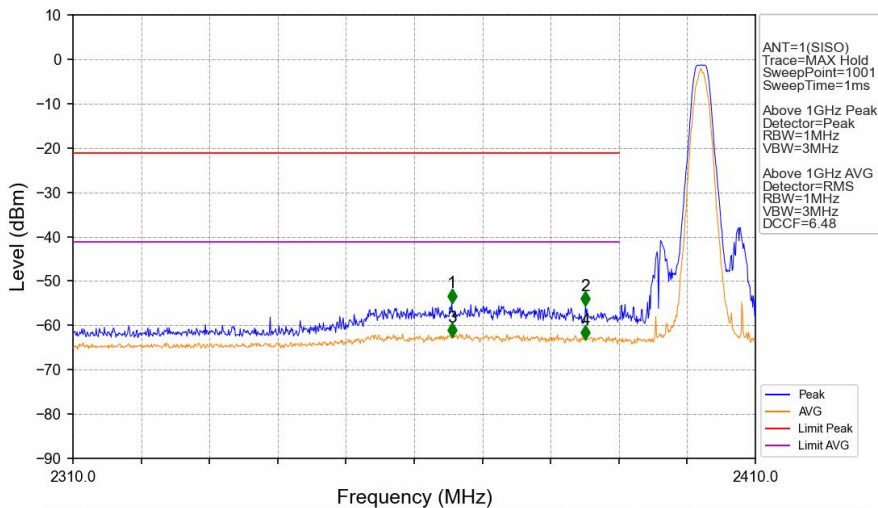


| No | Frequency (MHz) | Level (dBm) | Limit (dBm) | Margin (dB) | Status | Remark | No | Frequency (MHz) | Level (dBm) | Limit (dBm) | Margin (dB) | Status | Remark |
|----|-----------------|-------------|-------------|-------------|--------|--------|----|-----------------|-------------|-------------|-------------|--------|--------|
| 1  | 2483.536        | -42.30      | -21.20      | 21.09       | Pass   | Peak   | 3  | 2483.536        | -59.42      | -41.20      | 18.22       | Pass   | AVG    |
| 2  | 2486.616        | -47.08      | -21.20      | 25.88       | Pass   | Peak   | 4  | 2486.616        | -63.98      | -41.20      | 22.78       | Pass   | AVG    |



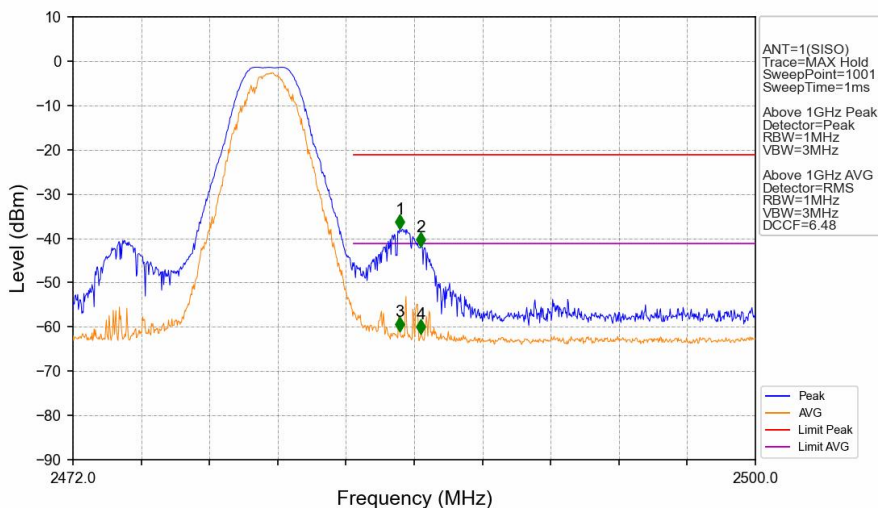


2M\_LCH\_2402MHz\_Ant1\_NTNV



| No | Frequency (MHz) | Level (dBm) | Limit (dBm) | Margin (dB) | Status | Remark | No | Frequency (MHz) | Level (dBm) | Limit (dBm) | Margin (dB) | Status | Remark |
|----|-----------------|-------------|-------------|-------------|--------|--------|----|-----------------|-------------|-------------|-------------|--------|--------|
| 1  | 2365.500        | -54.89      | -21.20      | 33.69       | Pass   | Peak   | 3  | 2365.500        | -62.66      | -41.20      | 21.46       | Pass   | AVG    |
| 2  | 2385.100        | -55.56      | -21.20      | 34.36       | Pass   | Peak   | 4  | 2385.100        | -63.20      | -41.20      | 22.00       | Pass   | AVG    |

2M\_HCH\_2480MHz\_Ant1\_NTNV



| No | Frequency (MHz) | Level (dBm) | Limit (dBm) | Margin (dB) | Status | Remark | No | Frequency (MHz) | Level (dBm) | Limit (dBm) | Margin (dB) | Status | Remark |
|----|-----------------|-------------|-------------|-------------|--------|--------|----|-----------------|-------------|-------------|-------------|--------|--------|
| 1  | 2485.412        | -37.83      | -21.20      | 16.63       | Pass   | Peak   | 3  | 2485.412        | -61.00      | -41.20      | 19.80       | Pass   | AVG    |
| 2  | 2486.280        | -41.94      | -21.20      | 20.74       | Pass   | Peak   | 4  | 2486.280        | -61.55      | -41.20      | 20.35       | Pass   | AVG    |

