

**FCC – TEST REPORT**

Report Number : **60.792.24.005.02R01** Date of Issue: **December 31, 2024**

Model/HVIN : **HG11385-US**

Product Type : **BLUETOOTH EAR DEFENDERS**

Applicant : **Lidl US LLC**

Address : **3500 S. Clark Street, Arlington Virginia 22202, United States.**

Production Facility : **Foshan Shunde Junye Electronic Co Ltd.**

Address : **Zhenghe South Road, Leliu Town, Shunde District, Foshan, Guangdong, China.**

Test Result : **n Positive** o Negative

Total pages including Appendices : **58**

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## 2 Details about the Test Laboratory

### Details about the Test Laboratory

#### Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch  
Building 12 & 13, Zhiheng Wisdomland Business Park, Nantou Checkpoint  
Road 2, Nanshan District  
Shenzhen 518052  
P.R. China

Telephone: 86 755 8828 6998

Fax: 86 755 828 5299

FCC Registration No.: 514049

FCC Designation Number: CN5009

### 3 Description of the Equipment Under Test

#### Description of the Equipment Under Test

|                            |                                                                                                            |
|----------------------------|------------------------------------------------------------------------------------------------------------|
| Product:                   | BLUETOOTH EAR DEFENDERS                                                                                    |
| Model no.:                 | HG11385-US                                                                                                 |
| Brand name:                | PARKSIDE                                                                                                   |
| FCC ID:                    | 2AJ9O-HG11385                                                                                              |
| Options and accessories:   | N/A                                                                                                        |
| Battery information:       | Rechargeable Li-ion Battery<br>Model: HDY 802040<br>3.7 VDC 500 mAh 1.85 Wh                                |
| Rating:                    | 5 VDC 1.5A<br>(USB C Port – Charging)                                                                      |
| RF Transmission Frequency: | 2402 – 2480 MHz                                                                                            |
| No. of Operated Channel:   | 79                                                                                                         |
| Modulation:                | GFSK, $\pi/4$ -DQPSK, 8DPSK                                                                                |
| Antenna Type:              | PCB Antenna                                                                                                |
| Antenna                    | Gain: -0.58 dBi                                                                                            |
| Description of the EUT:    | The Equipment Under Test (EUT) is a Headphone which support Bluetooth Classic function operated at 2.4GHz. |

NOTE 1: The above EUT's information is declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.



4 Summary of Test Standards

| Test Standards                             |                                                                        |
|--------------------------------------------|------------------------------------------------------------------------|
| FCC Part 15 Subpart C<br>10-1-2023 Edition | PART 15 - RADIO FREQUENCY DEVICES<br>Subpart C - Intentional Radiators |

All the test methods were according to KDB 558074 D01 15.247 Meas Guidance v05r02 Measurement Guidance and ANSI C63.10-2020.

## 5 Summary of Test Results

| Technical Requirements            |                                             |            |             |
|-----------------------------------|---------------------------------------------|------------|-------------|
| FCC Part 15 Subpart C             |                                             |            |             |
| Test Condition                    |                                             | Test Site  | Test Result |
| §15.207                           | Conducted emission AC power port            | Site 1     | Pass        |
| §15.247(b)(1)                     | Conducted peak output power                 | Site 1     | Pass        |
| §15.247(a)(1)                     | 20dB bandwidth                              | Site 1     | Pass        |
| §15.247(a)(1)                     | Carrier channel frequency separation        | Site 1     | Pass        |
| §15.247(a)(1)(iii)                | Number of hopping frequencies               | Site 1     | Pass        |
| §15.247(a)(1)(iii)                | Dwell Time - Average Time of Occupancy      | Site 1     | Pass        |
| §15.247(d)                        | Spurious RF conducted emissions             | Site 1     | Pass        |
| §15.247(d)                        | Band edge                                   | Site 1     | Pass        |
| §15.247(d) & §15.209<br>& §15.205 | Spurious radiated emissions for transmitter | Site 1     | Pass        |
| §15.203                           | Antenna requirement                         | See note 2 | Pass        |

Note 1: N/A=Not Applicable.

Note 2: The EUT uses a metal case antenna, which gain is -0.58 dBi. In accordance to §15.203, it is considered sufficiently to comply with the provisions of this section.

## 6 General Remarks

### Remarks

This submittal(s) (test report) is intended for FCC ID: 2AJ9O-HG11385, complies with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C rules.

### SUMMARY:

All tests according to the regulations cited on page 5 were

n - Performed

o - **Not** Performed

The Equipment Under Test

n - **Fulfills** the general approval requirements.

o - **Does not** fulfill the general approval requirements.

Sample Received Date: November 24, 2024

Testing Start Date: November 25, 2024

Testing End Date: December 31, 2024

- TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch -

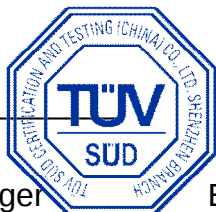
Reviewed by:

Prepared by:

Tested by:



Eric LI  
Section Manager



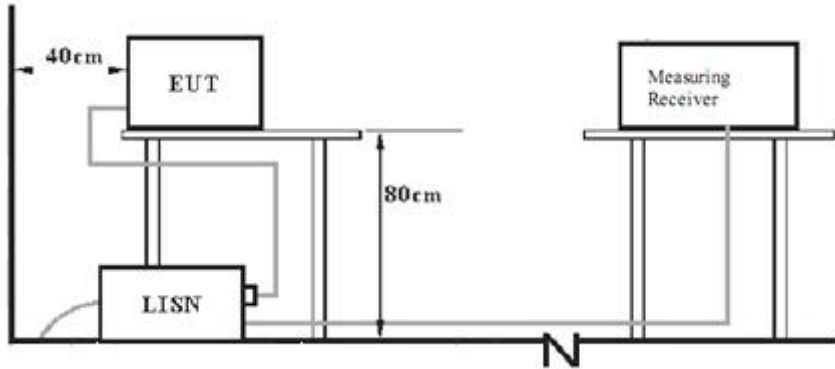
Kevin DU  
EMC Project Engineer



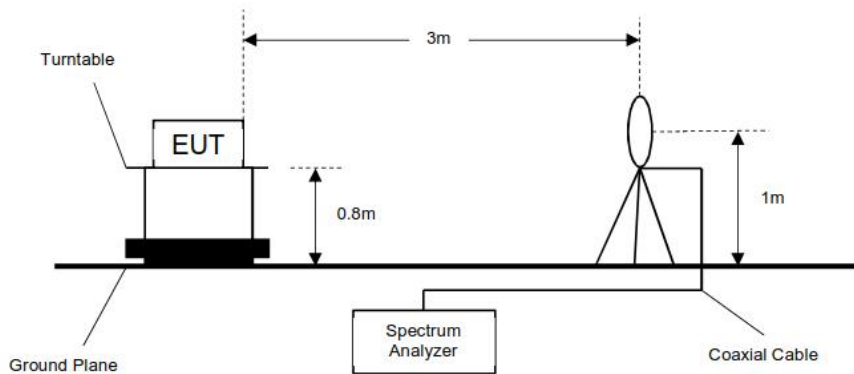
Carry Cai  
Test Engineer

## 7 Test Setups

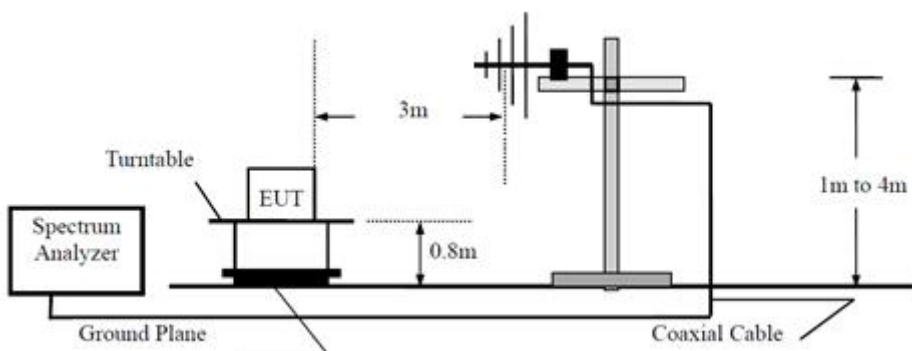
### 7.1 AC Power Line Conducted Emission test setups



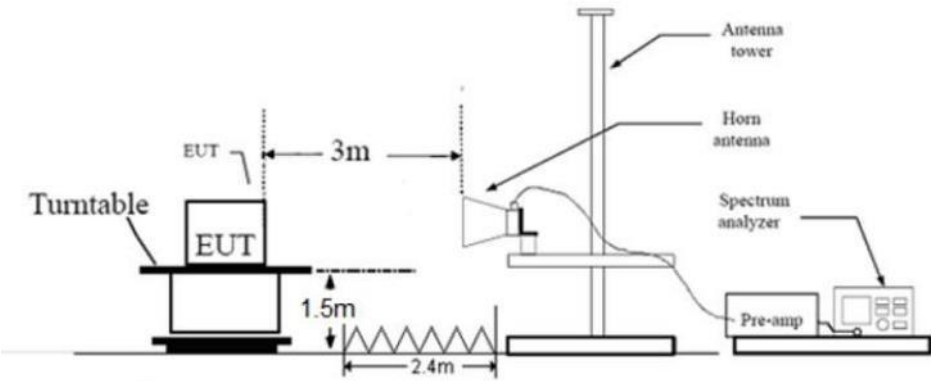
### 7.2 Radiated test setups 9KHz - 30MHz



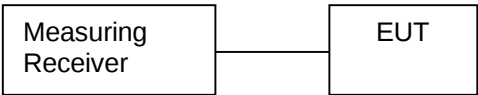
### 30MHz - 1GHz



Above 1GHz



7.3 Conducted RF test setups



## 8 Systems Test Configuration

Auxiliary Equipment Used during Test:

| Description | Manufacturer | Model NO. | S/N |
|-------------|--------------|-----------|-----|
| Adapter     | Apple        | A1443     | --- |
| Notebook    | LENOVO       | X220      | --- |

Cables Used During Test:

| Cable | Length | Shielded/unshielded | With / without ferrite |
|-------|--------|---------------------|------------------------|
| ---   | ---    | ---                 | ---                    |

Test software information:

| Test Software Version | Broadcom BlueTool |             |
|-----------------------|-------------------|-------------|
| Modulation            | Setting TX Power  | Packet Type |
| GFSK                  | Default           | PRBS9       |
| $\pi/4$ -DQPSK        | Default           | PRBS9       |
| 8DPSK                 | Default           | PRBS9       |

The system was configured to hopping mode and non-hopping mode.

Hopping mode: typical working mode (normal hopping status)

Non-hopping mode: The system was configured to operate at a signal channel transmitting. The test software allows the configuration and operation at the worst-case duty and the highest transmit power.

## 9 Technical Requirement

### 9.1 Conducted Emission

#### Test Method

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. Both sides of AC line were checked for maximum conducted interference.
6. The frequency range from 150 kHz to 30 MHz was searched.
7. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

#### Limit

| Frequency<br>MHz | QP Limit<br>dB $\mu$ V | AV Limit<br>dB $\mu$ V |
|------------------|------------------------|------------------------|
| 0.150-0.500      | 66-56*                 | 56-46*                 |
| 0.500-5          | 56                     | 46                     |
| 5-30             | 60                     | 50                     |

\*Decreases with the logarithm of the frequency.



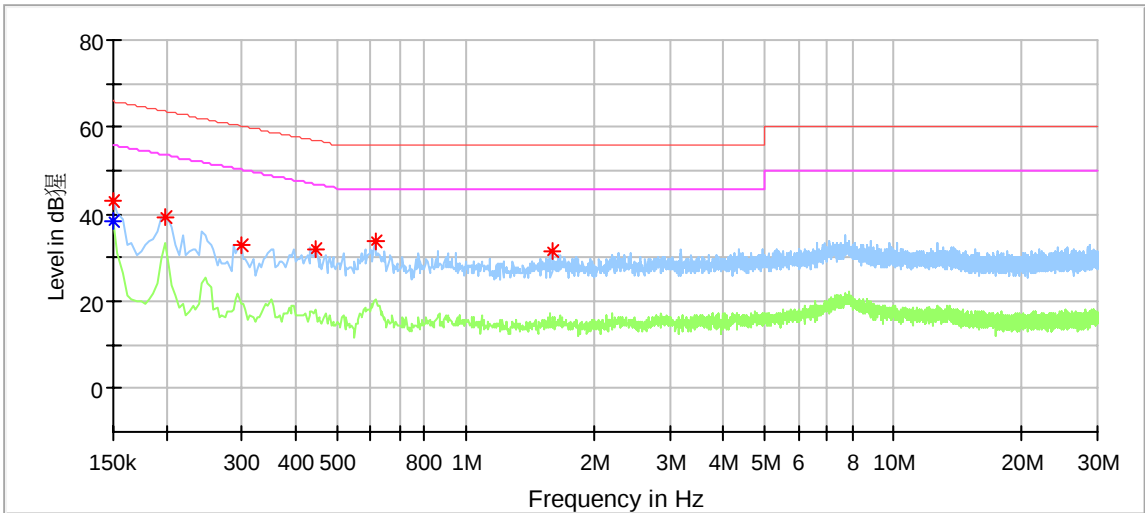
Test result:

EUT: HG11385-US  
Op Condition: USB Port Charging Mode  
Test Specification: FCC 15.107  
Comment: 120V AC 60Hz, L Line

Test Result

☒ Passed

☐ Not Passed



Critical Freqs

| Frequency (MHz) | MaxPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Line | Corr. (dB) |
|-----------------|----------------|----------------|--------------|-------------|------|------------|
| 0.150000        | 43.23          | ---            | 66.00        | 22.77       | L1   | 9.67       |
| 0.150000        | ---            | 38.38          | 56.00        | 17.62       | L1   | 9.67       |
| 0.198000        | 39.51          | ---            | 63.69        | 24.18       | L1   | 9.67       |
| 0.298000        | 32.81          | ---            | 60.30        | 27.49       | L1   | 9.67       |
| 0.446000        | 32.13          | ---            | 56.95        | 24.82       | L1   | 9.68       |
| 0.614000        | 33.68          | ---            | 56.00        | 22.32       | L1   | 9.69       |
| 1.590000        | 31.62          | ---            | 56.00        | 24.38       | L1   | 9.72       |

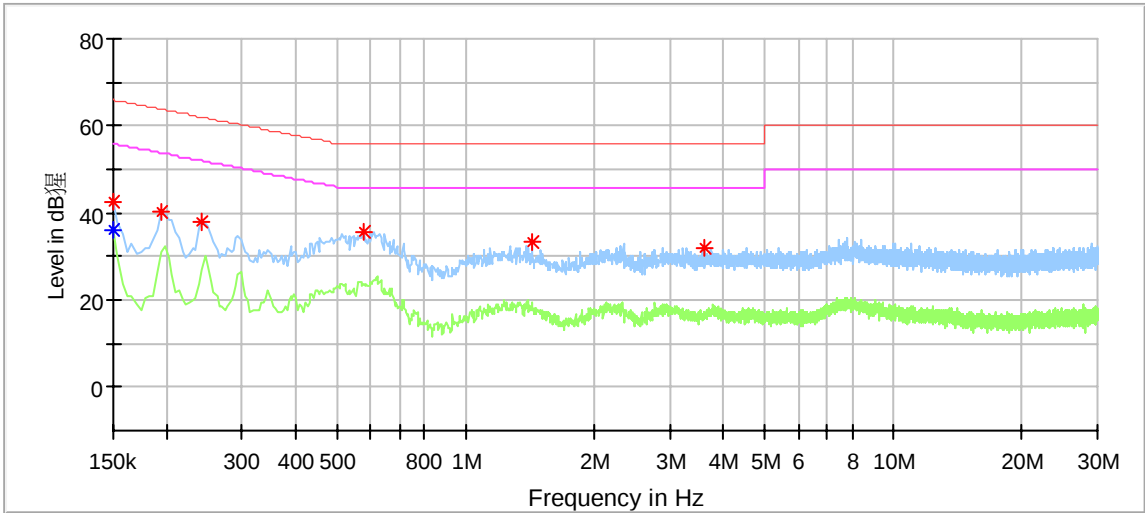


EUT: HG11385-US  
Op Condition: USB Port Charging Mode  
Test Specification: FCC 15.107  
Comment: 120V AC 60Hz, N Line

Test Result

☒ Passed

☐ Not Passed



Critical Freqs

| Frequency (MHz) | MaxPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Line | Corr. (dB) |
|-----------------|----------------|----------------|--------------|-------------|------|------------|
| 0.150000        | 42.43          | ---            | 66.00        | 23.57       | N    | 9.66       |
| 0.150000        | ---            | 36.05          | 56.00        | 19.95       | N    | 9.66       |
| 0.194000        | 40.20          | ---            | 63.86        | 23.66       | N    | 9.67       |
| 0.242000        | 38.17          | ---            | 62.03        | 23.86       | N    | 9.67       |
| 0.578000        | 35.69          | ---            | 56.00        | 20.31       | N    | 9.68       |
| 1.434000        | 33.23          | ---            | 56.00        | 22.77       | N    | 9.69       |
| 3.622000        | 31.99          | ---            | 56.00        | 24.01       | N    | 9.75       |

## 9.2 Conducted Peak Output Power & EIRP

### Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. Use the following test receiver settings:  
Span = approximately 5 times the 20dB bandwidth, centered on a hopping channel  
RBW > the 20dB bandwidth of the emission being measured, VBW ≥ RBW,  
Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power and record the results in the test report.
5. Repeat above procedures until all frequencies measured were complete.

### Limits

| Frequency Range<br>MHz | Limit<br>W | Limit<br>dBm |
|------------------------|------------|--------------|
| 2400-2483.5            | ≤1         | ≤30          |

### Test result:

#### Bluetooth Mode GFSK modulation Test Result

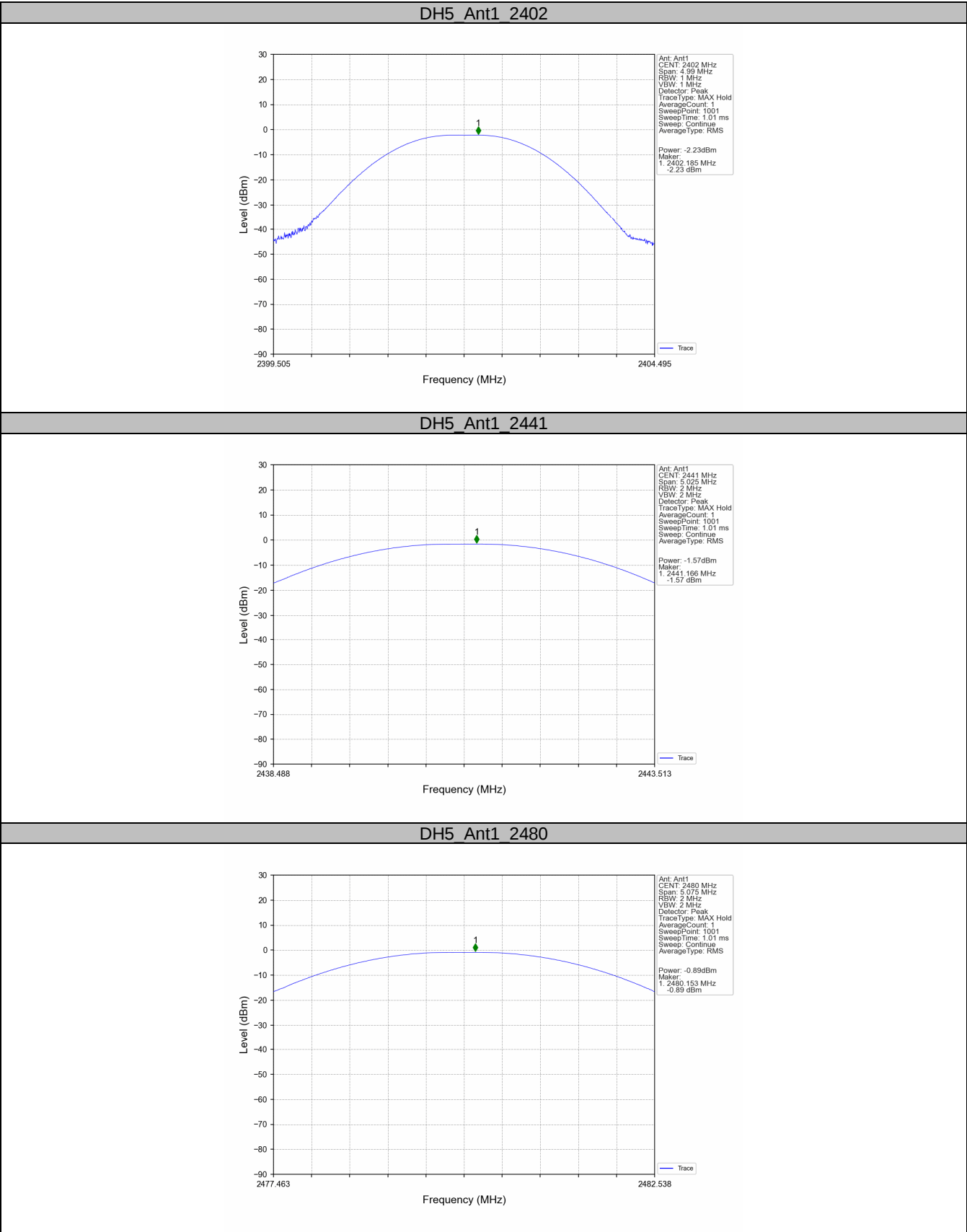
| Frequency<br>MHz       | Conducted Peak<br>Output Power<br>dBm | Result |
|------------------------|---------------------------------------|--------|
| Low channel 2402MHz    | -2.23                                 | Pass   |
| Middle channel 2441MHz | -1.57                                 | Pass   |
| High channel 2480MHz   | -0.89                                 | Pass   |

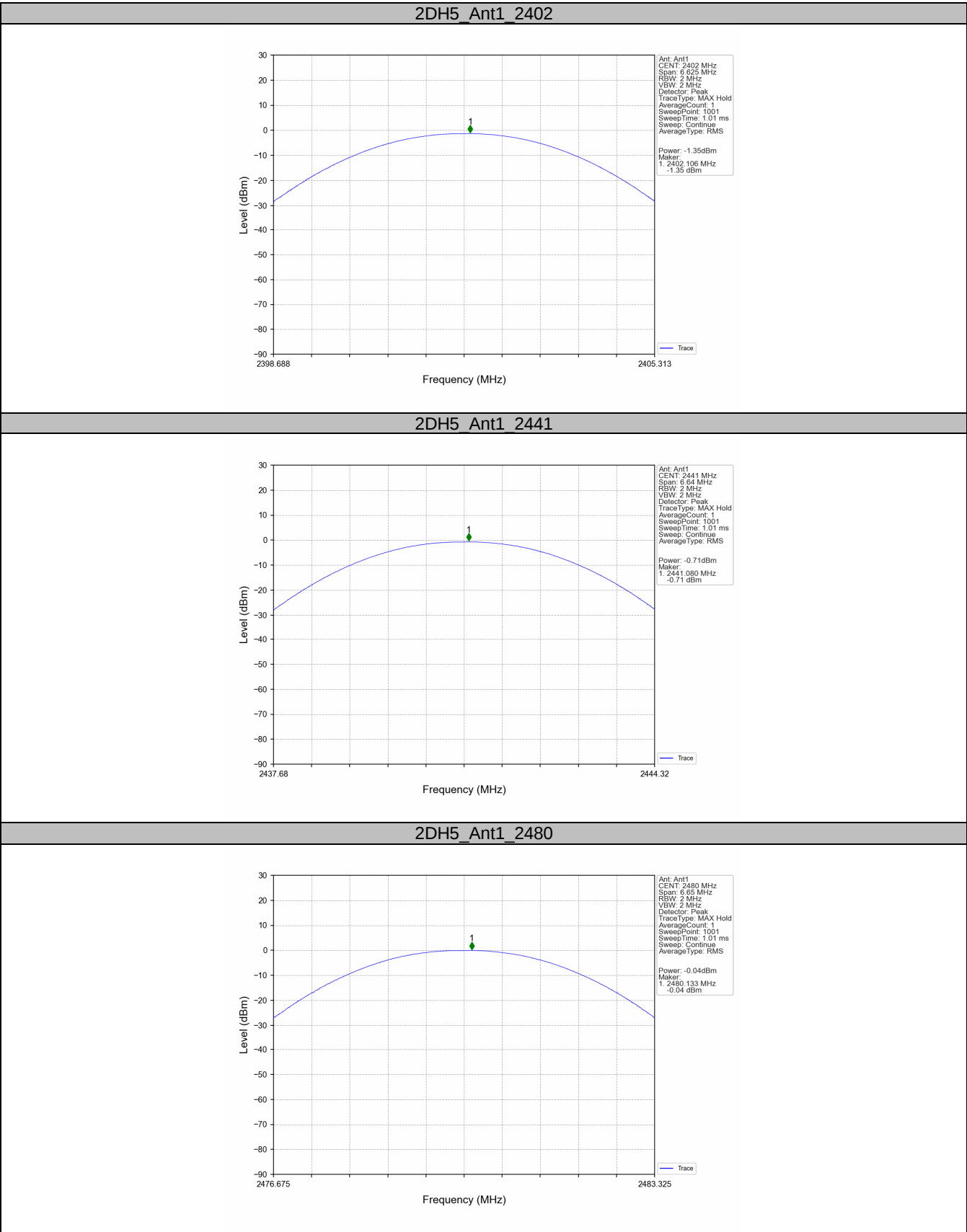
#### Bluetooth Mode $\pi/4$ -DQPSK modulation Test Result

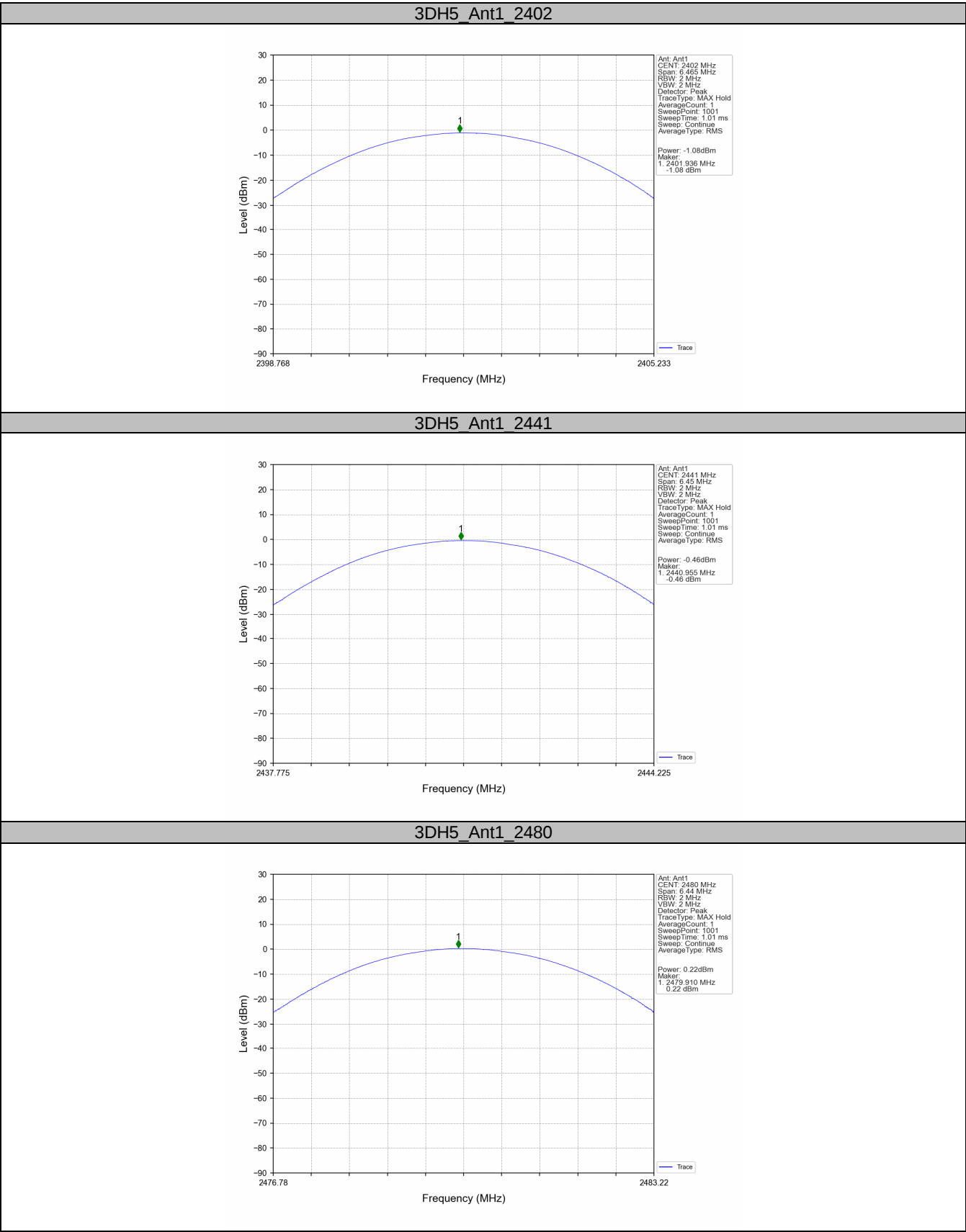
| Frequency<br>MHz       | Conducted Peak<br>Output Power<br>dBm | Result |
|------------------------|---------------------------------------|--------|
| Low channel 2402MHz    | -1.35                                 | Pass   |
| Middle channel 2441MHz | -0.71                                 | Pass   |
| High channel 2480MHz   | -0.04                                 | Pass   |

#### Bluetooth Mode 8DPSK modulation Test Result

| Frequency<br>MHz       | Conducted Peak<br>Output Power<br>dBm | Result |
|------------------------|---------------------------------------|--------|
| Low channel 2402MHz    | -1.08                                 | Pass   |
| Middle channel 2441MHz | -0.46                                 | Pass   |
| High channel 2480MHz   | 0.22                                  | Pass   |







### 9.3 20 dB Bandwidth

#### Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Use the following test receiver settings:  
Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel  
RBW  $\geq$  1% to 5% of the 20 dB bandwidth/99% OBW, VBW  $\geq$  3RBW,  
Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Measure the frequency difference of two frequencies that were attenuated 20 dB/99% OBW from the reference level. Record the frequency difference as the emission bandwidth. Record the results.
5. Repeat above procedures until all frequencies measured were complete.

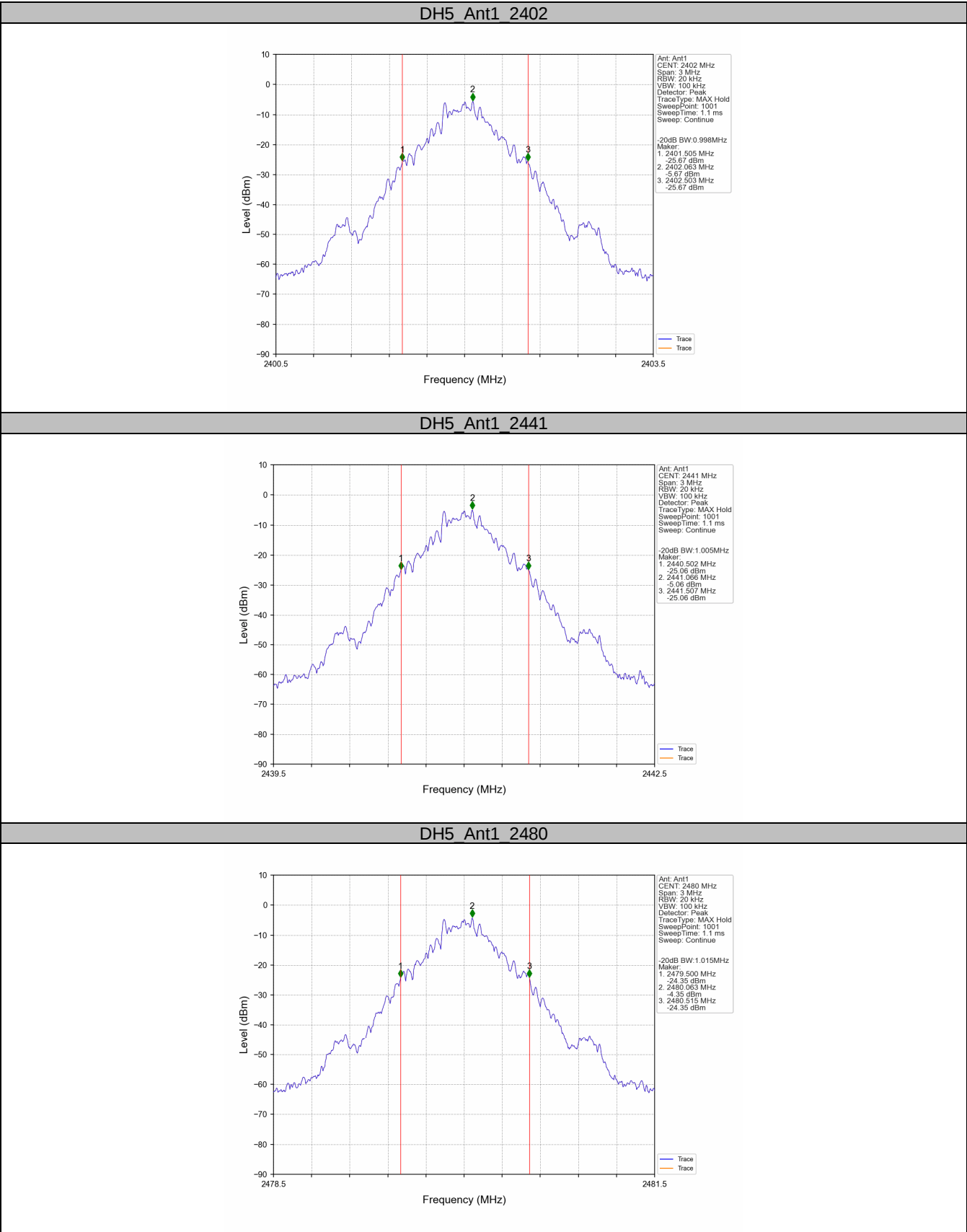
#### Limit

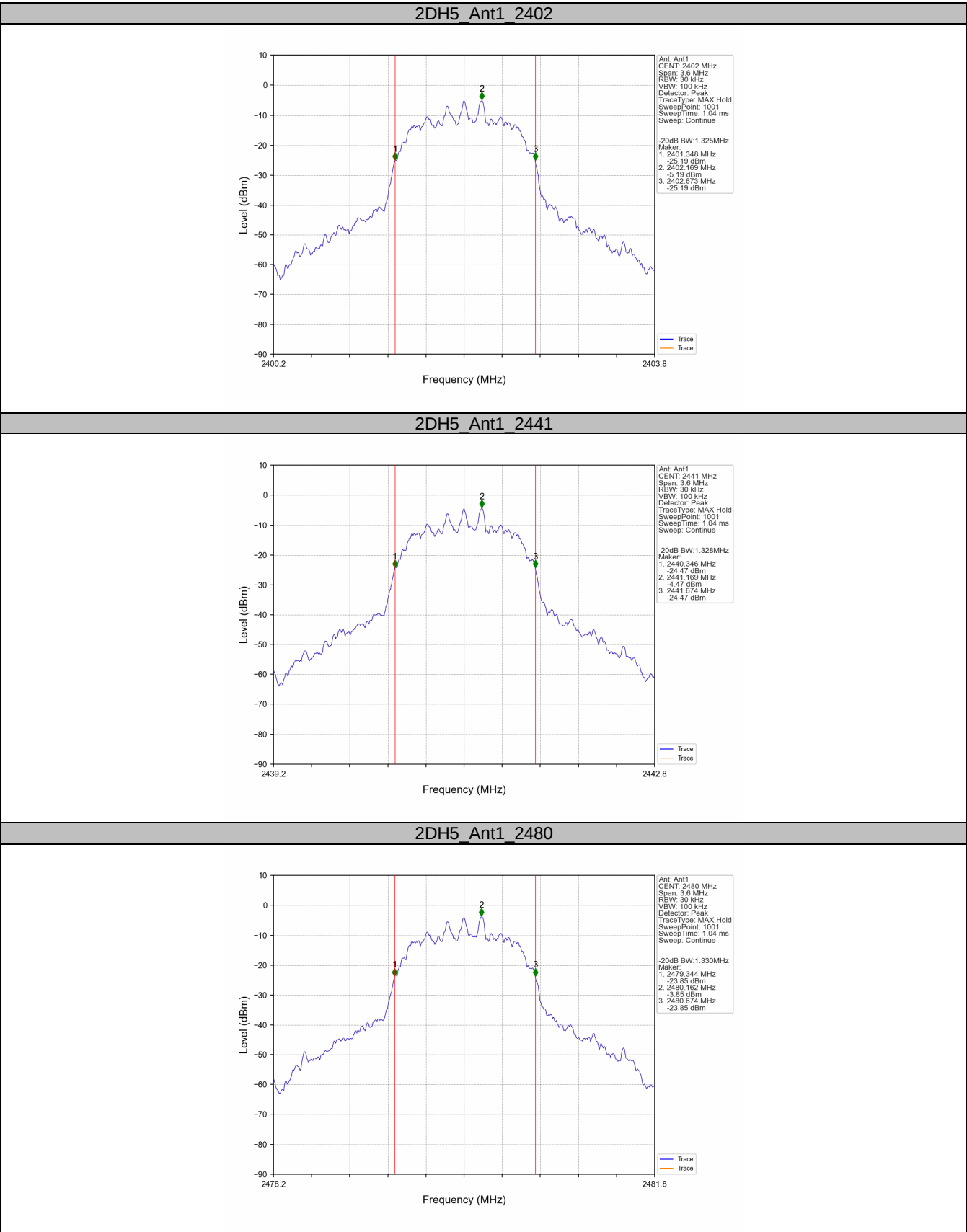
Limit [kHz]

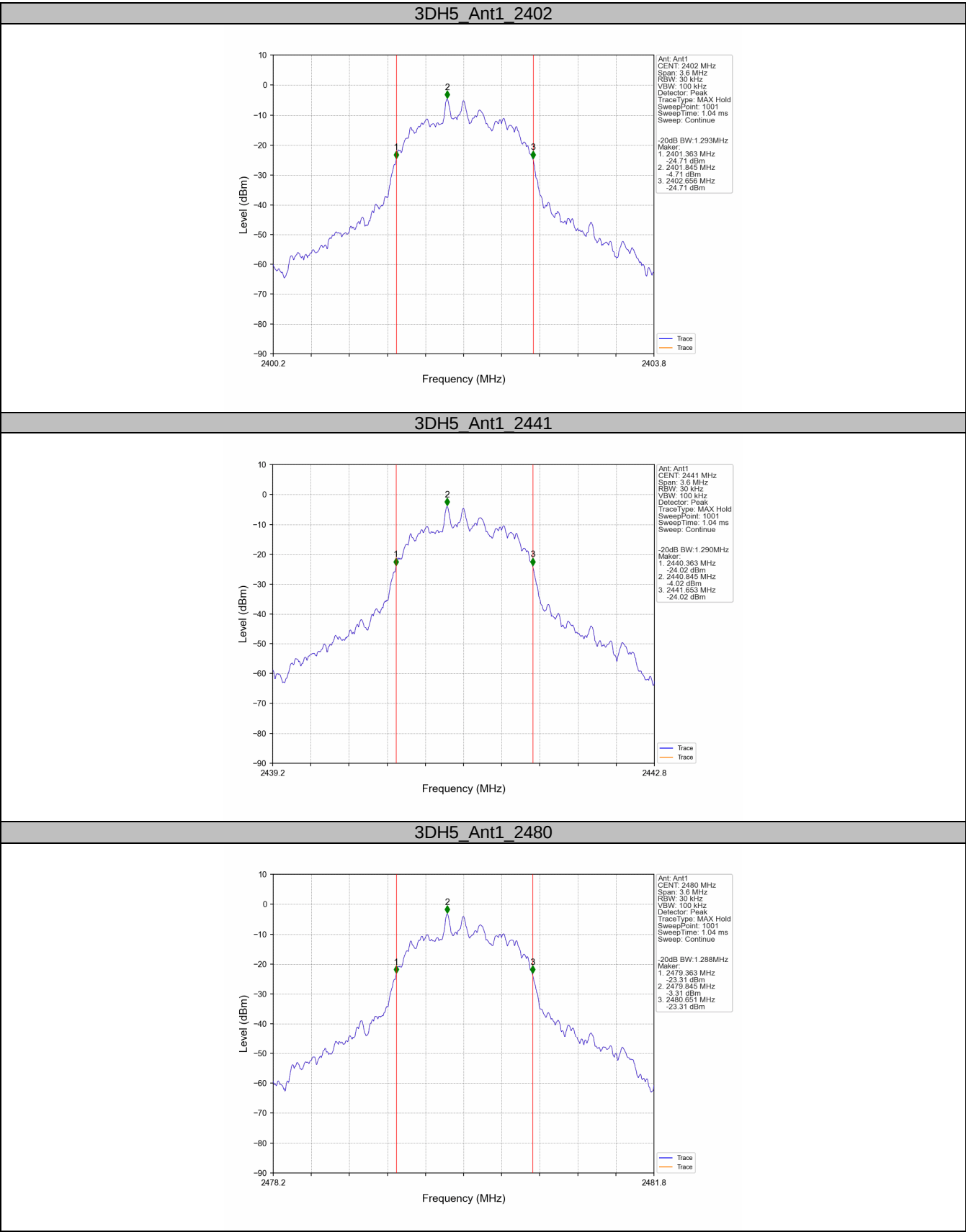
N/A

#### Test result:

| TestMode       | Frequency<br>MHz | 20 dB Bandwidth<br>MHz | Limit<br>MHz | Result |
|----------------|------------------|------------------------|--------------|--------|
| GFSK           | 2402             | 0.998                  | --           | Pass   |
| GFSK           | 2441             | 1.005                  | --           | Pass   |
| GFSK           | 2480             | 1.015                  | --           | Pass   |
| $\pi/4$ -DQPSK | 2402             | 1.325                  | --           | Pass   |
| $\pi/4$ -DQPSK | 2441             | 1.328                  | --           | Pass   |
| $\pi/4$ -DQPSK | 2480             | 1.330                  | --           | Pass   |
| 8DPSK          | 2402             | 1.293                  | --           | Pass   |
| 8DPSK          | 2441             | 1.290                  | --           | Pass   |
| 8DPSK          | 2480             | 1.288                  | --           | Pass   |







## 9.4 Carrier Frequency Separation

### Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit to hopping mode.
3. Use the following spectrum analyzer settings:  
Span = wide enough to capture the peaks of two adjacent channels, RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel. VBW  $\geq$  RBW, Sweep = auto, Detector function = peak.
4. By using the Max-Hold function record the separation of two adjacent channels.
5. Measure the frequency difference of these two adjacent channels by spectrum analyzer marker function. Record the results.
6. Repeat above procedures until all frequencies measured were complete.

### Limit

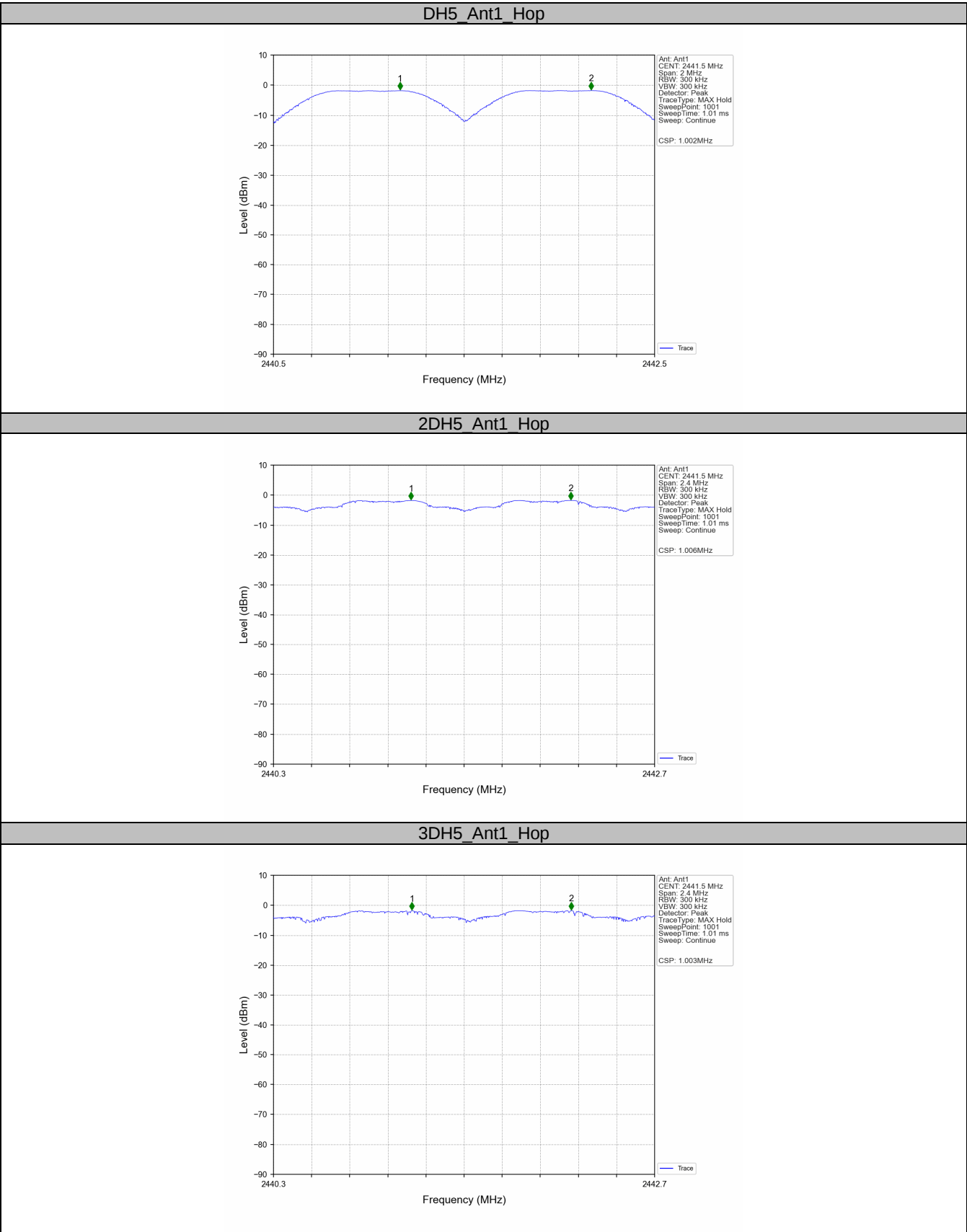
| Limit<br>kHz                                                         |
|----------------------------------------------------------------------|
| $\geq 25\text{kHz}$ or $2/3$ of the 20 dB bandwidth which is greater |

| Modulation     | Frequency<br>MHz | 2/3 of 20 dB Bandwidth<br>kHz |
|----------------|------------------|-------------------------------|
| GFSK           | 2441             | $\geq 0.677$                  |
| $\pi/4$ -DQPSK | 2441             | $\geq 0.887$                  |
| 8DPSK          | 2441             | $\geq 0.862$                  |

### Test result:

- The measurement was performed with the typical configuration (normal hopping status).

| Modulation     | Frequency<br>MHz | Carrier Frequency Separation<br>MHz | Result |
|----------------|------------------|-------------------------------------|--------|
| GFSK           | 2441             | 1.002                               | Pass   |
| $\pi/4$ -DQPSK | 2441             | 1.006                               | Pass   |
| 8DPSK          | 2441             | 1.003                               | Pass   |





9.5 Number of Hopping Frequencies

Test Method

- 1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
- 2. Set to the maximum power setting and enable the EUT transmit to hopping mode.
- 3. Use the following spectrum analyzer settings:  
Span = the frequency band of operation, RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller, VBW ≥RBW, Sweep = auto, Detector function = peak, Trace=Max hold.
- 4. Allow the trace to stabilize. It may prove necessary to break the span up to sections, in order to clearly show all of the hopping frequencies. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

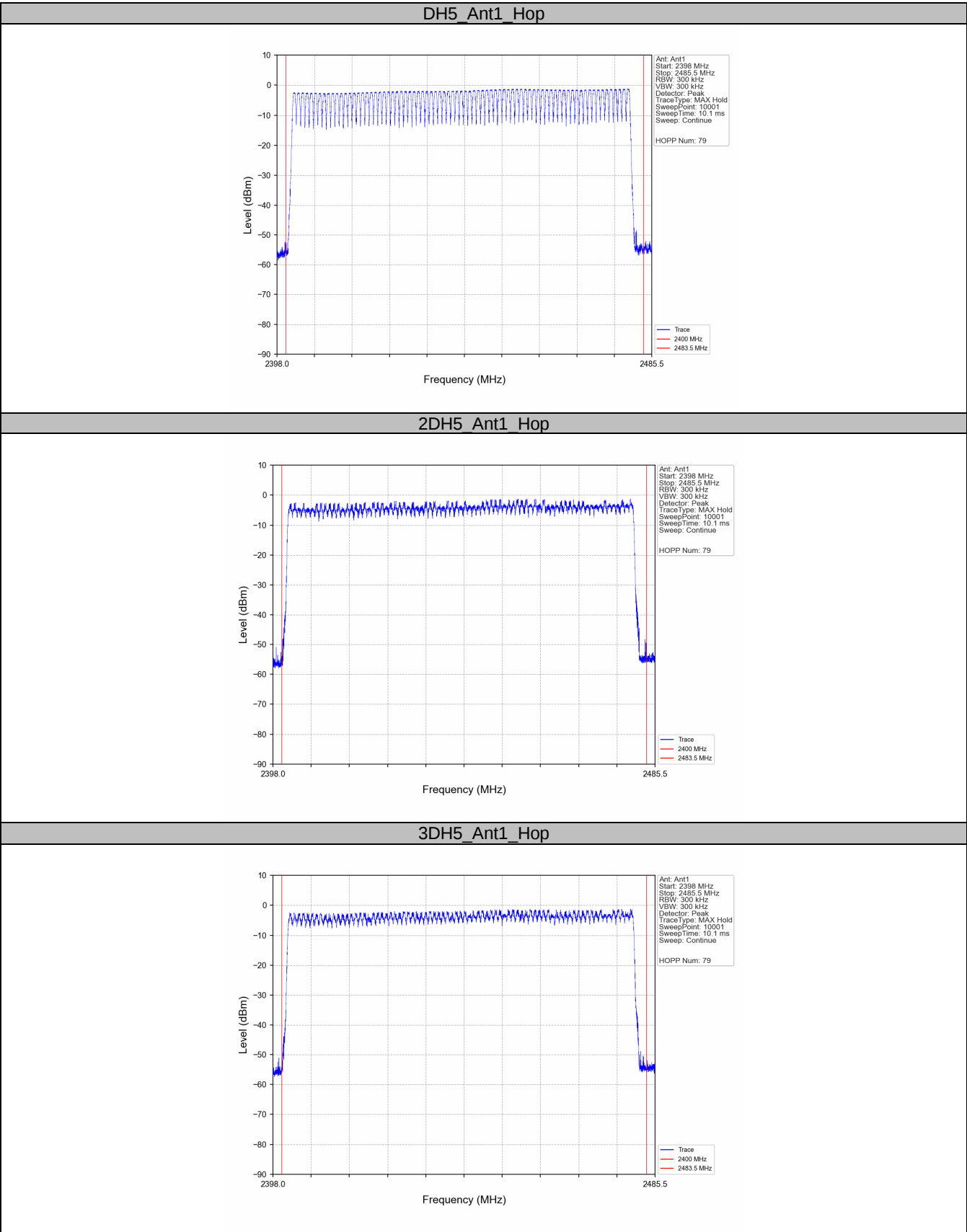
Limit

Limit  
number

≥ 15

Test result:

| Number of hopping frequencies | Result |
|-------------------------------|--------|
| 79                            | Pass   |



## 9.6 Dwell Time

### Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit to hopping mode.
3. Span: Zero span, centered on a hopping channel.
4. RBW shall be  $\leq$  channel spacing and where possible RBW should be set  $\gg 1 / T$ , where T is the expected dwell time per channel.
5. Sweep: As necessary to capture the entire dwell time per hopping channel; where possible use a video trigger and trigger delay so that the transmitted signal starts a little to the right of the start of the plot. The trigger level might need slight adjustment to prevent triggering when the system hops on an adjacent channel; a second plot might be needed with a longer sweep time to show two successive hops on a channel.
6. Detector function: Peak.
7. Trace: Max hold. Use the marker-delta function to determine the transmit time per hop. If this value varies with different modes of operation (data rate, modulation format, number of hopping channels, etc.), then repeat this test for each variation in transmit time.

### Limit

The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

### Test result:

#### Dwell time

The maximum dwell time shall be 0.4 s.

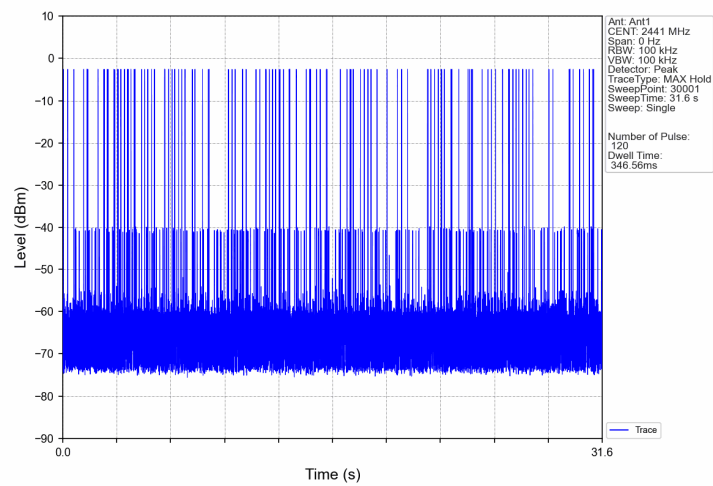
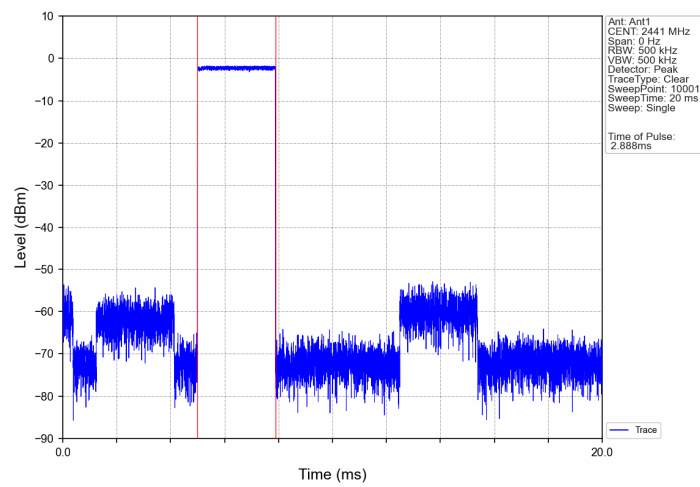
According to the Bluetooth Core Specification, the worse result (DH5, 2DH5, 3DH5 mode) was reported to show compliance.

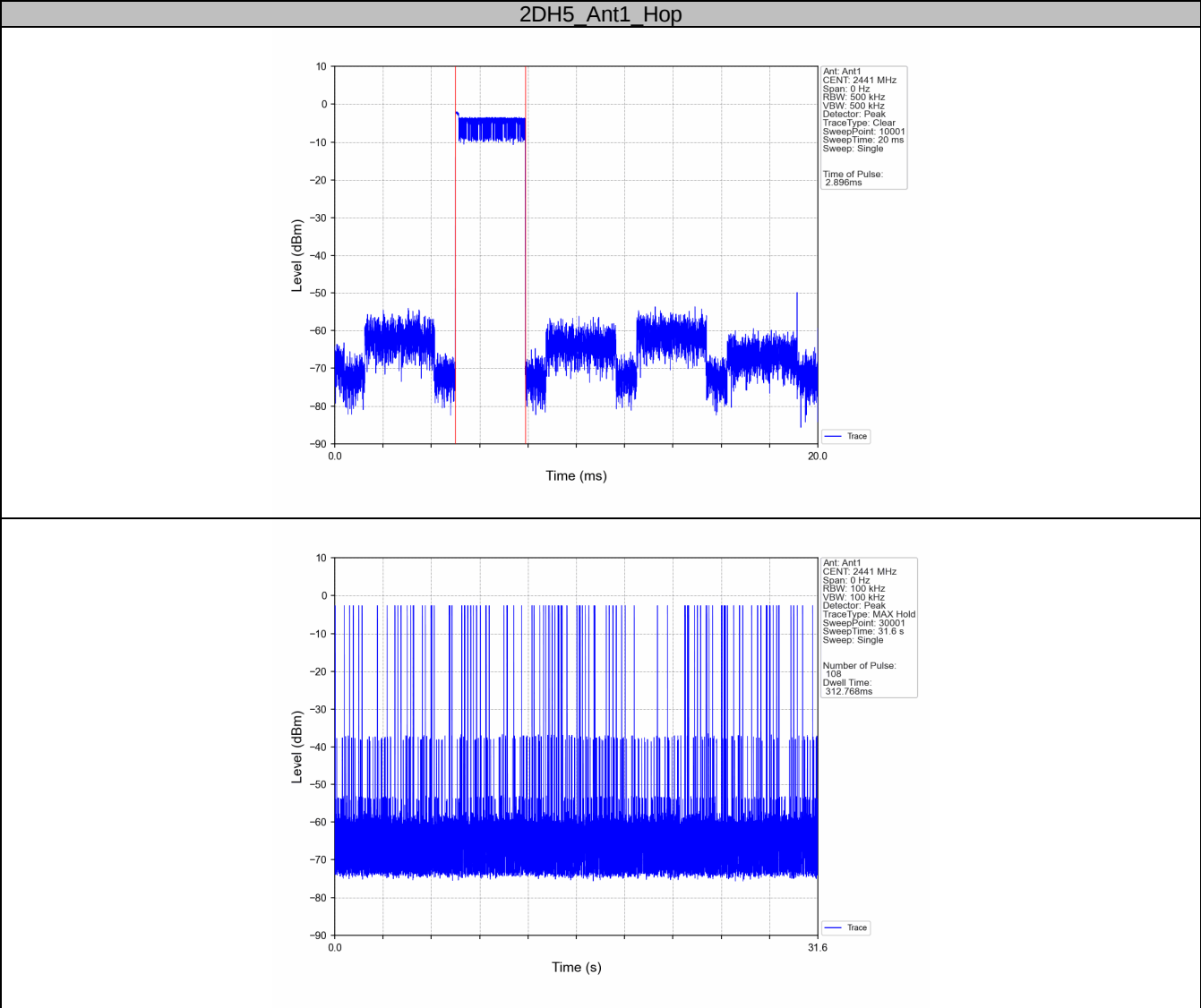
The duration for dwell time calculation:  $0.4 \text{ [s]} \times \text{hopping number} = 0.4 \text{ [s]} \times 79 \text{ [ch]} = 31.6 \text{ [s]}$

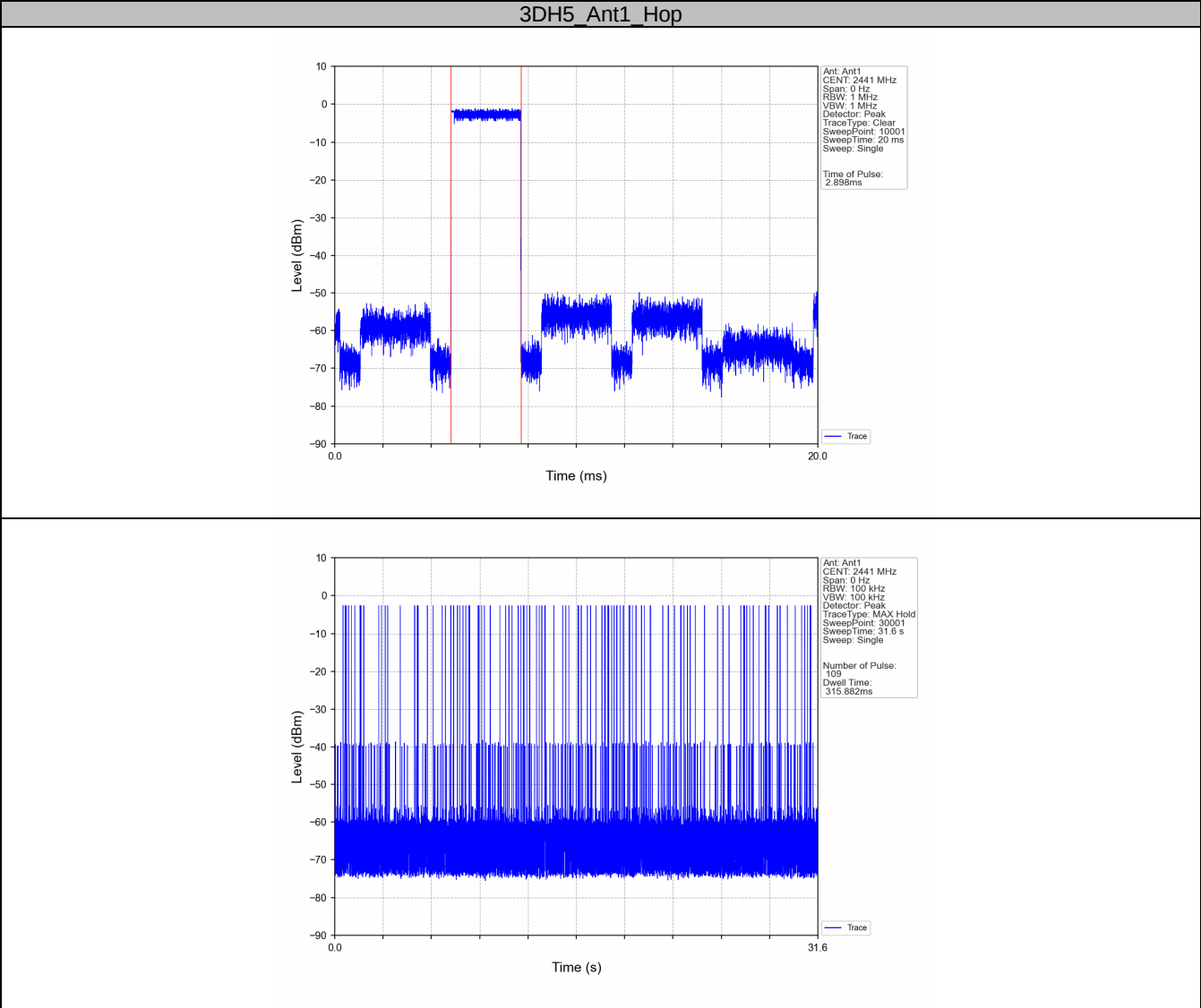
The Dwell Time = Burst Width \* Total Hops.

| Test Mode | Channel | Burst Width (ms) | Result (ms) | Limit (ms) | Verdict |
|-----------|---------|------------------|-------------|------------|---------|
| DH5       | Hop     | 2.89             | 346.560     | $\leq 400$ | PASS    |
| 2DH5      | Hop     | 2.90             | 312.768     | $\leq 400$ | PASS    |
| 3DH5      | Hop     | 2.90             | 315.882     | $\leq 400$ | PASS    |

## DH5\_Ant1\_Hop







## 9.7 Spurious RF Conducted Emissions

### Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector, Sweep = auto, Span = wide enough to capture the peak level of the in-band emission and all spurious emissions, Trace = max hold. Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded. The level displayed must comply with the limit specified in this Section.
4. Measure and record the results in the test report.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency

### Limit

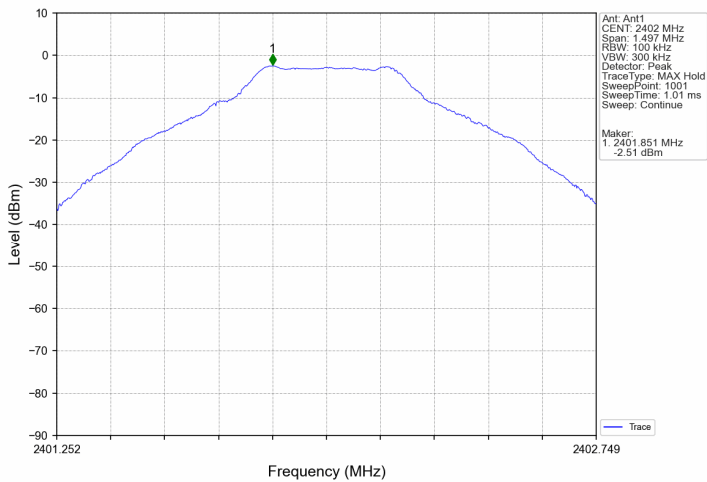
| Frequency Range<br>MHz | Limit (dBc) |
|------------------------|-------------|
| 30-25000               | -20         |

| Test Mode | Frequency (MHz) | Packet Type | Level of Reference (dBm) | Limit (dBm) |
|-----------|-----------------|-------------|--------------------------|-------------|
| GFSK      | 2402            | DH5         | -2.51                    | -22.51      |
|           | 2441            | DH5         | -1.90                    | -21.90      |
|           | 2480            | DH5         | -1.24                    | -21.24      |
|           | HOPP            | DH5         | -1.53                    | -21.53      |
|           |                 |             | -1.53                    | -21.53      |
| Pi/4DQPSK | 2402            | 2DH5        | -2.50                    | -22.50      |
|           | 2441            | 2DH5        | -1.89                    | -21.89      |
|           | 2480            | 2DH5        | -1.23                    | -21.23      |
|           | HOPP            | 2DH5        | -1.37                    | -21.37      |
|           |                 |             | -1.37                    | -21.37      |
| 8DPSK     | 2402            | 3DH5        | -2.50                    | -22.50      |
|           | 2441            | 3DH5        | -1.92                    | -21.92      |
|           | 2480            | 3DH5        | -1.25                    | -21.25      |
|           | HOPP            | 3DH5        | -1.36                    | -21.36      |
|           |                 |             | -1.36                    | -21.36      |

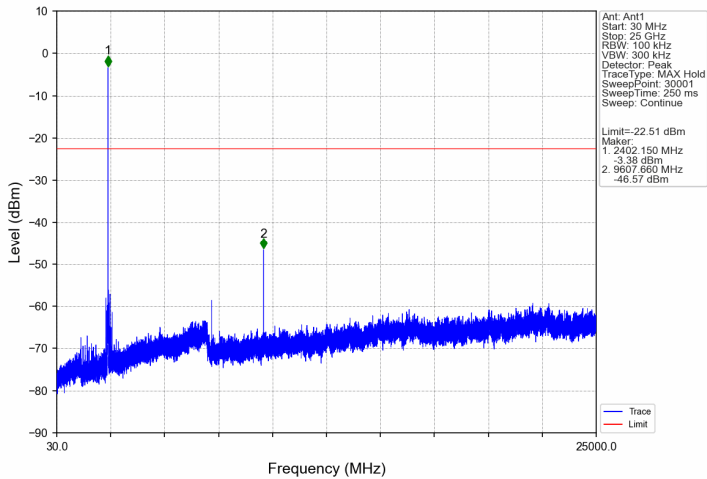
### Test result:



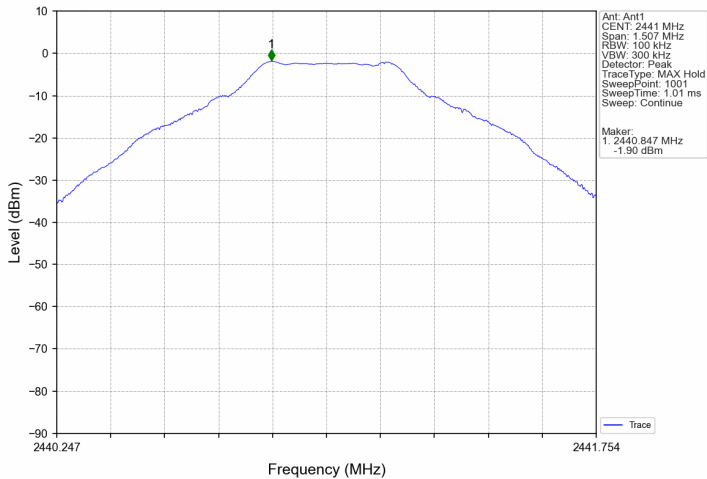
DH5\_Ant1\_2402\_0-Reference

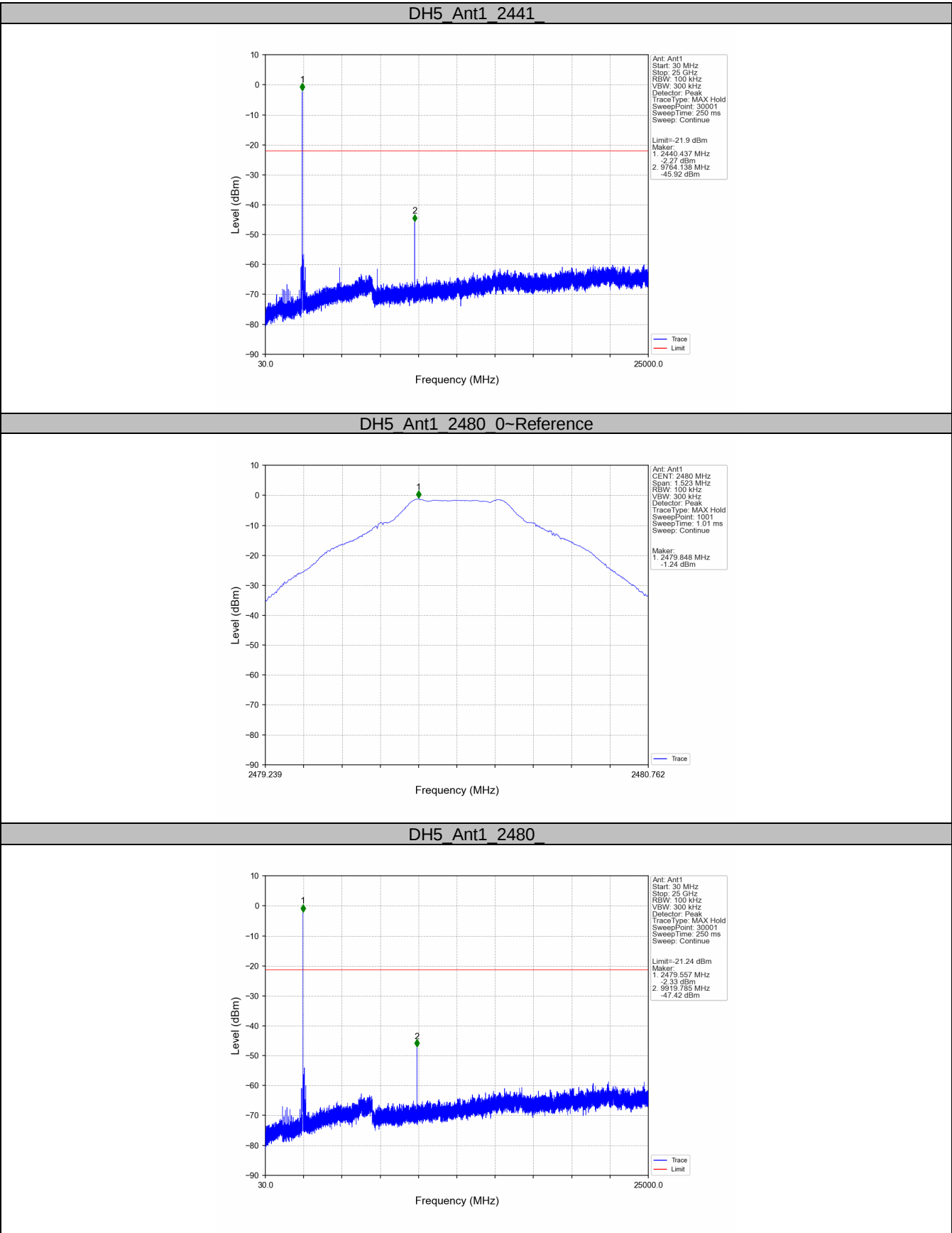


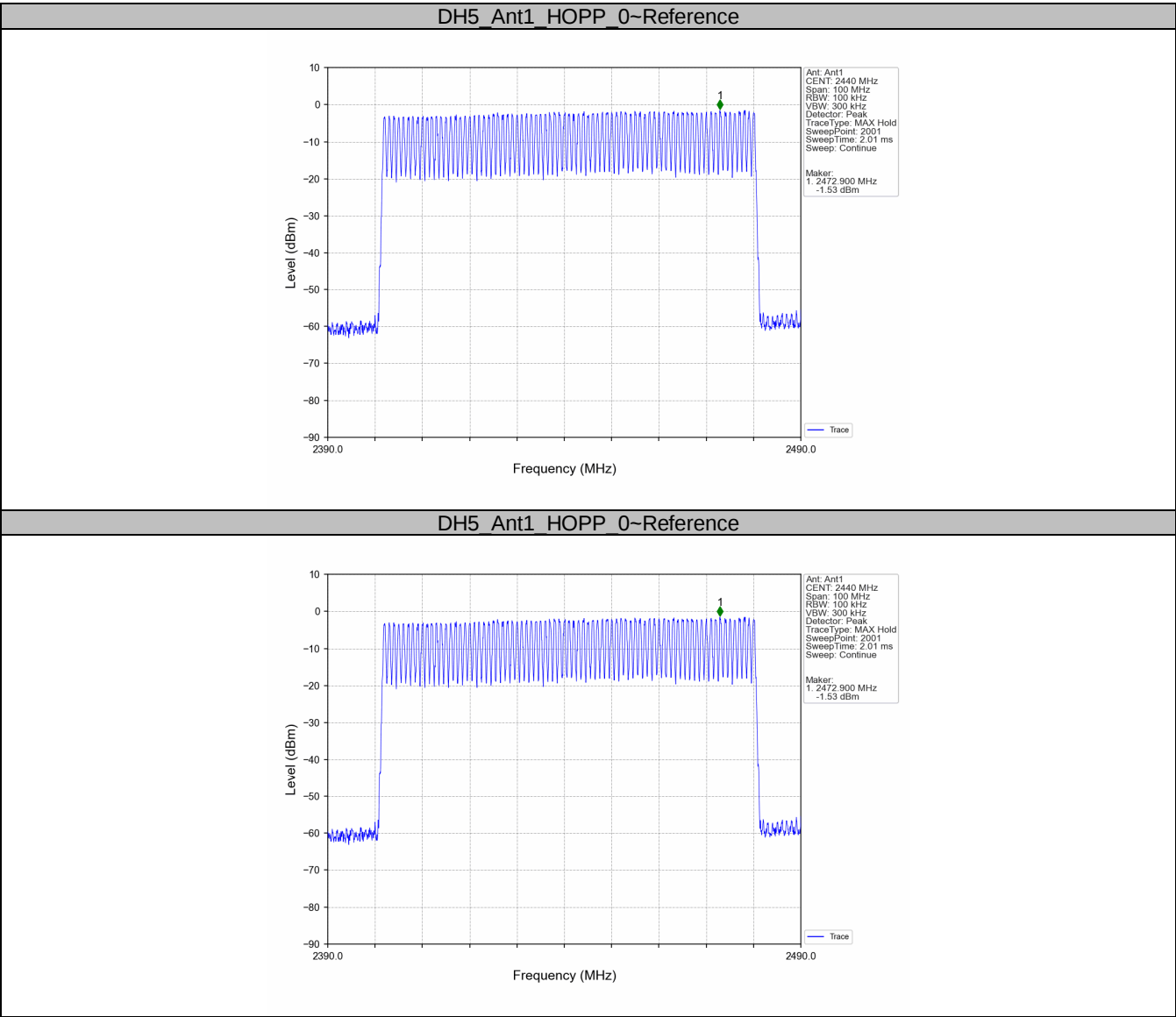
DH5\_Ant1\_2402\_

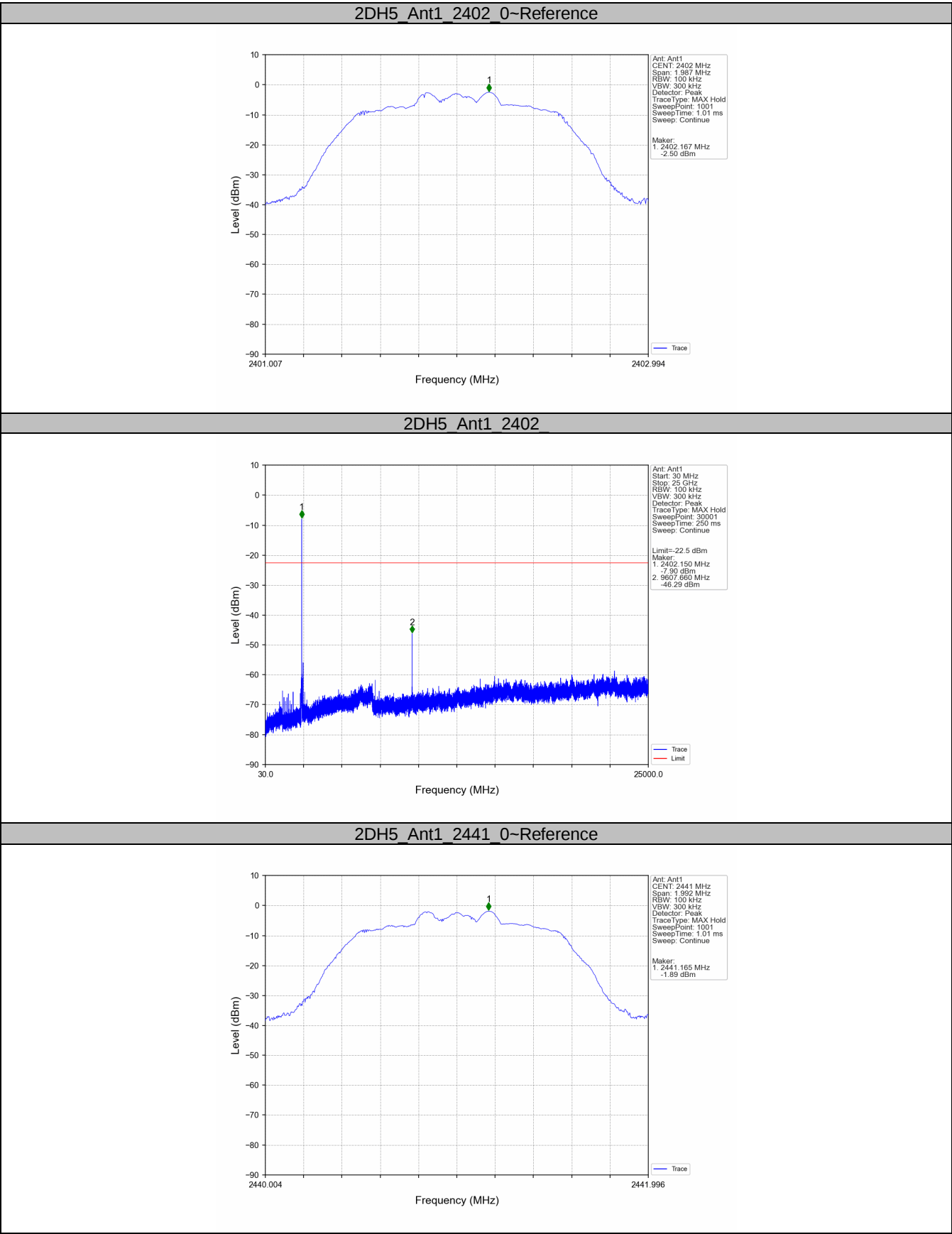


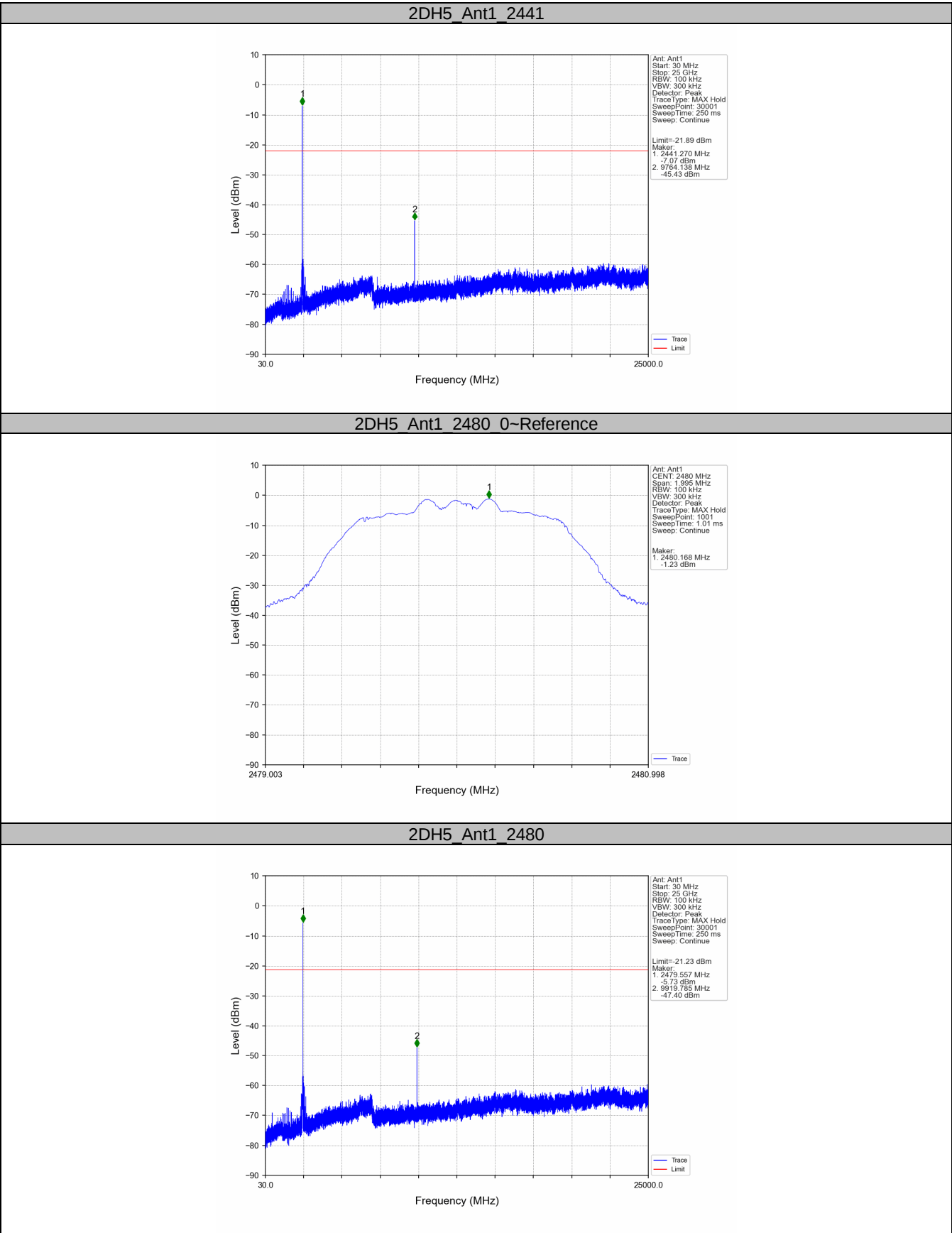
DH5\_Ant1\_2441\_0-Reference

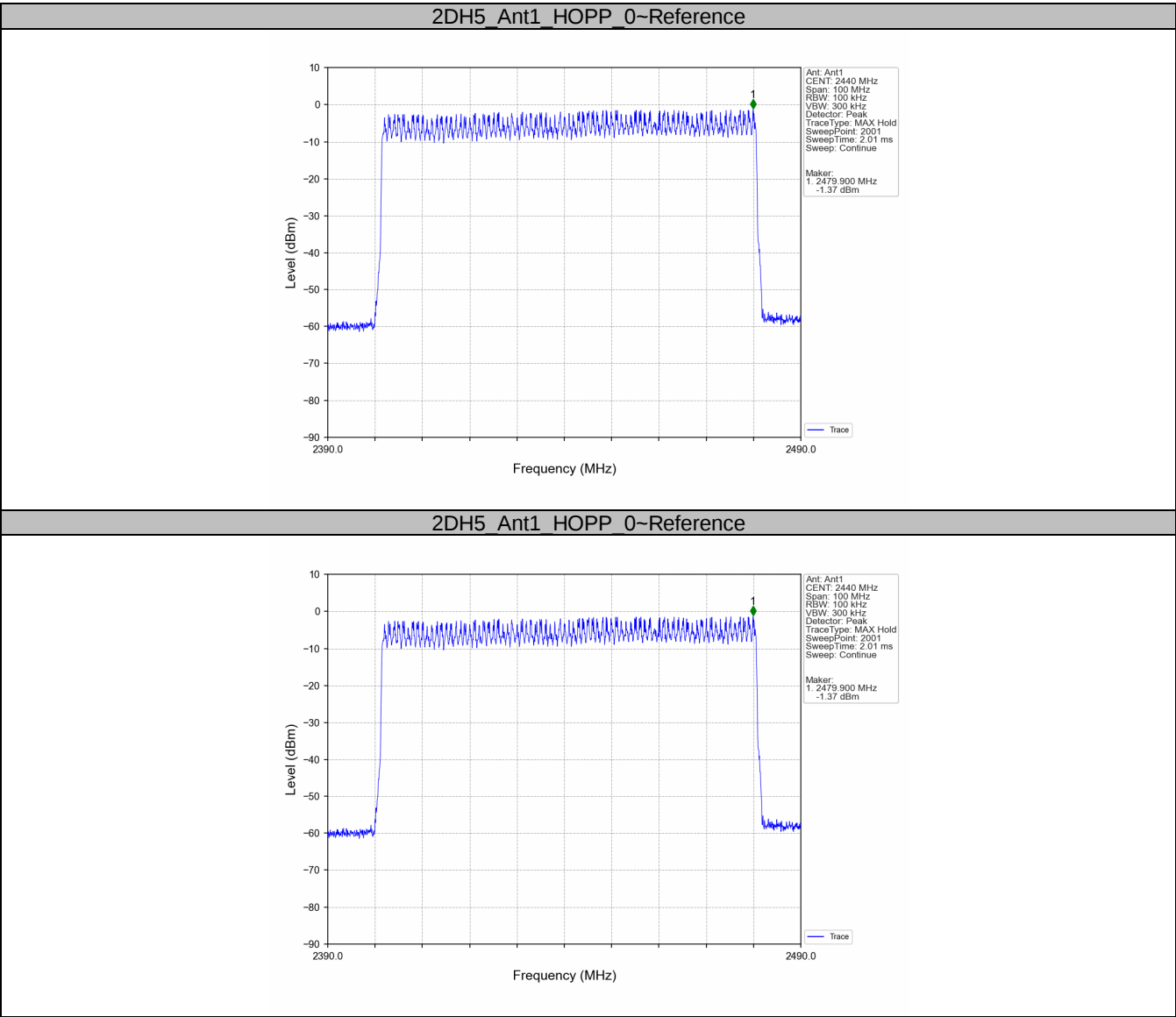


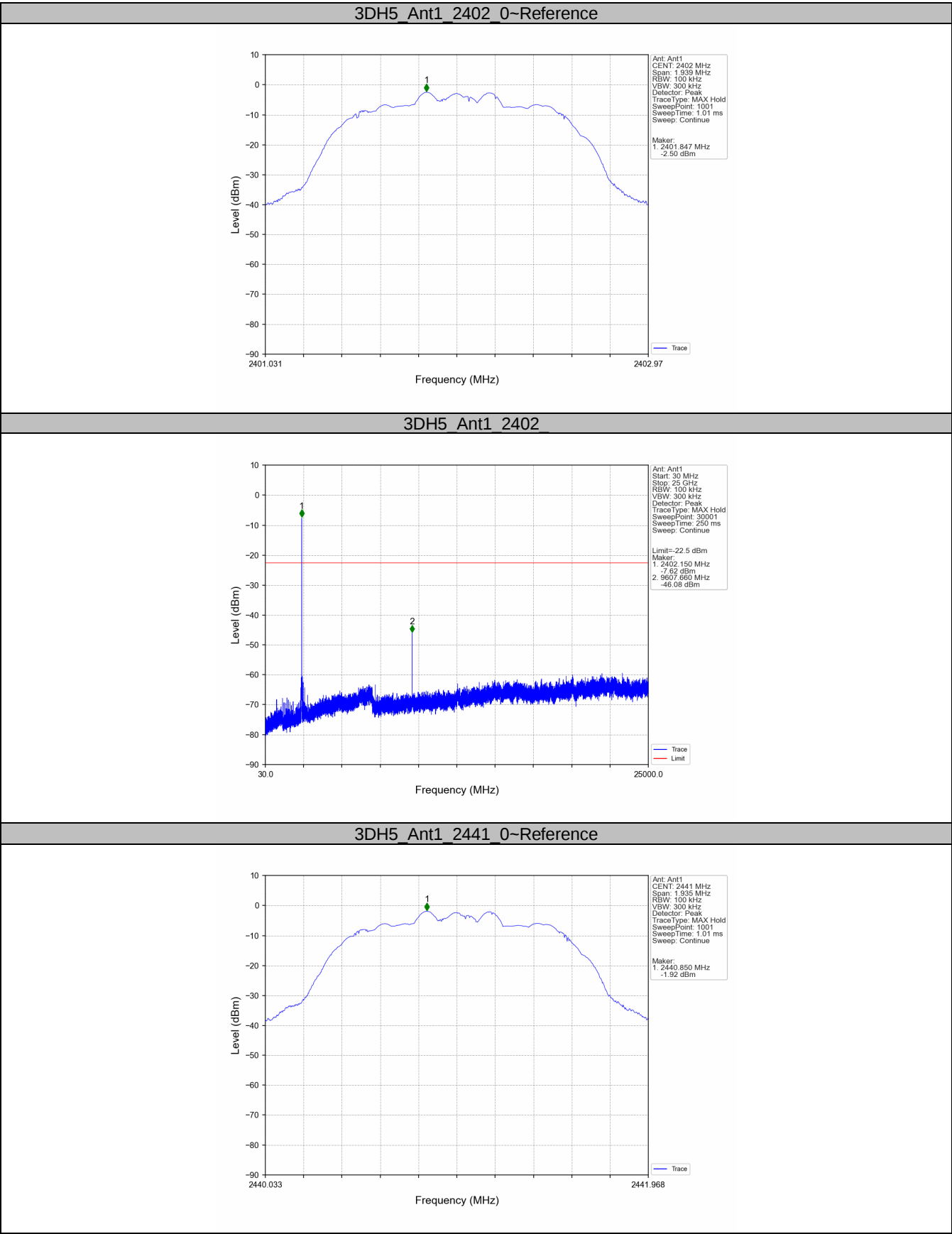


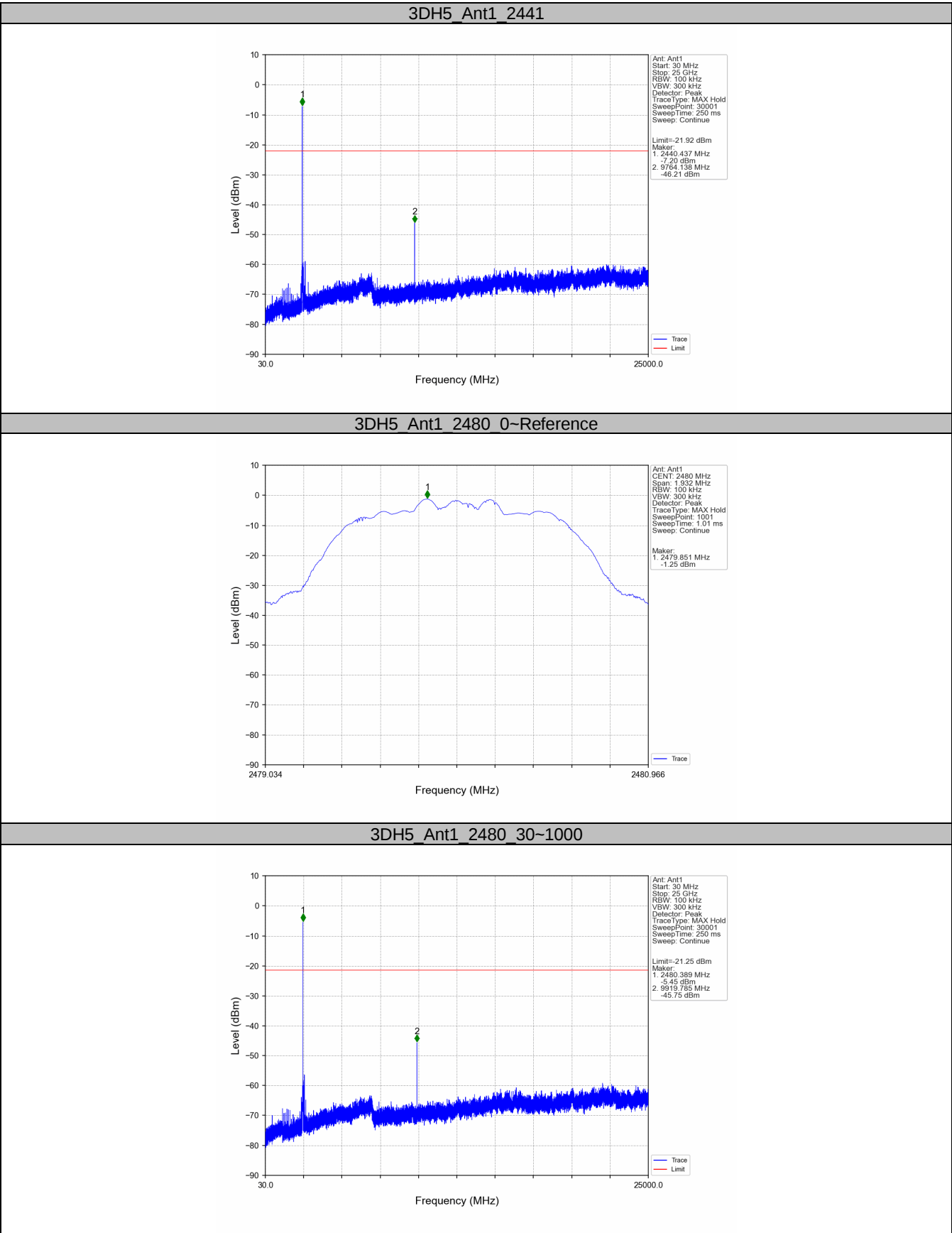


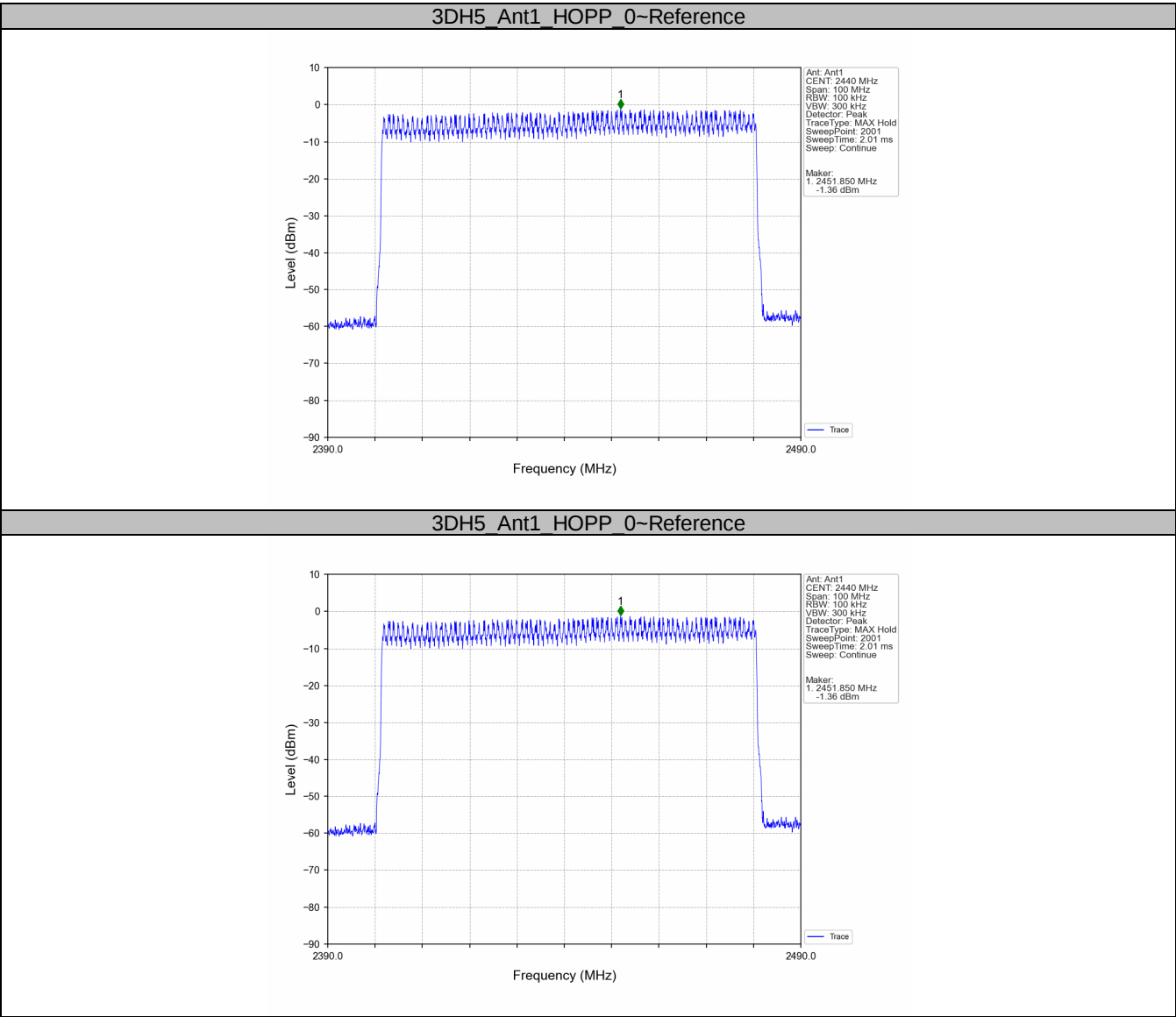












## 9.8 Band Edge Testing

### Test Method

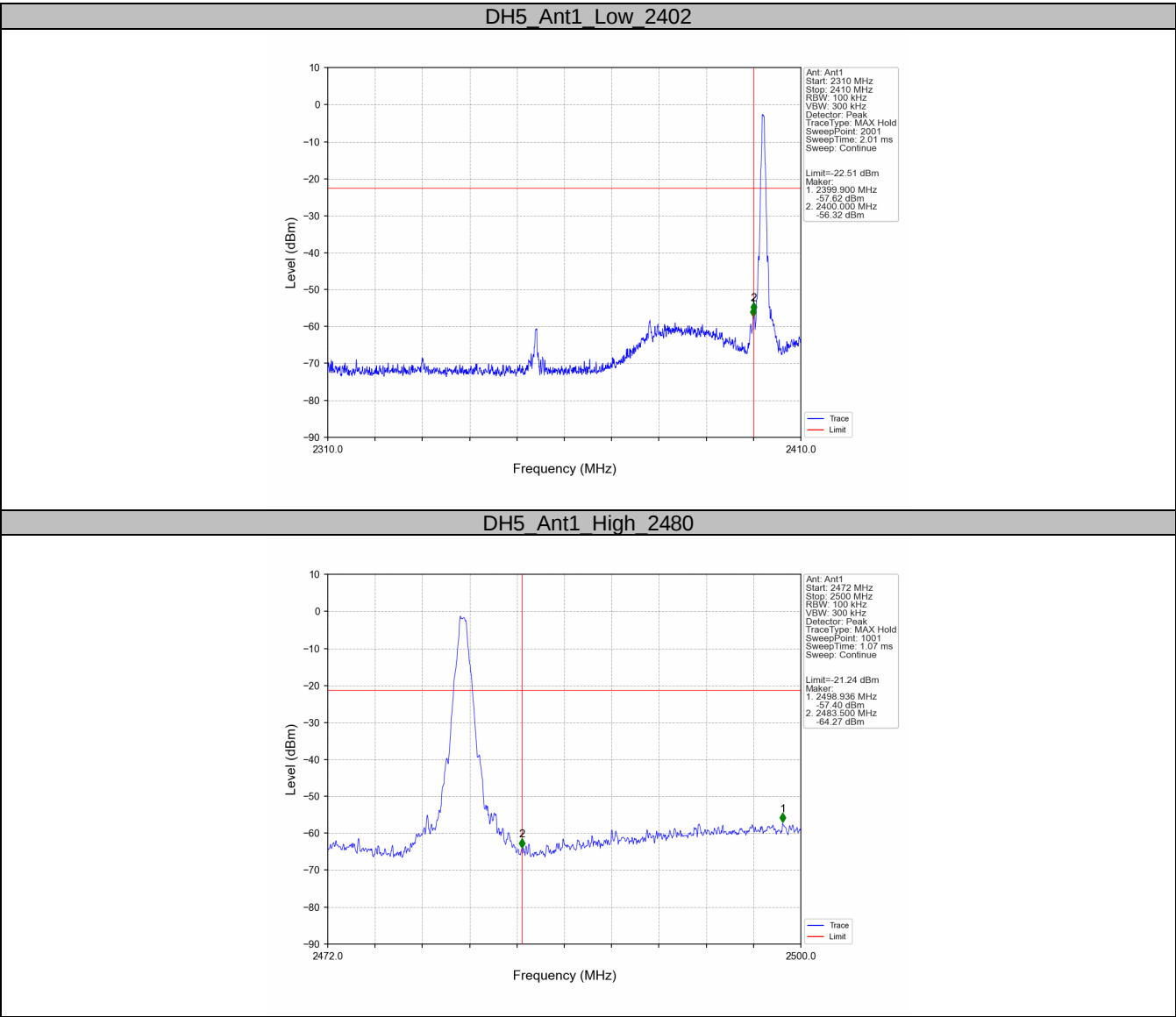
1. The RF output of EUT was connected to the test receiver by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously. Set the EUT to the lowest frequency channel.
3. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector, Trace: Max hold, Sweep time: Coupled, Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products that fall outside of the authorized band of operation. Allow the trace to stabilize.
4. Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge. Enable the marker-delta function, and then use the marker-to-peak function to move the marker to the peak of the in-band emission.
5. Set the EUT to the highest frequency channel and repeat step 2) to 4)
6. Enable the EUT hopping mode, repeat the test.

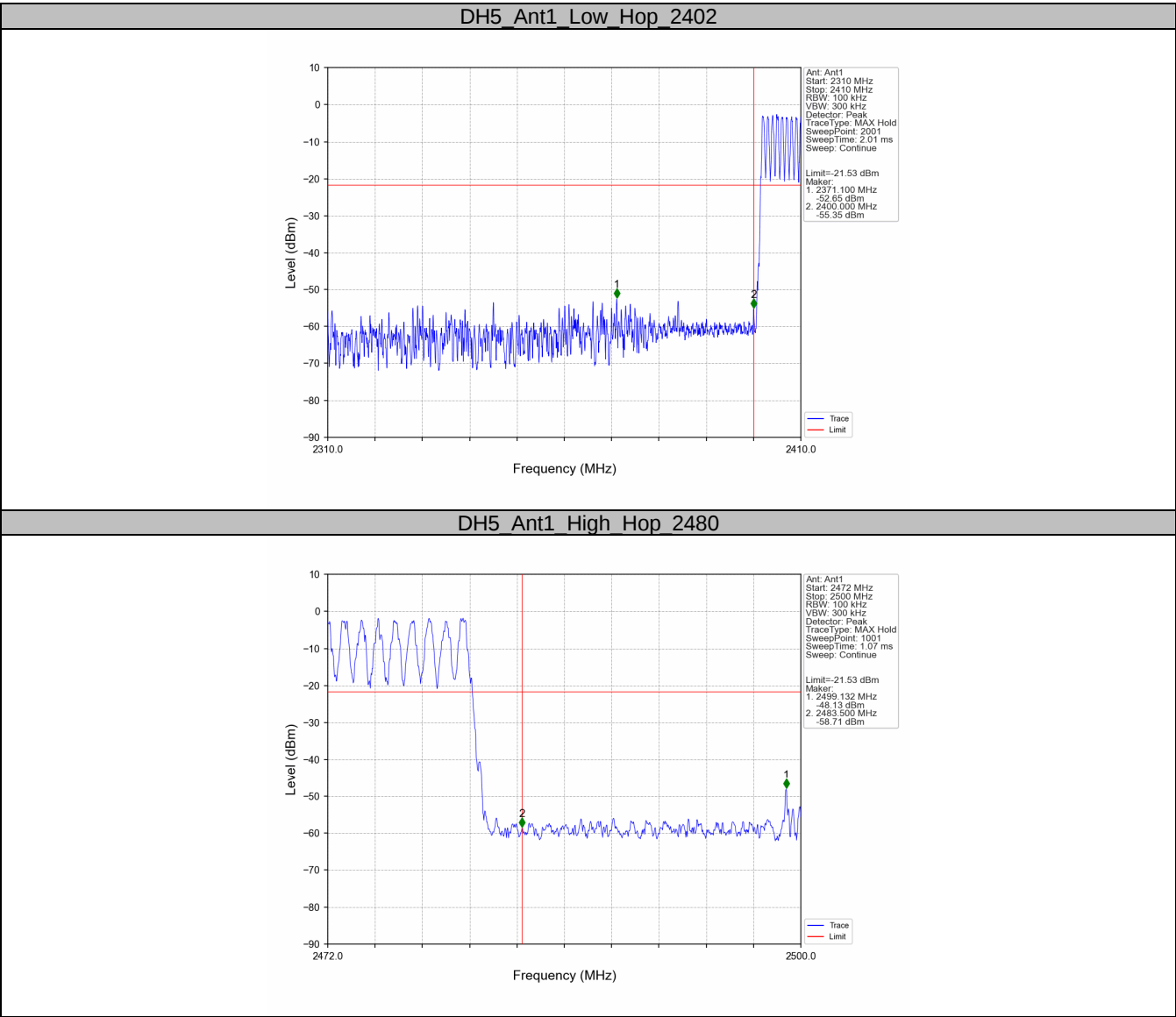
### Limit:

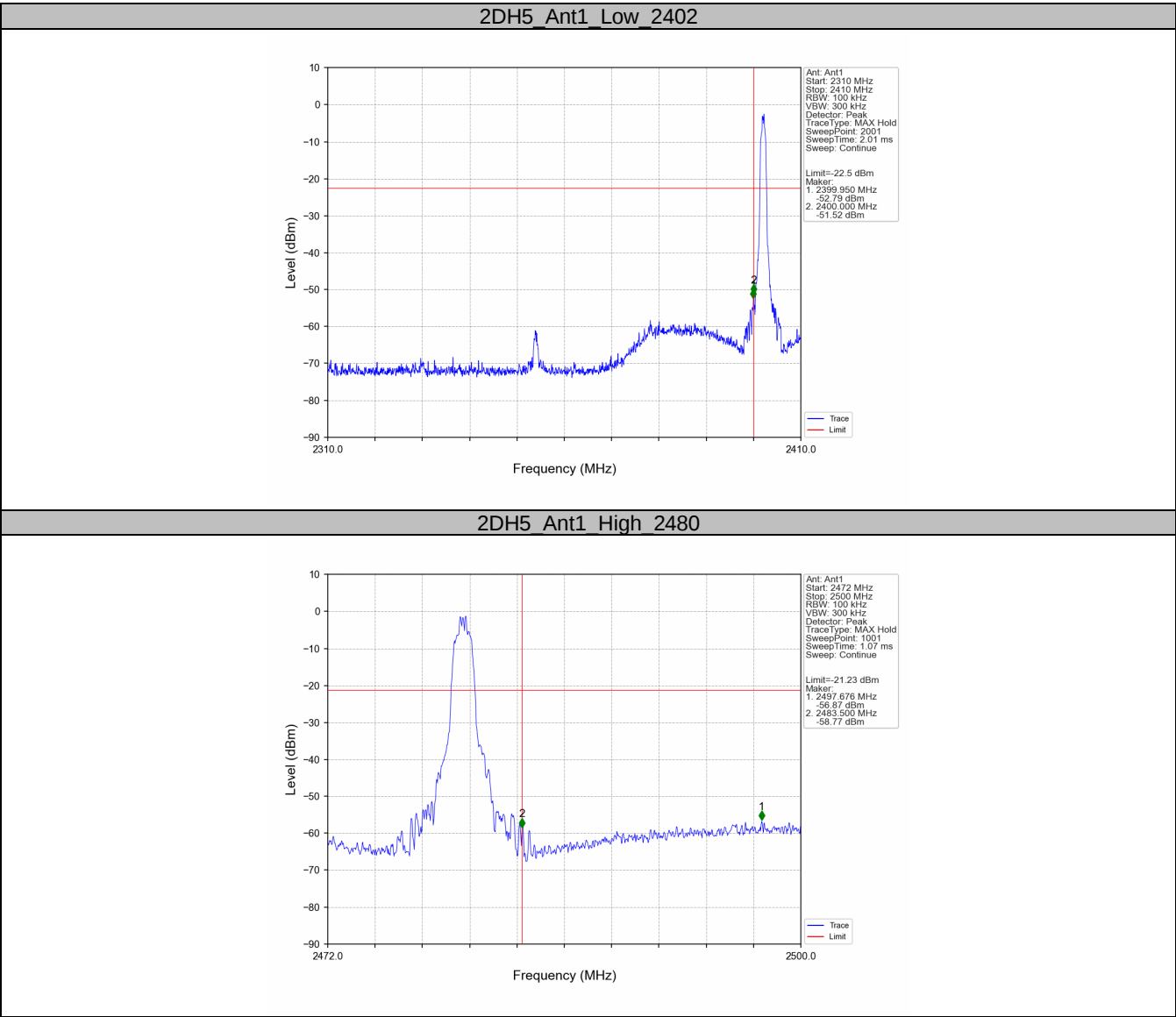
In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits.

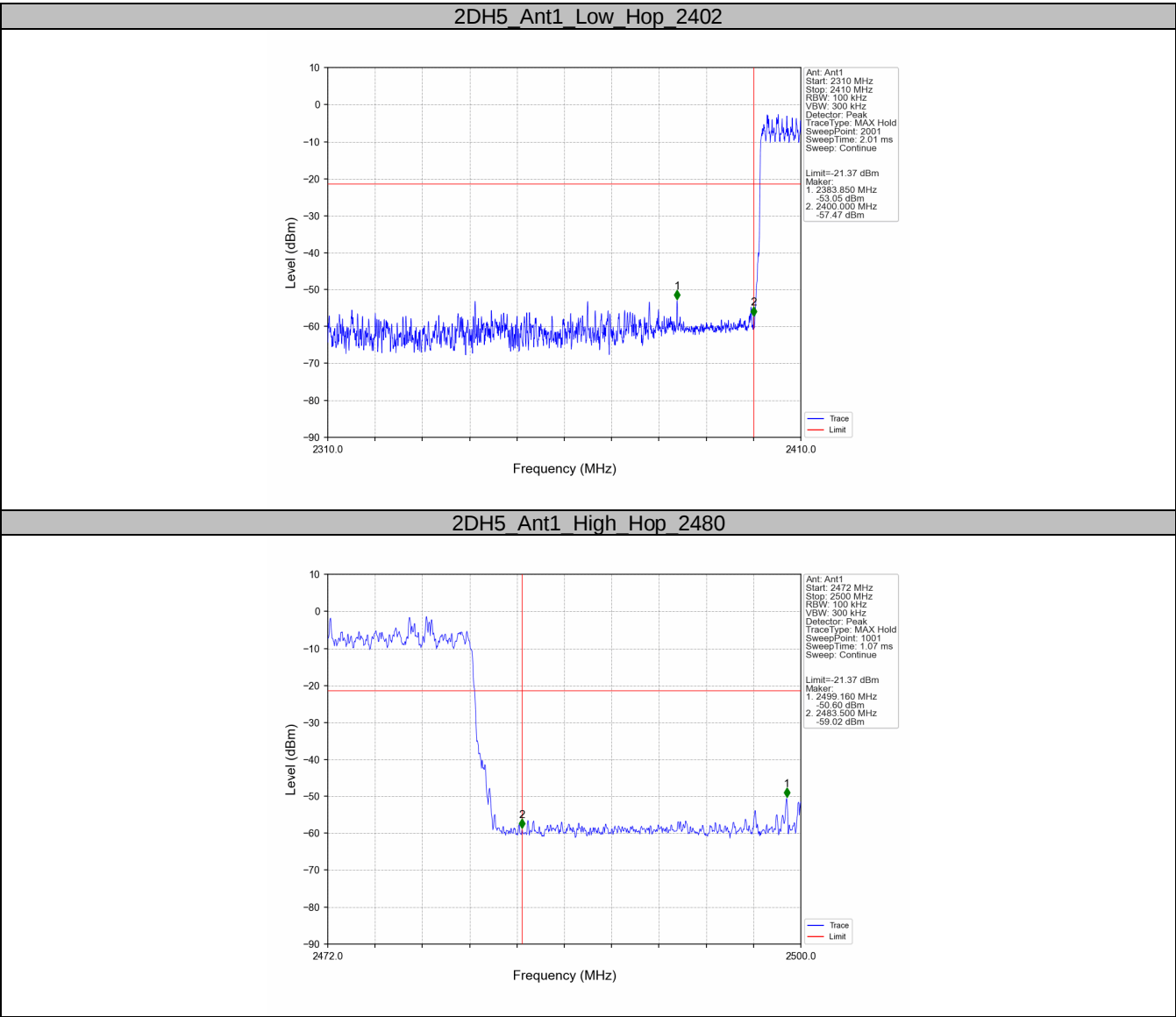
### Test result:

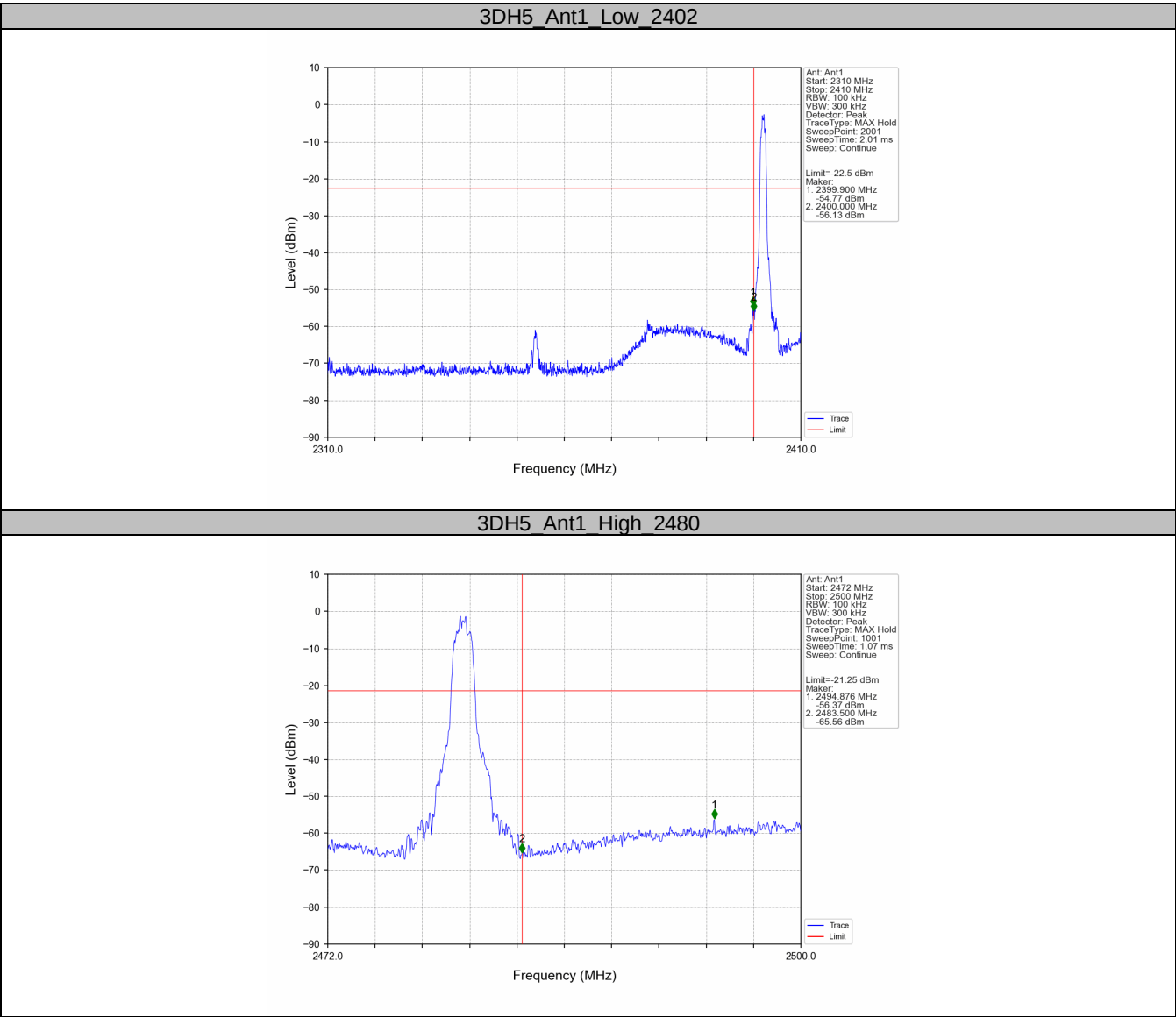
| Test Mode | Channel | Channel (MHz) | Reference Level (dBm) | Result (dBm) | Limit (dBm) | Verdict |
|-----------|---------|---------------|-----------------------|--------------|-------------|---------|
| DH5       | Low     | 2402          | -2.51                 | -56.32       | ≤ -22.51    | PASS    |
|           | High    | 2480          | -1.24                 | -64.27       | ≤ -21.24    | PASS    |
|           | Low     | Hop_2402      | -1.53                 | -55.35       | ≤ -21.53    | PASS    |
|           | High    | Hop_2480      | -1.53                 | -58.71       | ≤ -21.53    | PASS    |
| 2DH5      | Low     | 2402          | -2.50                 | -51.52       | ≤ -22.50    | PASS    |
|           | High    | 2480          | -1.23                 | -58.77       | ≤ -21.23    | PASS    |
|           | Low     | Hop_2402      | -1.37                 | -57.47       | ≤ -21.37    | PASS    |
|           | High    | Hop_2480      | -1.37                 | -59.02       | ≤ -21.37    | PASS    |
| 3DH5      | Low     | 2402          | -2.50                 | -56.13       | ≤ -22.50    | PASS    |
|           | High    | 2480          | -1.25                 | -65.56       | ≤ -21.25    | PASS    |
|           | Low     | Hop_2402      | -1.36                 | -58.04       | ≤ -21.36    | PASS    |
|           | High    | Hop_2480      | -1.36                 | -60.51       | ≤ -21.36    | PASS    |

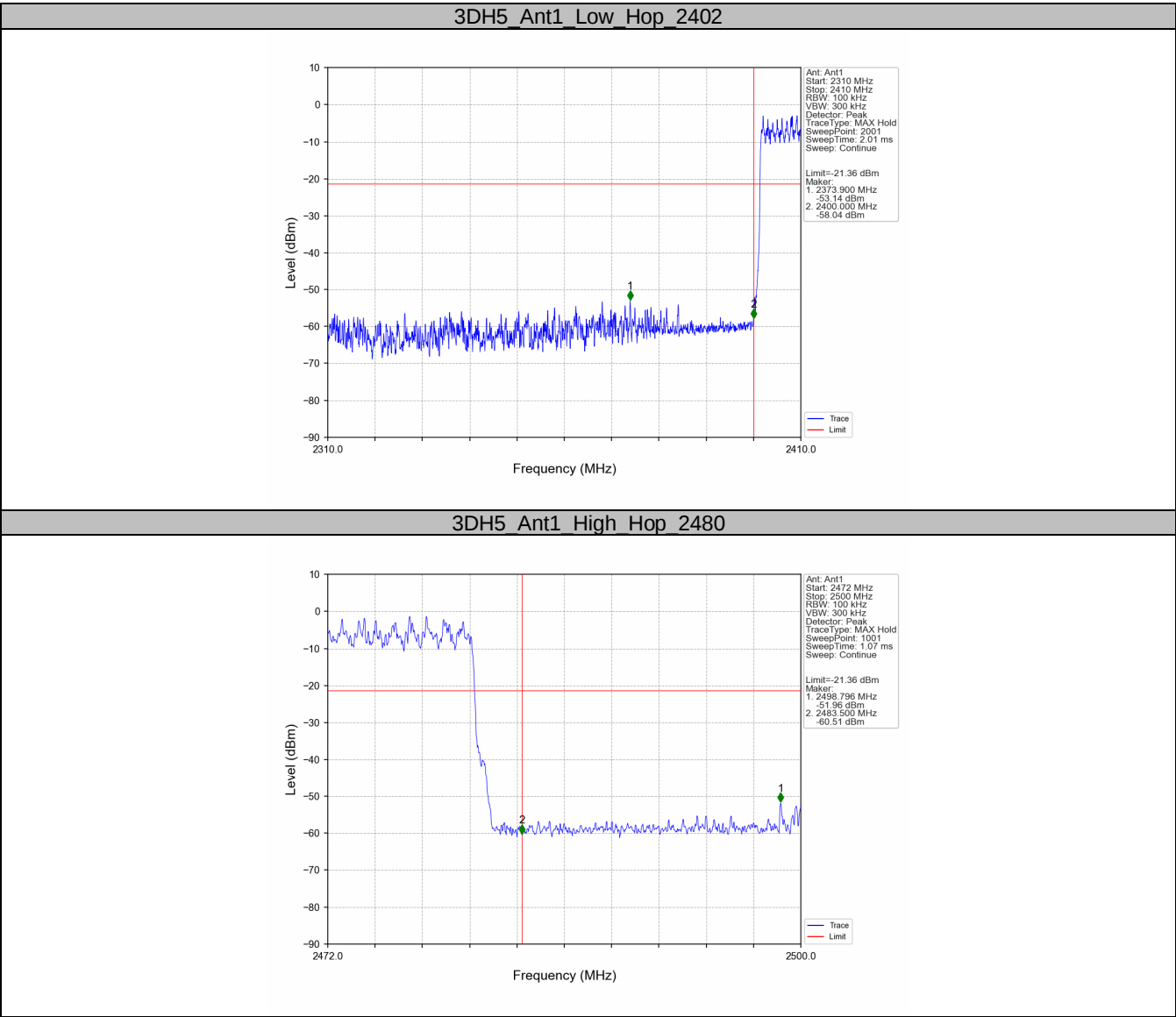












## 9.9 Spurious Radiated Emissions for Transmitter

### Test Method

1. The EUT was placed on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meters chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
4. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
5. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
6. Use the following test receiver settings According to C63.10:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 kHz to 120KHz for  $f < 1$  GHz;  $VBW \geq RBW$ ; Sweep = auto; Detector function = QP; Trace = max hold;
  - (3) Set RBW = 1 MHz, VBW= 3MHz for  $f \geq 1$  GHz for peak measurement.For average measurement:

The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average ((duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ( $20\log(1/\text{duty cycle})$ ).

The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
7. Repeat above procedures until all frequencies measured were complete.

## Spurious Radiated Emissions for Transmitter

### Limit

The radio emission outside the operating frequency band shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. Radiated emissions which fall in the restricted bands, as defined in section 15.205, must comply with the radiated emission limits specified in section 15.209.

| Frequency<br>MHz | Field Strength<br>$\mu\text{V/m}$ | Field Strength<br>dB $\mu\text{V/m}$ | Detector | Measurement distance<br>meters |
|------------------|-----------------------------------|--------------------------------------|----------|--------------------------------|
| 0.009-0.490      | 2400/F(kHz)                       | 48.5-13.8                            | AV       | 300                            |
| 0.490-1.705      | 24000/F(kHz)                      | 33.8-23.0                            | QP       | 30                             |
| 1.705-30         | 30                                | 29.5                                 | QP       | 30                             |
| 30-88            | 100                               | 40                                   | QP       | 3                              |
| 88-216           | 150                               | 43.5                                 | QP       | 3                              |
| 216-960          | 200                               | 46                                   | QP       | 3                              |
| 960-1000         | 500                               | 54                                   | QP       | 3                              |
| Above 1000       | 500                               | 54                                   | AV       | 3                              |
| Above 1000       | 5000                              | 74                                   | PK       | 3                              |

Note 1: Limit 3m(dB $\mu\text{V/m}$ )=Limit 300m(dB $\mu\text{V/m}$ )+40Log(300m/3m) (Below 30MHz)

Note 2: Limit 3m(dB $\mu\text{V/m}$ )=Limit 30m(dB $\mu\text{V/m}$ )+40Log(30m/3m) (Below 30MHz)

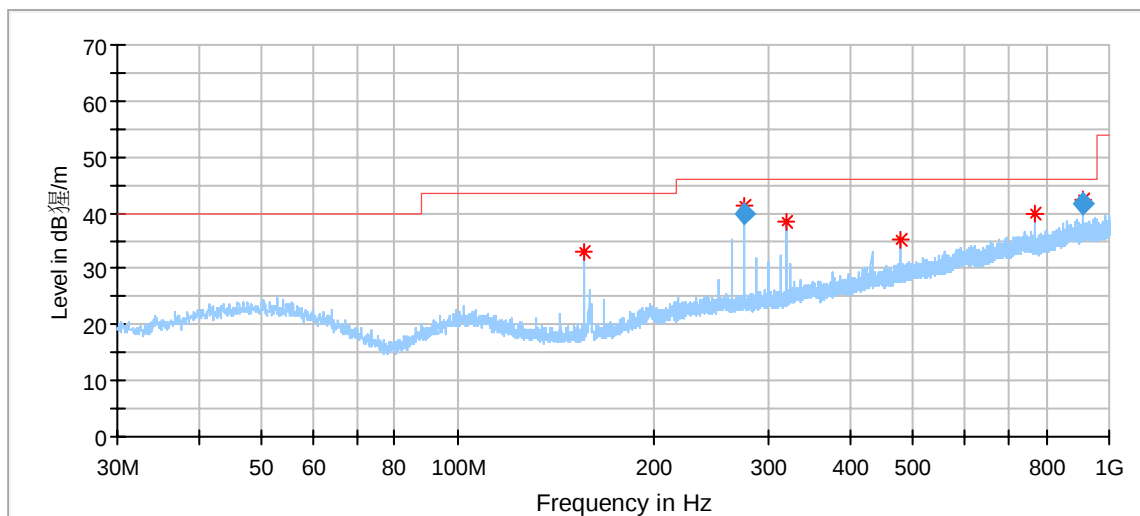
## Spurious radiated emissions for transmitter

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

The only worse case test result is listed in the report.

## Transmitting spurious emission test result as below:

Test data\_30MHz to 1000MHz  
DH5\_Low Channel:



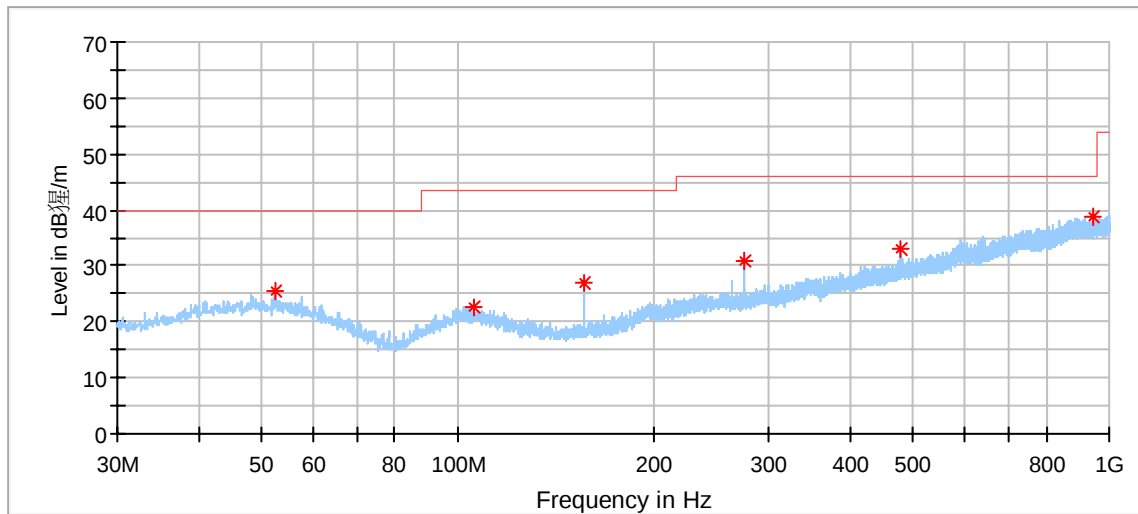
### Critical Freqs

| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 155.992222      | 33.06            | 43.50          | 10.44       | 200.0       | H   | 172.0         | 12.90        |
| 275.948889      | 41.25            | 46.00          | 4.75        | 100.0       | H   | 131.0         | 17.82        |
| 319.976111      | 38.31            | 46.00          | 7.69        | 100.0       | H   | 338.0         | 19.02        |
| 479.972222      | 35.09            | 46.00          | 10.91       | 200.0       | H   | 338.0         | 22.54        |
| 767.954444      | 39.70            | 46.00          | 6.30        | 100.0       | H   | 84.0          | 27.40        |
| 913.454444      | 42.53            | 46.00          | 3.47        | 200.0       | H   | 271.0         | 29.44        |

### Final Result

| Frequency (MHz) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|--------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 275.948889      | 39.90              | 46.00          | 6.10        | 100.0       | H   | 131.0         | 17.82        |
| 913.454444      | 41.70              | 46.00          | 4.30        | 200.0       | H   | 271.0         | 29.44        |

Test data\_30MHz to 1000MHz  
DH5\_Low Channel:



### Critical Freqs

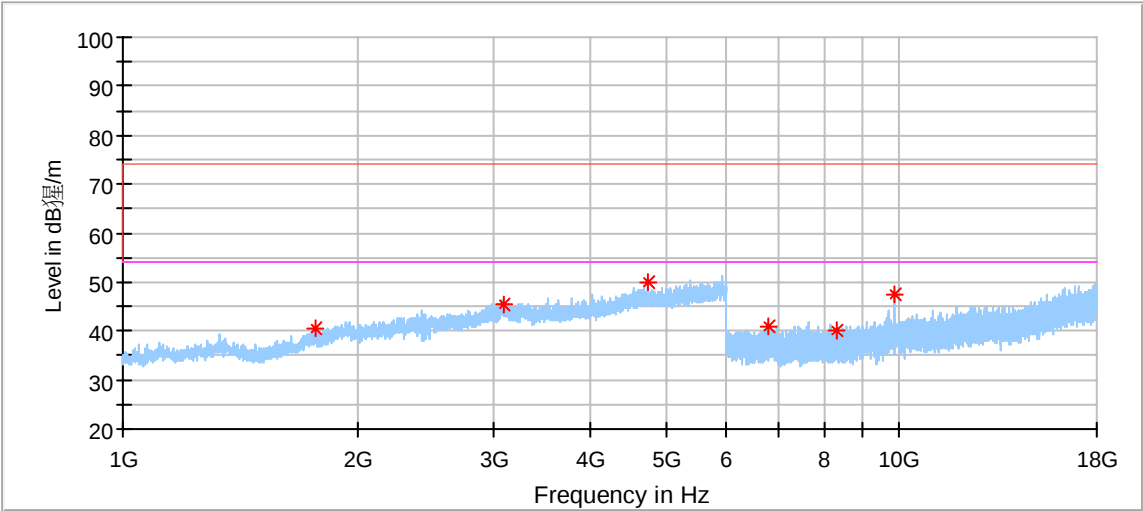
| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 52.363889       | 25.65            | 40.00          | 14.35       | 200.0       | V   | 149.0         | 18.03        |
| 106.091111      | 22.62            | 43.50          | 20.88       | 100.0       | V   | 11.0          | 15.85        |
| 155.992222      | 26.83            | 43.50          | 16.67       | 200.0       | V   | 102.0         | 12.90        |
| 275.948889      | 30.87            | 46.00          | 15.13       | 100.0       | V   | 4.0           | 17.82        |
| 479.972222      | 33.16            | 46.00          | 12.84       | 100.0       | V   | 100.0         | 22.54        |
| 948.051111      | 38.65            | 46.00          | 7.35        | 200.0       | V   | 70.0          | 29.56        |

Remark:

- (1) "\*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205
- (2) Data of measurement within frequency range 9kHz-30MHz and 18GHz-40 GHz are the noise floor or attenuated more than 20dB below the permissible limits or the field strength is too small to be measured, so test data does not present in this report.
- (3) Corrected Amplitude = Read level + Corrector factor  
Above 1GHz: Corrector factor = Antenna Factor + Cable Loss- Amplifier Gain  
Below 1GHz: Corrector factor = Antenna Factor + Cable Loss

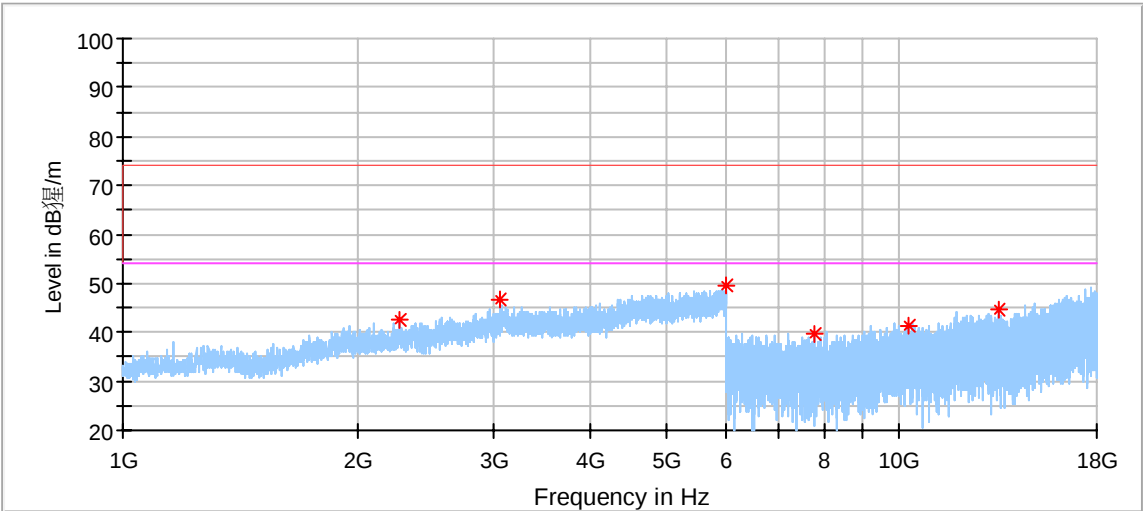


Test data 1GHz to 18GHz:  
DH5\_Low Channel:



Critical\_Freqs

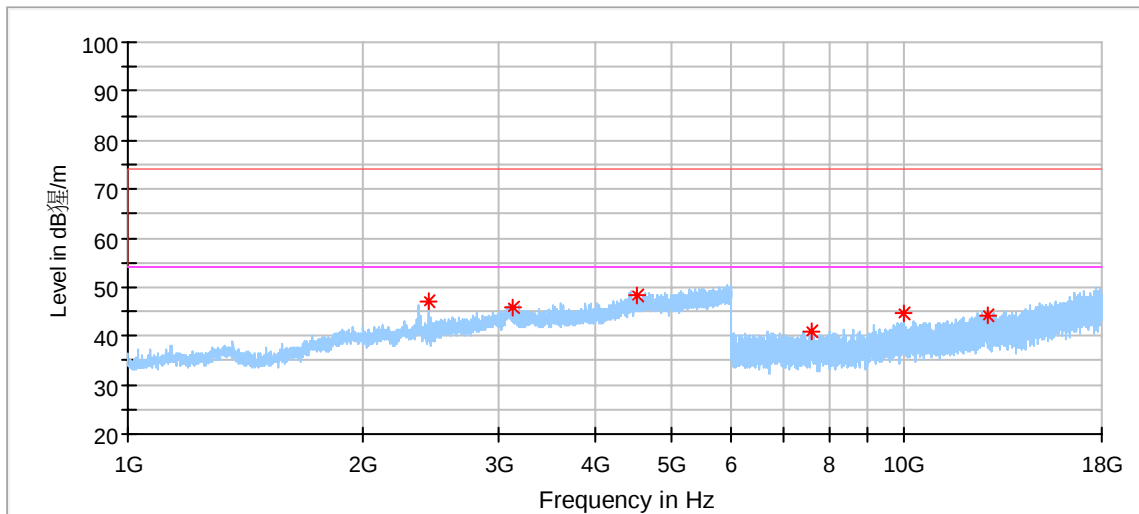
| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 1770.000000     | 40.41            | 74.00          | 33.59       | 150.0       | H   | 344.0         | -5.98        |
| 3088.500000     | 45.53            | 74.00          | 28.47       | 150.0       | H   | 40.0          | 1.13         |
| 4745.000000     | 49.78            | 74.00          | 24.22       | 150.0       | H   | 276.0         | 4.31         |
| 6768.500000     | 40.93            | 74.00          | 33.07       | 150.0       | H   | 145.0         | 10.17        |
| 8324.500000     | 40.26            | 74.00          | 33.74       | 150.0       | H   | 145.0         | 11.12        |
| 9872.500000     | 47.48            | 74.00          | 26.52       | 150.0       | H   | 145.0         | 13.66        |



Critical\_Freqs

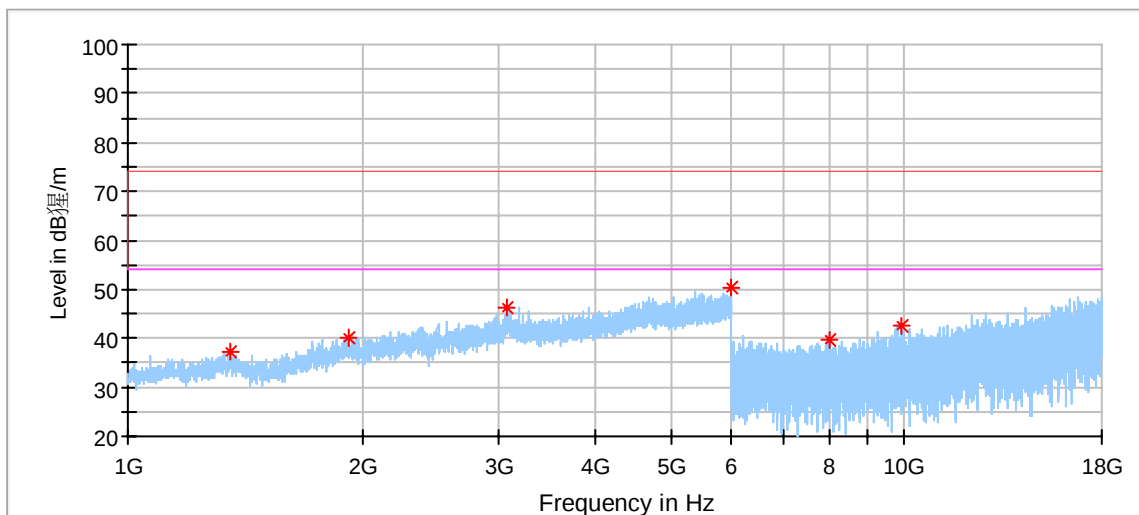
| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2276.000000     | 42.51            | 74.00          | 31.49       | 150.0       | V   | 0.0           | -3.16        |
| 3061.000000     | 46.63            | 74.00          | 27.37       | 150.0       | V   | 0.0           | 0.18         |
| 5979.500000     | 49.63            | 74.00          | 24.37       | 150.0       | V   | 0.0           | 7.06         |
| 7778.500000     | 39.81            | 74.00          | 34.19       | 150.0       | V   | 0.0           | 10.40        |
| 10262.000000    | 41.40            | 74.00          | 32.60       | 150.0       | V   | 0.0           | 13.84        |
| 13440.000000    | 44.74            | 74.00          | 29.26       | 150.0       | V   | 0.0           | 16.06        |

Test data 1GHz to 18GHz:  
DH5\_Middle Channel:



### Critical\_Freqs

| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2444.500000     | 47.20            | 74.00          | 26.80       | 150.0       | H   | 0.0           | -2.26        |
| 3126.500000     | 45.66            | 74.00          | 28.34       | 150.0       | H   | 165.0         | 0.55         |
| 4540.500000     | 48.40            | 74.00          | 25.60       | 150.0       | H   | 305.0         | 3.67         |
| 7609.000000     | 40.87            | 74.00          | 33.13       | 150.0       | H   | 299.0         | 10.41        |
| 9965.500000     | 44.48            | 74.00          | 29.52       | 150.0       | H   | 17.0          | 14.35        |
| 12801.000000    | 44.37            | 74.00          | 29.63       | 150.0       | H   | 156.0         | 16.32        |

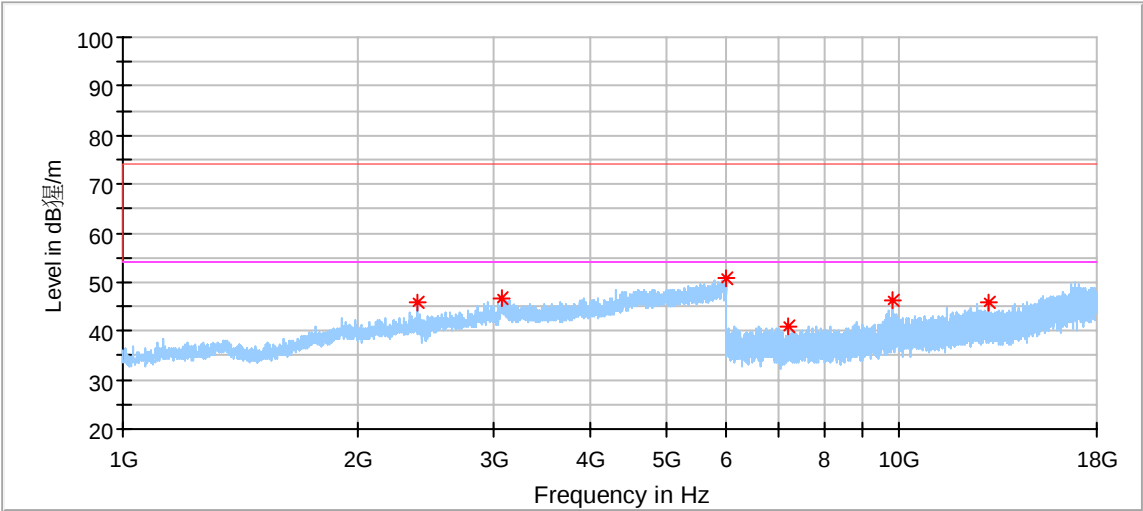


### Critical\_Freqs

| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 1351.000000     | 37.41            | 74.00          | 36.59       | 150.0       | V   | 0.0           | -7.71        |
| 1928.000000     | 40.04            | 74.00          | 33.96       | 150.0       | V   | 0.0           | -4.36        |
| 3086.000000     | 46.30            | 74.00          | 27.70       | 150.0       | V   | 0.0           | 1.03         |
| 5999.000000     | 50.18            | 74.00          | 23.82       | 150.0       | V   | 0.0           | 7.14         |
| 8019.500000     | 39.85            | 74.00          | 34.15       | 150.0       | V   | 0.0           | 10.91        |
| 9950.000000     | 42.60            | 74.00          | 31.40       | 150.0       | V   | 0.0           | 14.32        |

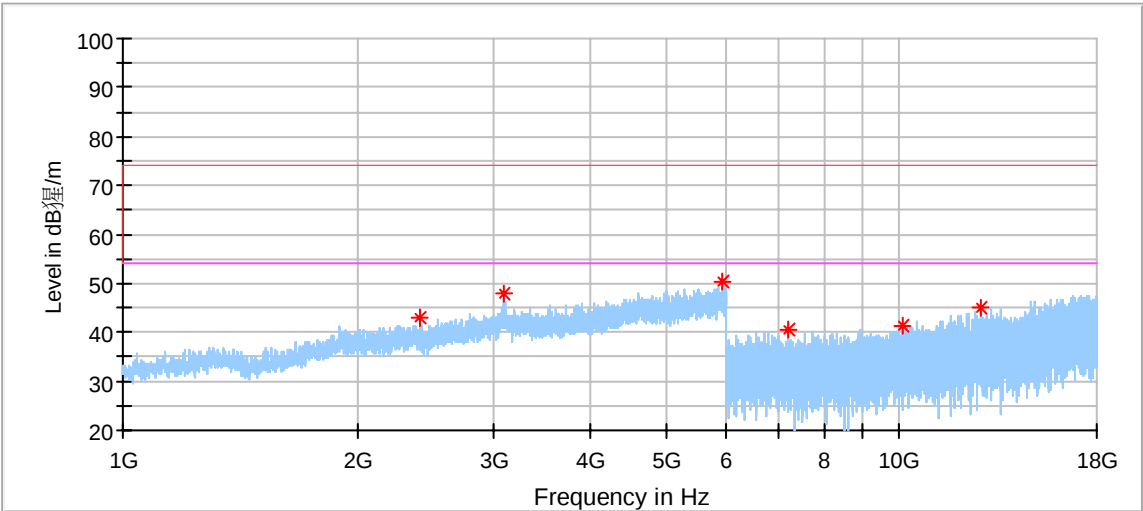


Test data 1GHz to 18GHz:  
DH5\_Hight Channel:



Critical\_Freqs

| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2401.500000     | 45.80            | 74.00          | 28.20       | 150.0       | H   | 300.0         | -2.41        |
| 3079.000000     | 46.86            | 74.00          | 27.14       | 150.0       | H   | 341.0         | 0.76         |
| 5992.000000     | 50.60            | 74.00          | 23.40       | 150.0       | H   | 245.0         | 7.10         |
| 7209.500000     | 40.86            | 74.00          | 33.14       | 150.0       | H   | 1.0           | 9.88         |
| 9820.000000     | 46.44            | 74.00          | 27.56       | 150.0       | H   | 181.0         | 13.72        |
| 13052.000000    | 45.99            | 74.00          | 28.01       | 150.0       | H   | 269.0         | 16.69        |

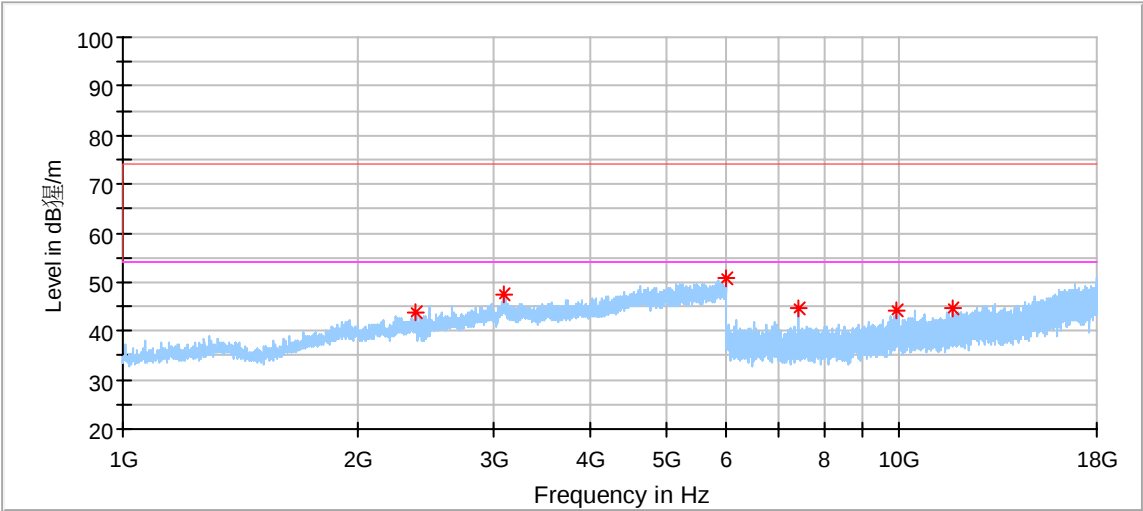


Critical\_Freqs

| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2407.000000     | 42.91            | 74.00          | 31.09       | 150.0       | V   | 0.0           | -2.38        |
| 3094.000000     | 47.95            | 74.00          | 26.05       | 150.0       | V   | 0.0           | 1.35         |
| 5918.000000     | 50.34            | 74.00          | 23.66       | 150.0       | V   | 0.0           | 6.91         |
| 7212.500000     | 40.63            | 74.00          | 33.37       | 150.0       | V   | 0.0           | 9.87         |
| 10084.500000    | 41.26            | 74.00          | 32.74       | 150.0       | V   | 0.0           | 13.17        |
| 12774.000000    | 44.90            | 74.00          | 29.10       | 150.0       | V   | 0.0           | 16.28        |

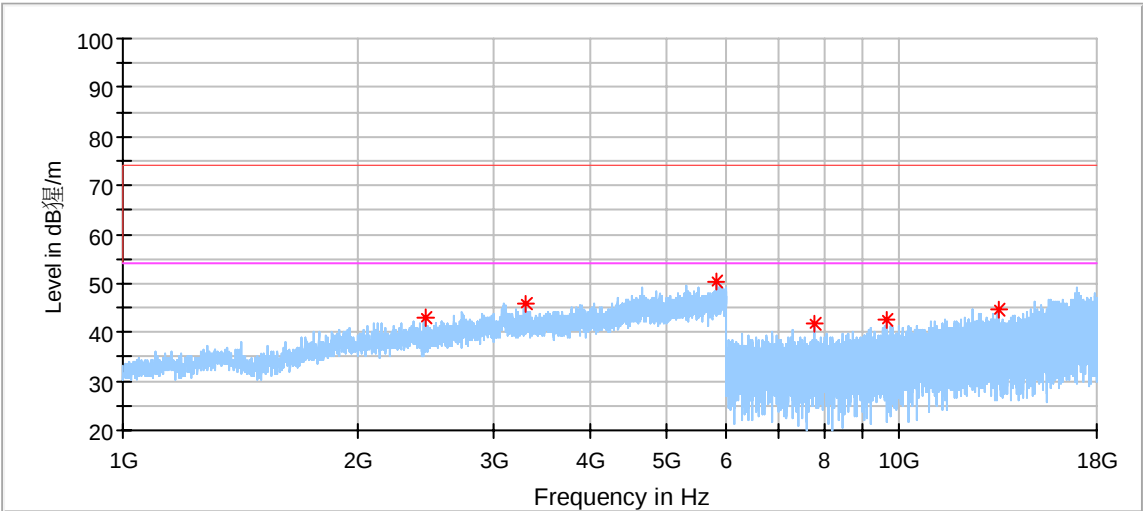


Test data 1GHz to 18GHz:  
3DH5\_Low Channel:



Critical\_Freqs

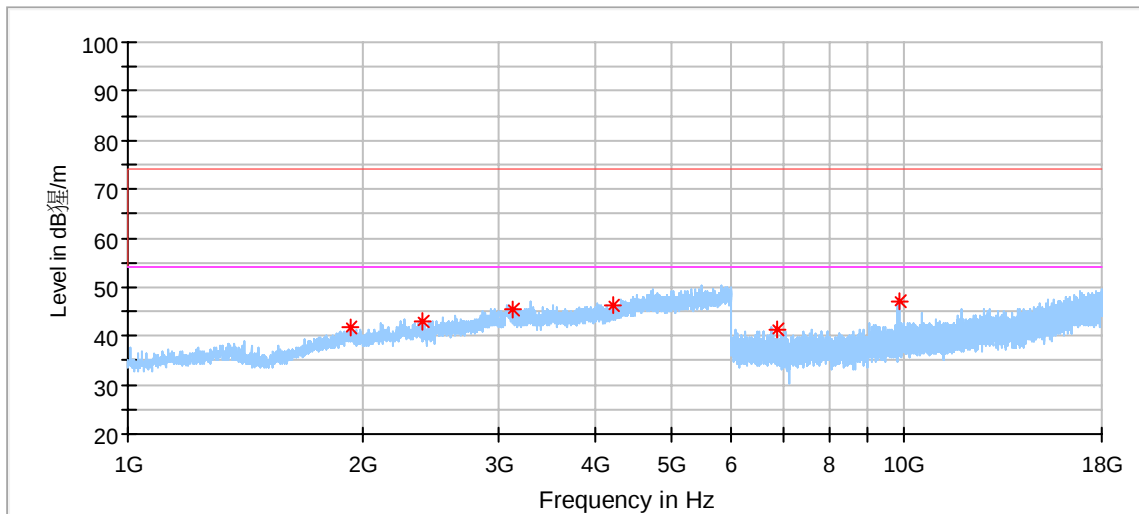
| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2388.000000     | 43.89            | 74.00          | 30.11       | 150.0       | H   | 68.0          | -2.51        |
| 3096.000000     | 47.53            | 74.00          | 26.47       | 150.0       | H   | 0.0           | 1.43         |
| 5990.000000     | 50.90            | 74.00          | 23.10       | 150.0       | H   | 136.0         | 7.09         |
| 7416.500000     | 44.63            | 74.00          | 29.37       | 150.0       | H   | 328.0         | 10.22        |
| 9916.000000     | 44.39            | 74.00          | 29.61       | 150.0       | H   | 179.0         | 14.08        |
| 11721.000000    | 44.41            | 74.00          | 29.59       | 150.0       | H   | 151.0         | 15.84        |



Critical\_Freqs

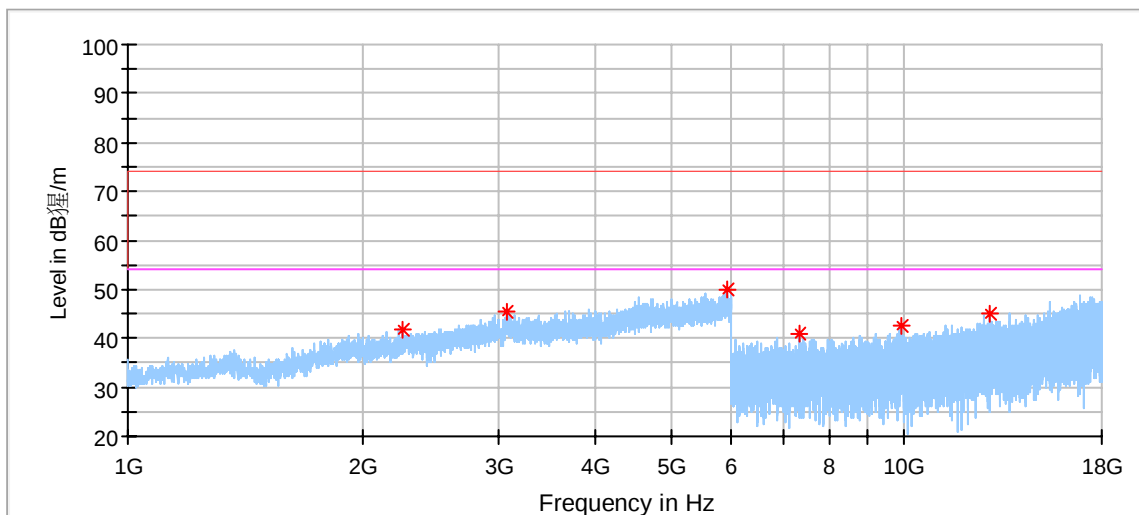
| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2449.500000     | 42.88            | 74.00          | 31.12       | 150.0       | V   | 0.0           | -2.24        |
| 3304.000000     | 45.78            | 74.00          | 28.22       | 150.0       | V   | 0.0           | 0.09         |
| 5807.000000     | 50.51            | 74.00          | 23.49       | 150.0       | V   | 0.0           | 6.32         |
| 7794.000000     | 41.84            | 74.00          | 32.16       | 150.0       | V   | 0.0           | 10.43        |
| 9633.000000     | 42.49            | 74.00          | 31.51       | 150.0       | V   | 0.0           | 12.71        |
| 13429.500000    | 44.49            | 74.00          | 29.51       | 150.0       | V   | 0.0           | 16.02        |

Test data 1GHz to 18GHz:  
3DH5\_Middle Channel:



### Critical\_Freqs

| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 1939.500000     | 41.58            | 74.00          | 32.42       | 150.0       | H   | 40.0          | -4.25        |
| 2390.000000     | 43.01            | 74.00          | 30.99       | 150.0       | H   | 347.0         | -2.49        |
| 3132.000000     | 45.25            | 74.00          | 28.75       | 150.0       | H   | 218.0         | 0.33         |
| 4206.500000     | 46.10            | 74.00          | 27.90       | 150.0       | H   | 108.0         | 1.90         |
| 6863.000000     | 41.22            | 74.00          | 32.78       | 150.0       | H   | 176.0         | 9.91         |
| 9872.000000     | 46.94            | 74.00          | 27.06       | 150.0       | H   | 32.0          | 13.66        |

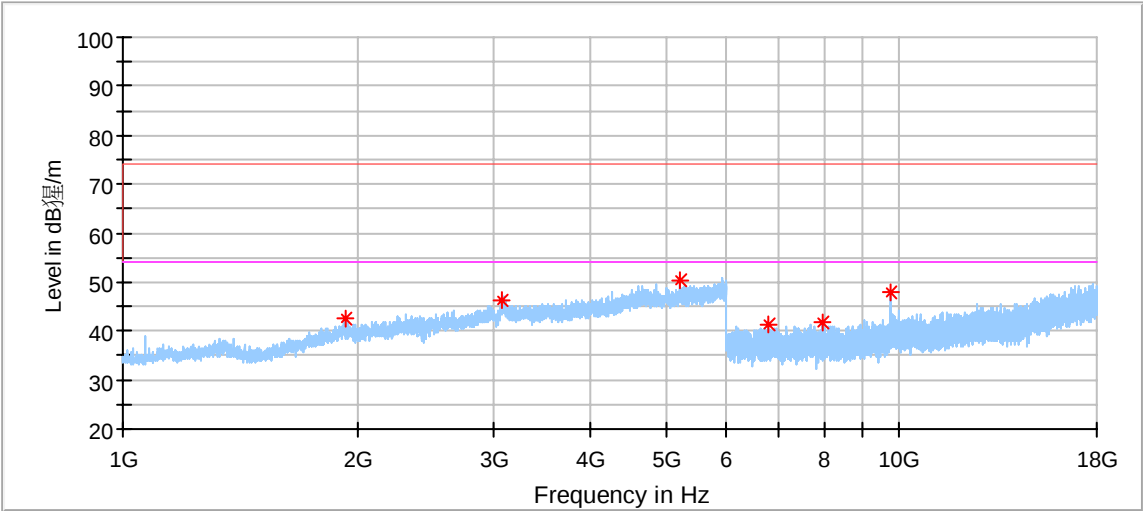


### Critical\_Freqs

| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2261.000000     | 41.58            | 74.00          | 32.42       | 150.0       | V   | 0.0           | -3.00        |
| 3086.000000     | 45.31            | 74.00          | 28.69       | 150.0       | V   | 0.0           | 1.03         |
| 5917.500000     | 49.94            | 74.00          | 24.06       | 150.0       | V   | 0.0           | 6.91         |
| 7331.000000     | 40.75            | 74.00          | 33.25       | 150.0       | V   | 0.0           | 10.38        |
| 9957.000000     | 42.58            | 74.00          | 31.42       | 150.0       | V   | 0.0           | 14.39        |
| 12898.000000    | 44.93            | 74.00          | 29.07       | 150.0       | V   | 0.0           | 16.56        |

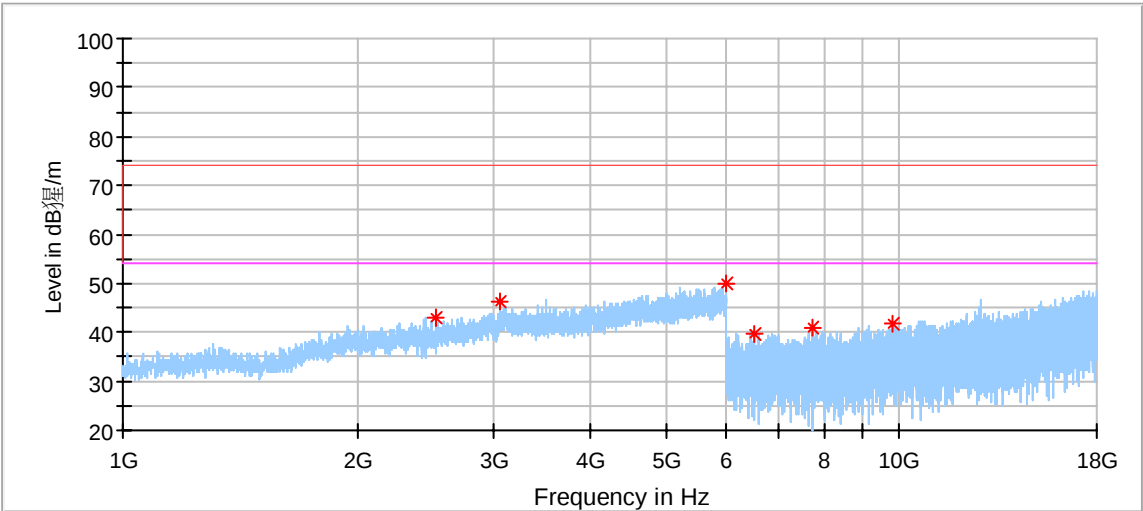


Test data 1GHz to 18GHz:  
3DH5\_Hight Channel:



Critical\_Freqs

| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 1936.500000     | 42.54            | 74.00          | 31.46       | 150.0       | H   | 354.0         | -4.28        |
| 3077.000000     | 46.10            | 74.00          | 27.90       | 150.0       | H   | 27.0          | 0.69         |
| 5234.500000     | 50.25            | 74.00          | 23.75       | 150.0       | H   | 277.0         | 5.13         |
| 6796.000000     | 41.23            | 74.00          | 32.77       | 150.0       | H   | 328.0         | 10.10        |
| 7967.000000     | 41.92            | 74.00          | 32.08       | 150.0       | H   | 17.0          | 10.80        |
| 9760.500000     | 47.78            | 74.00          | 26.22       | 150.0       | H   | 184.0         | 14.01        |



Critical\_Freqs

| Frequency (MHz) | MaxPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2524.500000     | 42.92            | 74.00          | 31.08       | 150.0       | V   | 0.0           | -2.48        |
| 3064.000000     | 46.05            | 74.00          | 27.95       | 150.0       | V   | 0.0           | 0.28         |
| 5996.000000     | 49.75            | 74.00          | 24.25       | 150.0       | V   | 0.0           | 7.11         |
| 6510.500000     | 39.49            | 74.00          | 34.51       | 150.0       | V   | 0.0           | 9.29         |
| 7737.000000     | 40.92            | 74.00          | 33.08       | 150.0       | V   | 0.0           | 10.49        |
| 9800.500000     | 41.81            | 74.00          | 32.19       | 150.0       | V   | 0.0           | 13.81        |

## 10 Test Equipment List

### Radiated Emission Test 1# (9kHz – 1GHz)

| DESCRIPTION                         | MANUFACTURER    | MODEL NO.         | EQUIPMENT ID       | SERIAL NO.      | CAL. DUE DATE |
|-------------------------------------|-----------------|-------------------|--------------------|-----------------|---------------|
| EMI Test Receiver                   | Rohde & Schwarz | ESR 26            | 68-4-74-14-002     | 101269          | 2025-5-13     |
| Trilog Super Broadband Test Antenna | Schwarzbeck     | VULB 9162         | 68-4-80-19-003     | 284             | 2025-2-2      |
| Loop Antenna                        | Rohde & Schwarz | HFH2-Z2           | 68-4-80-14-006     | 100398          | 2025-7-24     |
| Pre-amplifier                       | Rohde & Schwarz | SCU 18F           | 68-4-29-19-001     | 100745          | 2025-5-11     |
| Sideband Horn Antenna               | Q-PAR           | QWH-SL-18-40-K-SG | 68-4-80-14-008     | 12827           | 2025-7-2      |
| Pre-amplifier                       | Rohde & Schwarz | SCU 40A           | 68-4-29-14-002     | 100432          | 2025-7-17     |
| Attenuator                          | Mini-circuits   | UNAT-6+           | 68-4-81-21-002     | 15542           | 2025-5-11     |
| 3m Semi-anechoic chamber            | TDK             | SAC-3 #2          | 68-4-90-19-006     | ----            | 2026-10-25    |
| Test software                       | Rohde & Schwarz | EMC32             | 68-4-90-19-006-A01 | Version10.35.02 | N/A           |

### Radiated Emission 2# Test (1GHz – 40GHz)

| DESCRIPTION              | MANUFACTURER    | MODEL NO.         | EQUIPMENT ID       | SERIAL NO.      | CAL. DUE DATE |
|--------------------------|-----------------|-------------------|--------------------|-----------------|---------------|
| EMI Test Receiver        | Rohde & Schwarz | ESR 26            | 68-4-74-14-002     | 101269          | 2025-5-13     |
| Wave Guide Antenna       | ETS             | 3117              | 68-4-80-19-001     | 00218954        | 2025-4-10     |
| Pre-amplifier            | Rohde & Schwarz | SCU 18F           | 68-4-29-19-002     | 100746          | 2025-5-11     |
| Sideband Horn Antenna    | Q-PAR           | QWH-SL-18-40-K-SG | 68-4-80-14-008     | 12827           | 2025-7-2      |
| Pre-amplifier            | Rohde & Schwarz | SCU 40A           | 68-4-29-14-002     | 100432          | 2025-7-17     |
| Attenuator               | Mini-circuits   | UNAT-6+           | 68-4-81-21-002     | 15542           | 2025-5-11     |
| 3m Semi-anechoic chamber | TDK             | SAC-3 #2          | 68-4-90-19-006     | ----            | 2026-10-25    |
| Test software            | Rohde & Schwarz | EMC32             | 68-4-90-19-006-A01 | Version10.35.02 | N/A           |

### Conducted RF Test System

| DESCRIPTION      | MANUFACTURER    | MODEL NO.          | EQUIPMENT ID       | SERIAL NO.          | CAL. DUE DATE |
|------------------|-----------------|--------------------|--------------------|---------------------|---------------|
| Signal Analyzer  | Rohde & Schwarz | FSV40              | 68-4-74-14-004     | 101030              | 2025-5-11     |
| RF Switch Module | Rohde & Schwarz | OSP120/OSP-B157W   | 68-4-93-14-003     | 101226/100929       | 2025-5-11     |
| Power Splitter   | Weinschel       | 1580               | 68-4-85-14-001     | SC319               | 2025-5-11     |
| 10dB Attenuator  | Weinschel       | 4M-10              | 68-4-81-14-003     | 43152               | 2025-5-11     |
| 10dB Attenuator  | R&S             | DNF                | 68-4-81-14-004     | DNF-001             | 2025-5-11     |
| 10dB Attenuator  | R&S             | DNF                | 68-4-81-14-005     | DNF-002             | 2025-5-11     |
| 10dB Attenuator  | R&S             | DNF                | 68-4-81-14-006     | DNF-003             | 2025-5-11     |
| 10dB Attenuator  | R&S             | DNF                | 68-4-81-14-007     | DNF-004             | 2025-5-11     |
| Test software    | Tonscend        | System for BT/WIFI | 68-4-74-14-006-A13 | Version 2.6.77.0518 | N/A           |
| Shielding Room   | TDK             | TS8997             | 68-4-90-19-003     | ----                | 2025-10-15    |

### Conducted Emission Test

| DESCRIPTION       | MANUFACTURER    | MODEL NO. | EQUIPMENT ID       | SERIAL NO.     | CAL. DUE DATE |
|-------------------|-----------------|-----------|--------------------|----------------|---------------|
| EMI Test Receiver | Rohde & Schwarz | ESR 3     | 68-4-74-14-001     | 101782         | 2025-5-13     |
| LISN              | Rohde & Schwarz | ENV432    | 68-4-87-16-001     | 101318         | 2025-5-12     |
| Test software     | Rohde & Schwarz | EMC32     | 68-4-90-14-003-A10 | Version9.15.00 | N/A           |
| Shielding Room    | TDK             | CSR #1    | 68-4-90-19-004     | ----           | 2025-10-15    |

## 11 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

| System Measurement Uncertainty                                                         |                                                                                      |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Test Items                                                                             | Extended Uncertainty                                                                 |
| Uncertainty for Conducted Emission 150kHz-30MHz (for test using AMN ENV432 or ENV4200) | 3.57dB                                                                               |
| Uncertainty for Radiated Emission in 3m chamber 9kHz-30MHz                             | 4.70dB                                                                               |
| Uncertainty for Radiated Emission in new 3m chamber 30MHz-1000MHz                      | Horizontal: 4.59dB;<br>Vertical: 4.75dB                                              |
| Uncertainty for Radiated Emission in new 3m 1000MHz-18000MHz                           | Horizontal: 5.08dB;<br>Vertical: 5.09dB;                                             |
| Uncertainty for Radiated Emission 18000MHz-40000MHz                                    | Horizontal: 4.52dB;<br>Vertical: 4.51dB                                              |
| Uncertainty for Conducted RF test                                                      | RF Power Conducted: 1.31dB<br>Frequency test involved:<br>$0.6 \times 10^{-8}$ or 1% |

Measurement Uncertainty Decision Rule:

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.3.3 and 4.3.4.

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THE END