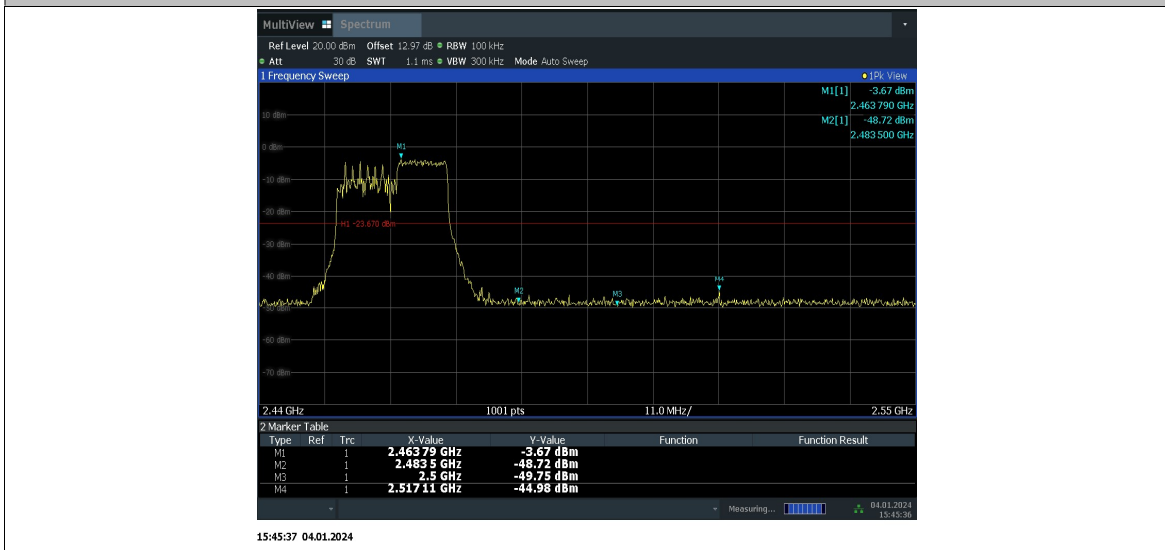


11AX20MIMO\_Ant10\_High\_2462\_106Tone\_RU54



**Conclusion: Pass**

## **A.6. Transmitter Spurious Emission**

### **A.6.1 Transmitter Spurious Emission – Conducted**

#### **Method of Measurement: See ANSI C63.10-2013-clause 11.11**

Establish a reference level by using the following procedure:

- a) Set instrument center frequency to DTS channel center frequency
- b) Set the span to  $\geq 1.5$  times the DTS bandwidth
- c) Set the RBW= 100 kHz
- d) Set the VBW= 300 kHz
- e) Detector = Peak
- f) Sweep time = auto couple
- g) Trace mode = max hold
- h) Allow trace to fully stabilize
- i) Use the peak marker function to determine the maximum PSD level

Note that the channel found to contain the maximum PSD level can be used to establish the reference level.

Establish an emission level by using the following procedure:

- a) Set the center frequency and span to encompass frequency range to be measured.
- b) Set the RBW = 100 kHz.
- c) Set the VBW = 300 kHz.
- d) Detector = peak.
- e) Sweep time = auto couple.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

#### **Measurement Limit:**

| Standard                   | Limit                                             |
|----------------------------|---------------------------------------------------|
| FCC 47 CFR Part 15.247 (d) | 20dB below peak output power in 100 kHz bandwidth |

#### **EUT ID: UT11a**

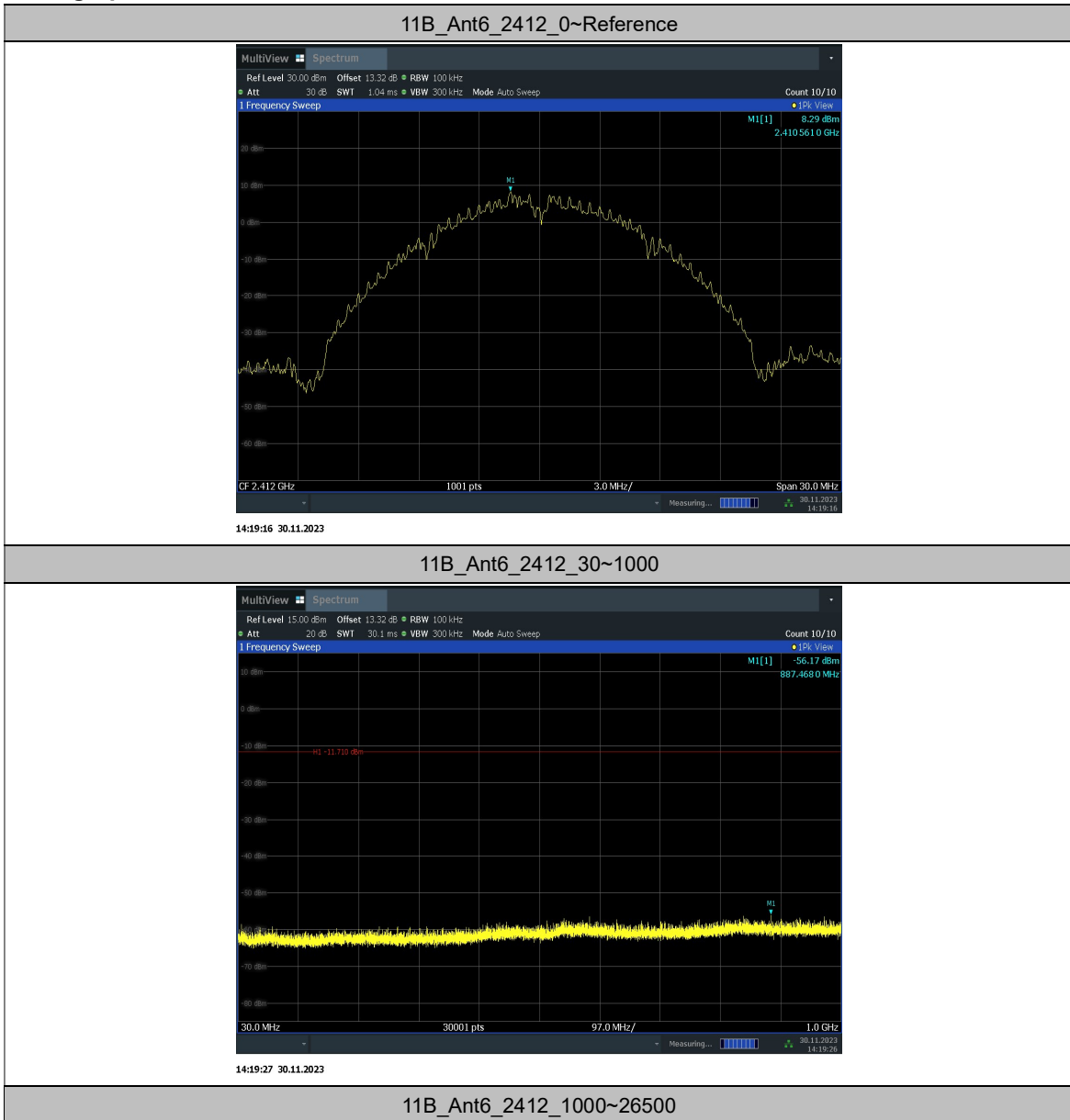
#### **Measurement Results:**

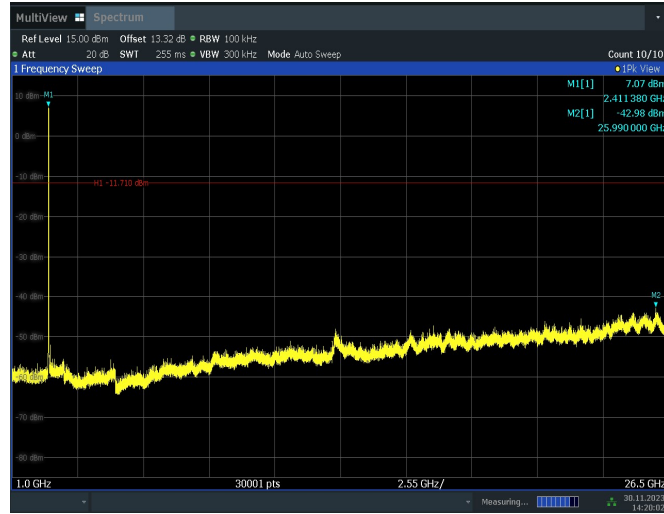
| TestMode | Antenna | Frequency[MHz] | FreqRange [Mhz] | RefLevel [dBm] | Result [dBm] | Verdict |
|----------|---------|----------------|-----------------|----------------|--------------|---------|
| 11B      | Ant6    | 2412           | Reference       | 8.29           | 8.29         | PASS    |
|          |         |                | 30~1000         | 8.29           | -56.17       | PASS    |
|          |         |                | 1000~26500      | 8.29           | -42.98       | PASS    |
|          |         | 2437           | Reference       | 6.52           | 6.52         | PASS    |
|          |         |                | 30~1000         | 6.52           | -54.98       | PASS    |

|            |       |      |            |       |        |      |
|------------|-------|------|------------|-------|--------|------|
|            |       |      | 1000~26500 | 6.52  | -43.91 | PASS |
|            |       | 2462 | Reference  | 7.16  | 7.16   | PASS |
|            |       |      | 30~1000    | 7.16  | -56.61 | PASS |
|            |       |      | 1000~26500 | 7.16  | -35.75 | PASS |
| 11G        | Ant6  | 2412 | Reference  | 4.33  | 4.33   | PASS |
|            |       |      | 30~1000    | 4.33  | -56.44 | PASS |
|            |       |      | 1000~26500 | 4.33  | -43.21 | PASS |
|            |       | 2437 | Reference  | 3.66  | 3.66   | PASS |
|            |       |      | 30~1000    | 3.66  | -56.5  | PASS |
|            |       |      | 1000~26500 | 3.66  | -42.41 | PASS |
|            |       | 2462 | Reference  | 3.71  | 3.71   | PASS |
|            |       |      | 30~1000    | 3.71  | -56.12 | PASS |
|            |       |      | 1000~26500 | 3.71  | -43.34 | PASS |
| 11N20SISO  | Ant6  | 2412 | Reference  | 3.85  | 3.85   | PASS |
|            |       |      | 30~1000    | 3.85  | -56.38 | PASS |
|            |       |      | 1000~26500 | 3.85  | -42.98 | PASS |
|            |       | 2437 | Reference  | 3.75  | 3.75   | PASS |
|            |       |      | 30~1000    | 3.75  | -56.75 | PASS |
|            |       |      | 1000~26500 | 3.75  | -43.37 | PASS |
|            |       | 2462 | Reference  | 3.74  | 3.74   | PASS |
|            |       |      | 30~1000    | 3.74  | -56.35 | PASS |
|            |       |      | 1000~26500 | 3.74  | -43.67 | PASS |
| 11AX40SISO | Ant6  | 2422 | Reference  | -0.81 | -0.81  | PASS |
|            |       |      | 30~1000    | -0.81 | -29.32 | PASS |
|            |       |      | 1000~26500 | -0.81 | -32.68 | PASS |
|            |       | 2437 | Reference  | -0.72 | -0.72  | PASS |
|            |       |      | 30~1000    | -0.72 | -56.48 | PASS |
|            |       |      | 1000~26500 | -0.72 | -37.8  | PASS |
|            |       | 2452 | Reference  | -1.24 | -1.24  | PASS |
|            |       |      | 30~1000    | -1.24 | -56.22 | PASS |
|            |       |      | 1000~26500 | -1.24 | -42.2  | PASS |
| 11N20MIMO  | Ant6  | 2412 | Reference  | 0.44  | 0.44   | PASS |
|            |       |      | 30~1000    | 0.44  | -56.09 | PASS |
|            |       |      | 1000~26500 | 0.44  | -43.37 | PASS |
|            | Ant10 | 2412 | Reference  | 0.99  | 0.99   | PASS |
|            |       |      | 30~1000    | 0.99  | -25.48 | PASS |
|            |       |      | 1000~26500 | 0.99  | -43.32 | PASS |
|            | Ant6  | 2437 | Reference  | 0.88  | 0.88   | PASS |
|            |       |      | 30~1000    | 0.88  | -56.11 | PASS |
|            |       |      | 1000~26500 | 0.88  | -43.59 | PASS |
|            | Ant10 | 2437 | Reference  | 1.00  | 1.00   | PASS |
|            |       |      | 30~1000    | 1.00  | -55.66 | PASS |

|           |       |      |            |            |        |        |      |
|-----------|-------|------|------------|------------|--------|--------|------|
|           | Ant6  | 2462 | 1000~26500 | 1.00       | -42.84 | PASS   |      |
|           |       |      | Reference  | 0.29       | 0.29   | PASS   |      |
|           |       |      | 30~1000    | 0.29       | -56.46 | PASS   |      |
|           | Ant10 | 2462 | 1000~26500 | 0.29       | -43.25 | PASS   |      |
|           |       |      | Reference  | 0.18       | 0.18   | PASS   |      |
|           |       |      | 30~1000    | 0.18       | -55.64 | PASS   |      |
| 11N40MIMO | Ant6  | 2422 | 1000~26500 | 0.18       | -43.21 | PASS   |      |
|           |       |      | Reference  | -1.56      | -1.56  | PASS   |      |
|           |       |      | 30~1000    | -1.56      | -55.97 | PASS   |      |
|           | Ant10 | 2422 | 1000~26500 | -1.56      | -43.79 | PASS   |      |
|           |       |      | Reference  | -1.95      | -1.95  | PASS   |      |
|           |       |      | 30~1000    | -1.95      | -36.45 | PASS   |      |
|           | Ant6  | 2437 | 1000~26500 | -1.95      | -43.28 | PASS   |      |
|           |       |      | Reference  | -1.52      | -1.52  | PASS   |      |
|           |       |      | 30~1000    | -1.52      | -56.15 | PASS   |      |
|           | Ant10 | 2437 | 1000~26500 | -1.52      | -43.33 | PASS   |      |
|           |       |      | Reference  | -1.11      | -1.11  | PASS   |      |
|           |       |      | 30~1000    | -1.11      | -56.29 | PASS   |      |
|           | Ant6  | 2452 | 1000~26500 | -1.11      | -42.64 | PASS   |      |
|           |       |      | Reference  | -1.83      | -1.83  | PASS   |      |
|           |       |      | 30~1000    | -1.83      | -56.14 | PASS   |      |
|           | Ant10 | 2452 | 1000~26500 | -1.83      | -43.89 | PASS   |      |
|           |       |      | Reference  | -1.44      | -1.44  | PASS   |      |
|           |       |      | 30~1000    | -1.44      | -56.57 | PASS   |      |
|           |       |      |            | 1000~26500 | -1.44  | -43.54 | PASS |

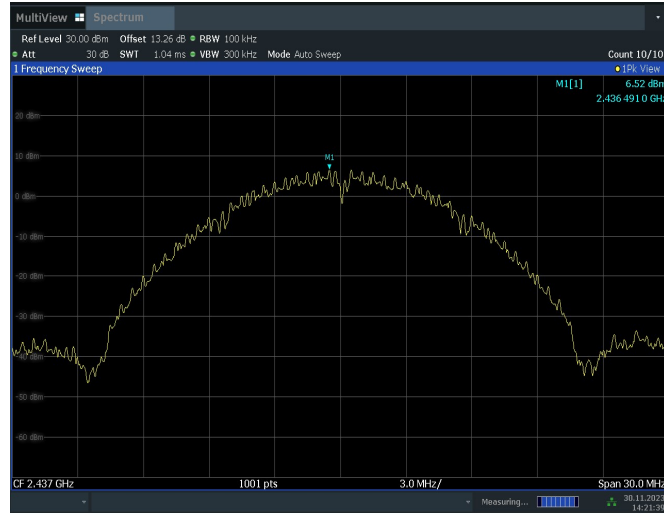
Test graphs as below:





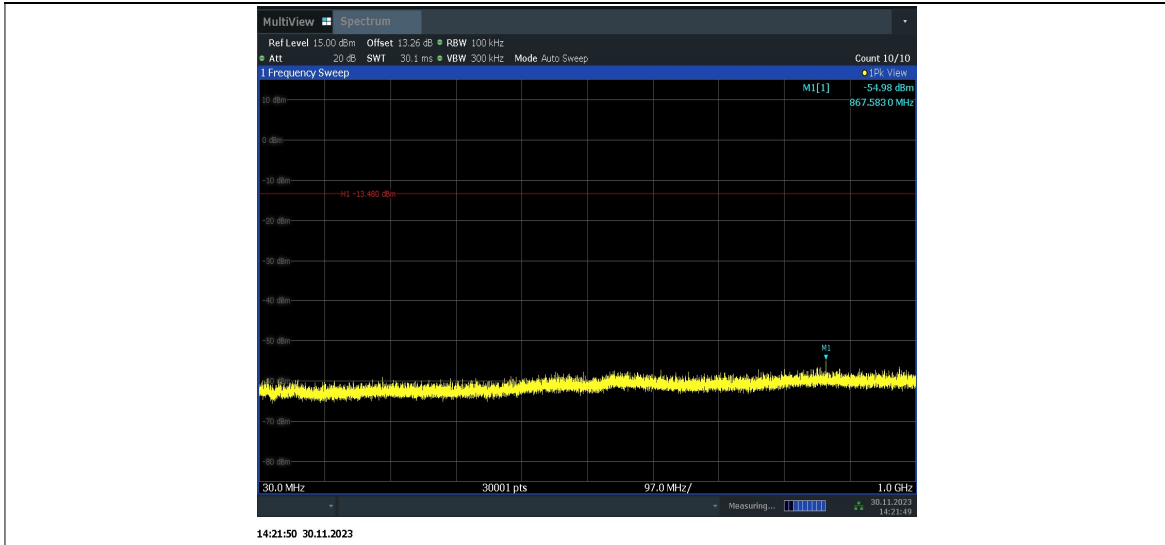
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11B\_Ant6\_2437\_0~Reference



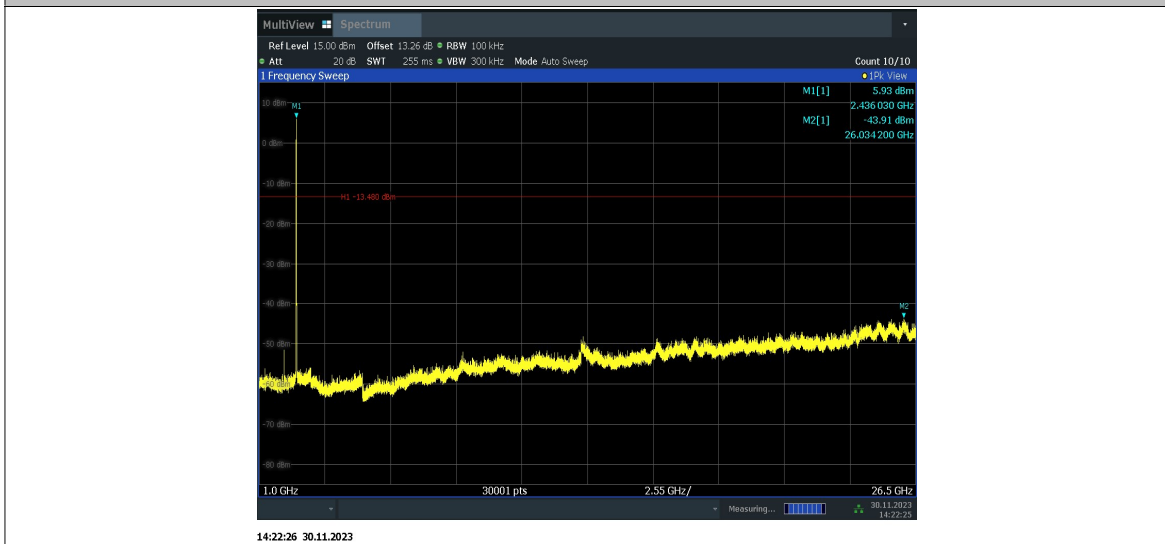
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11B\_Ant6\_2437\_30~1000



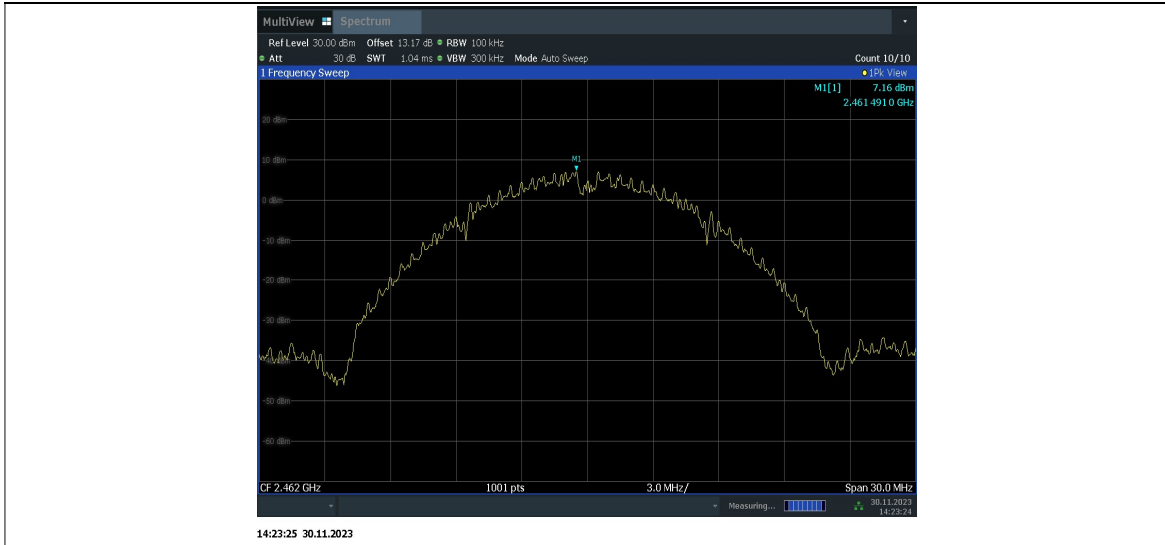
14:21:50 30.11.2023

11B\_Ant6\_2437\_1000~26500

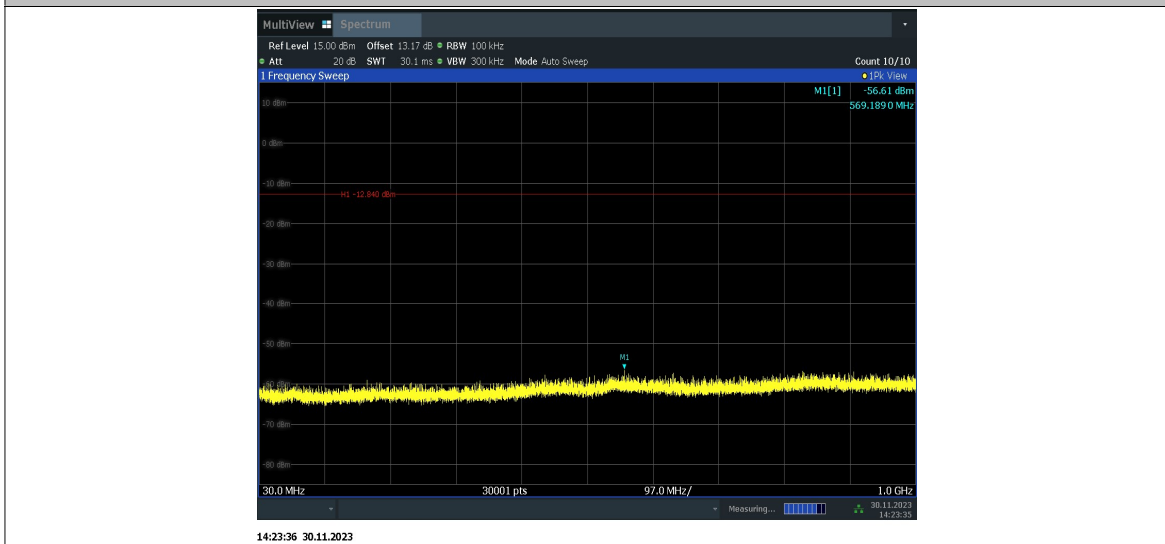


14:22:26 30.11.2023

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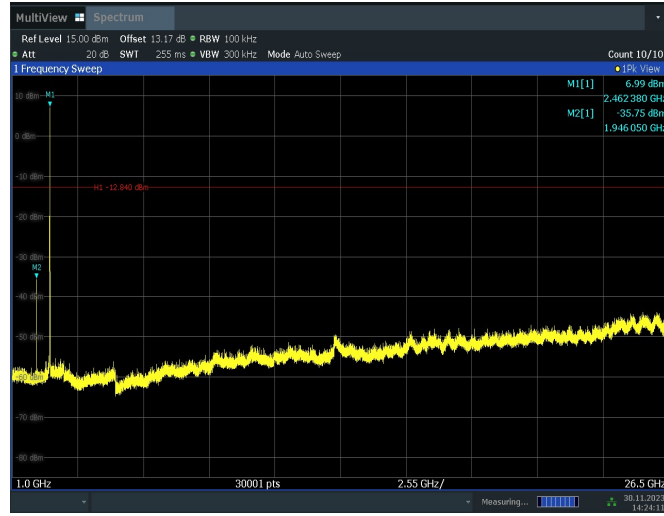


11B\_Ant6\_2462\_30~1000



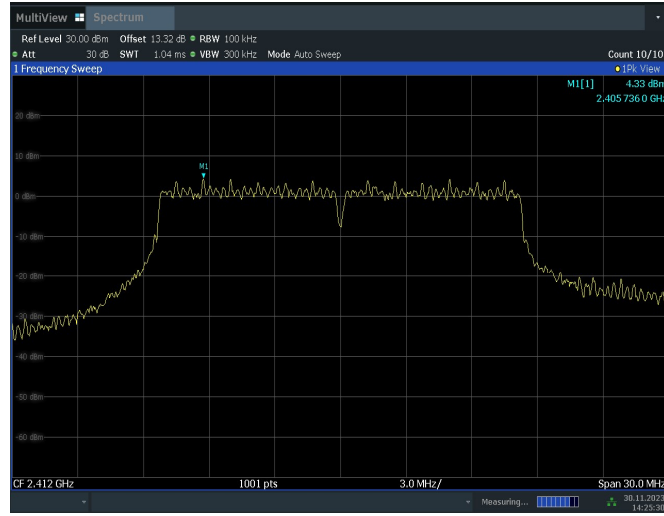
11B\_Ant6\_2462\_1000~26500





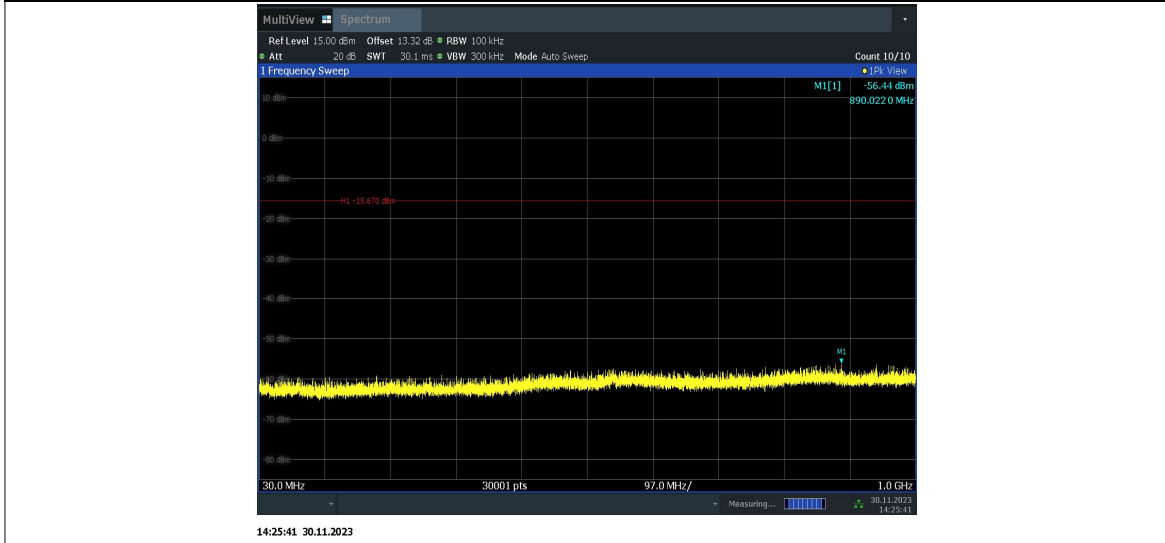
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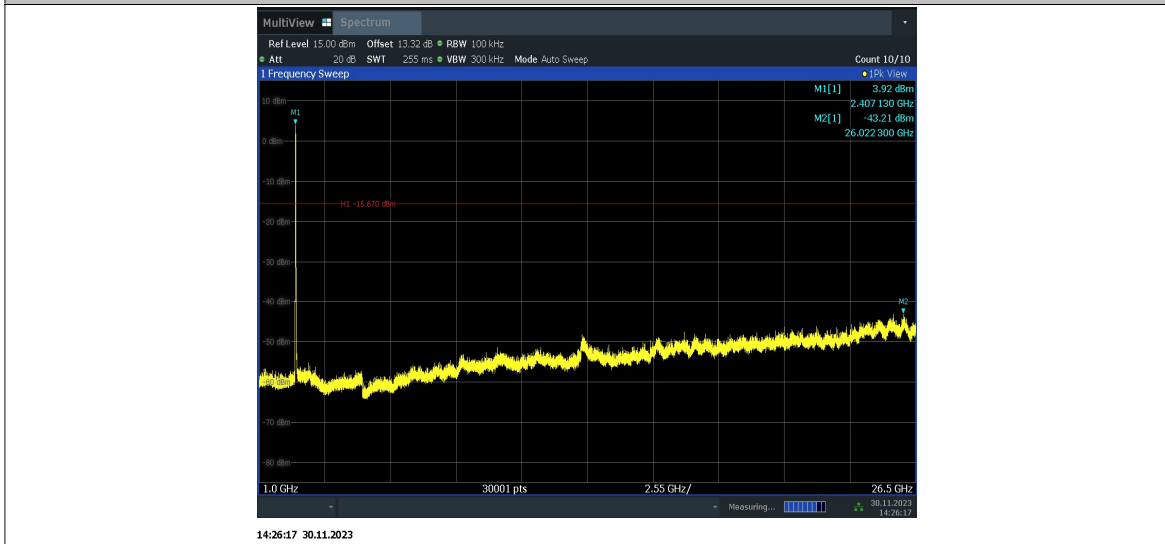
14:25:31 30.11.2023

11G\_Ant6\_2412\_30~1000



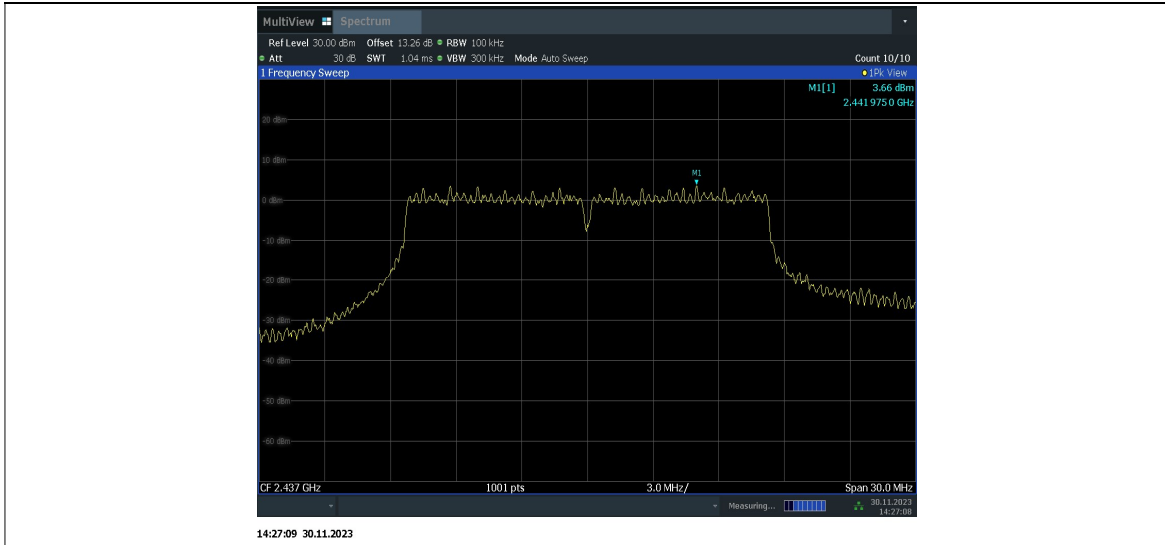
14:25:41 30.11.2023

11G\_Ant6\_2412\_1000~26500

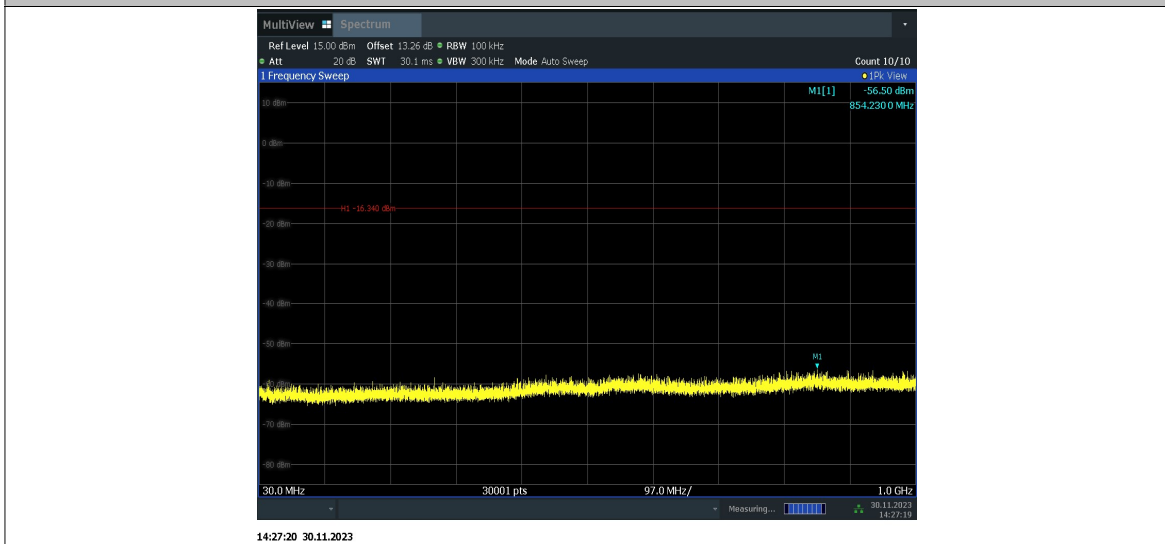


14:26:17 30.11.2023

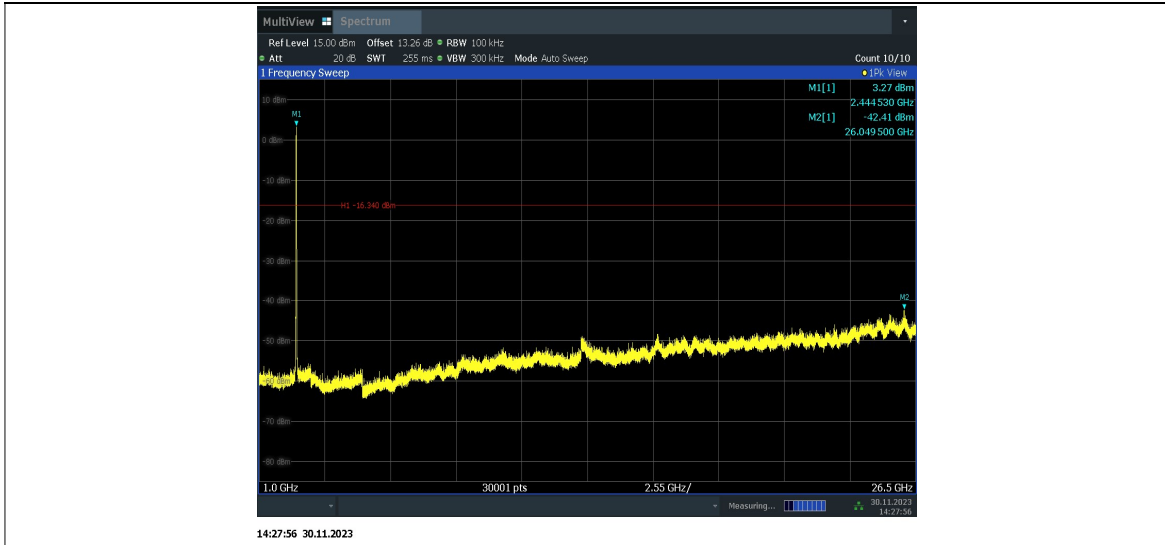
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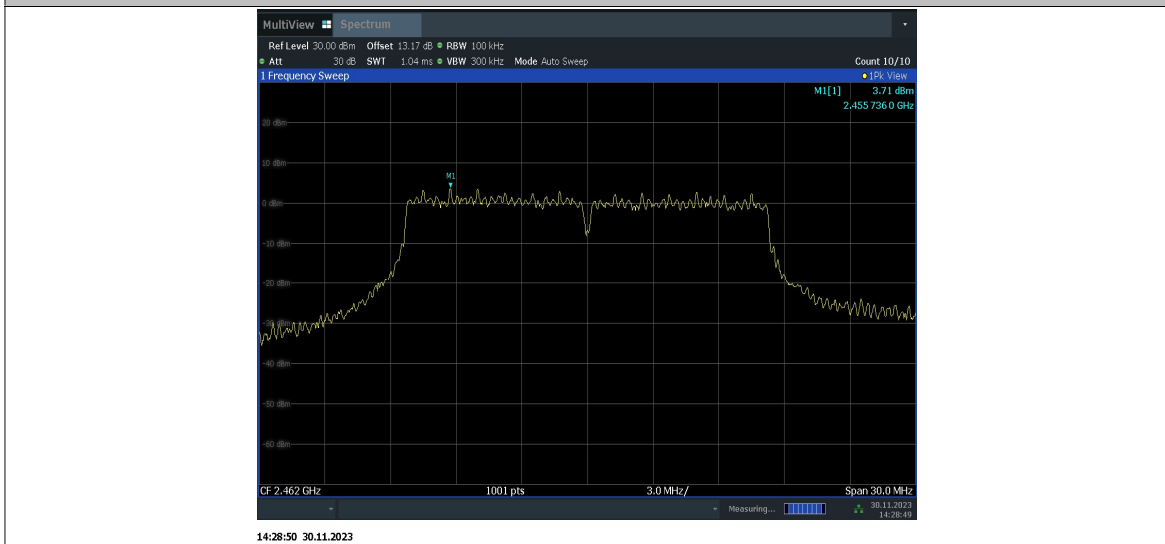
11G\_Ant6\_2437\_30~1000



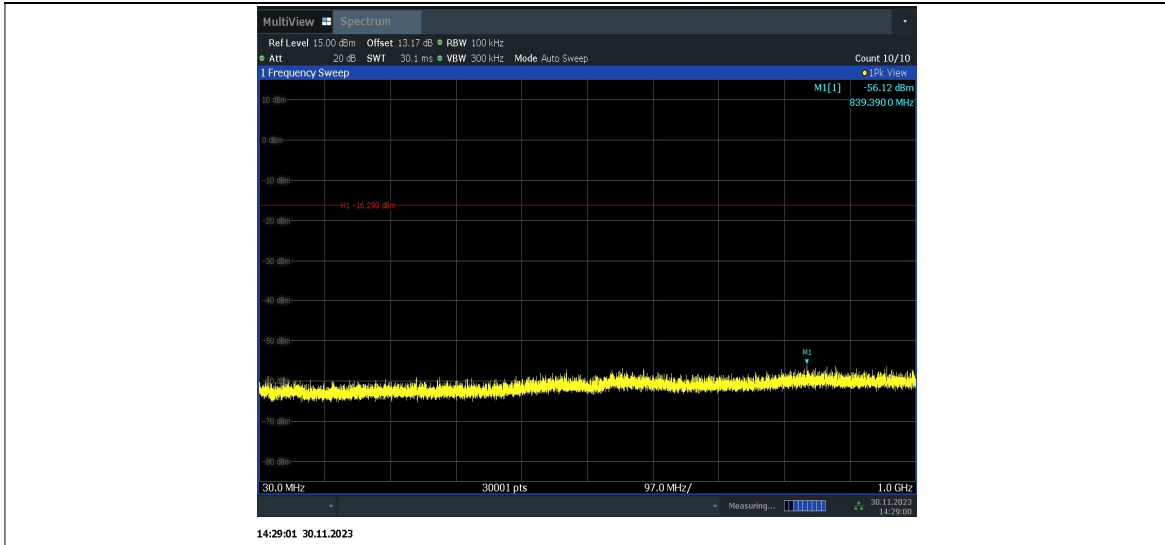
11G\_Ant6\_2437\_1000~26500



11G\_Ant6\_2462\_0~Reference

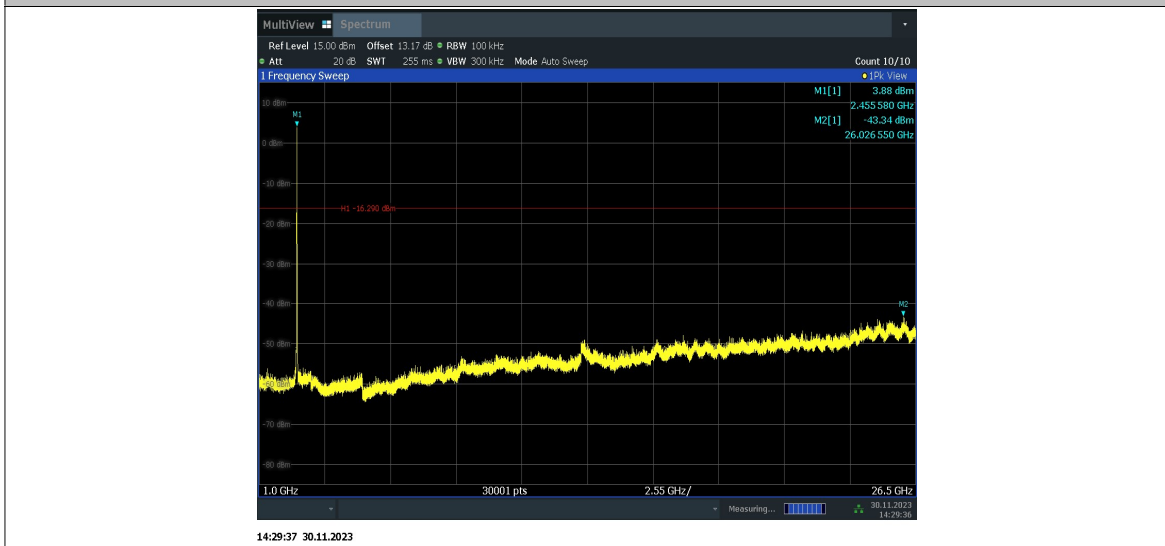


11G\_Ant6\_2462\_30~1000



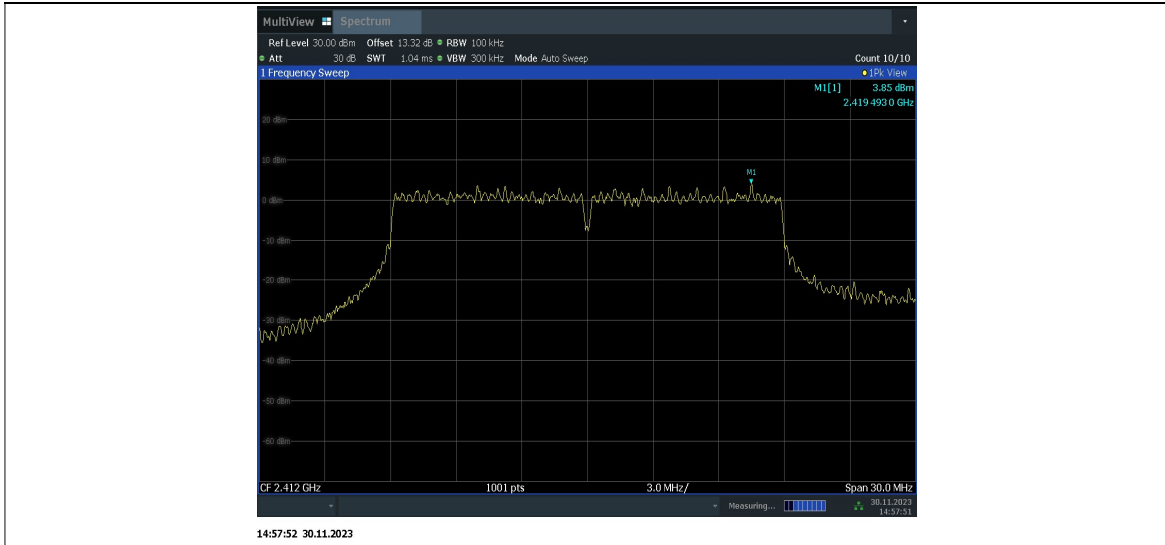
14:29:01 30.11.2023

11G\_Ant6\_2462\_1000~26500

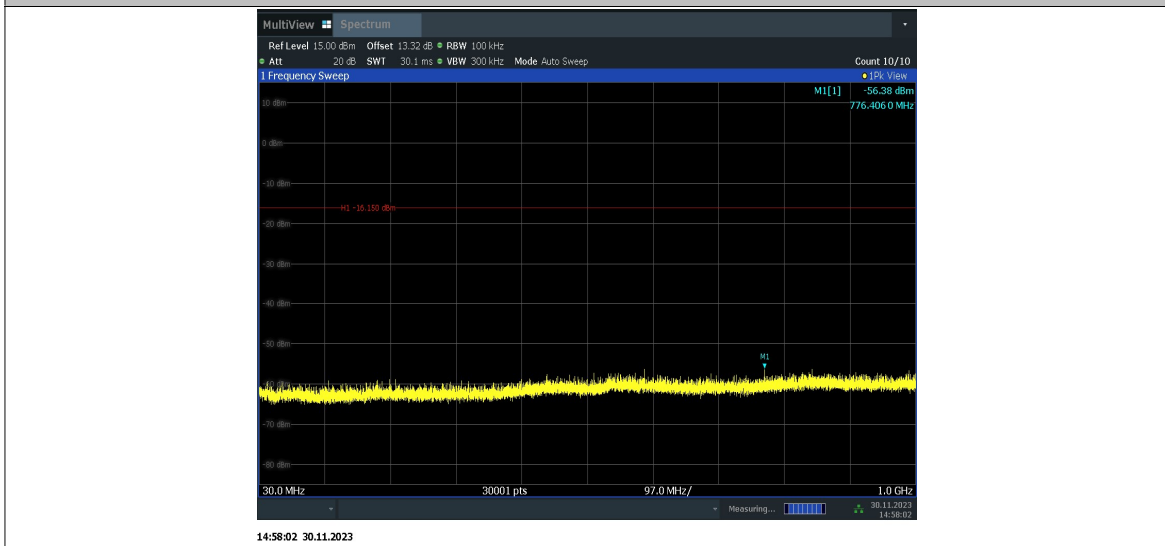


14:29:37 30.11.2023

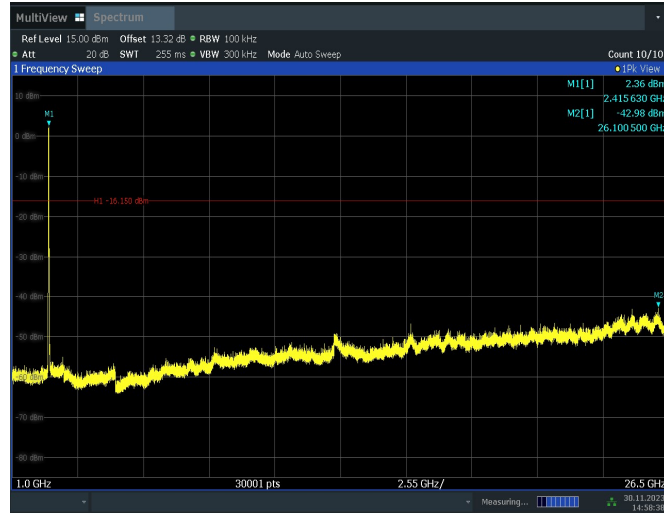
11N20SISO\_Ant6\_2412\_0~Reference



11N20SISO\_Ant6\_2412\_30~1000

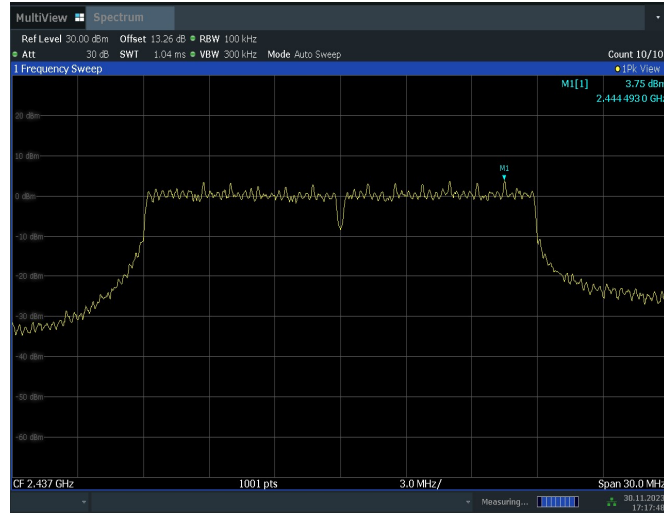


11N20SISO\_Ant6\_2412\_1000~26500



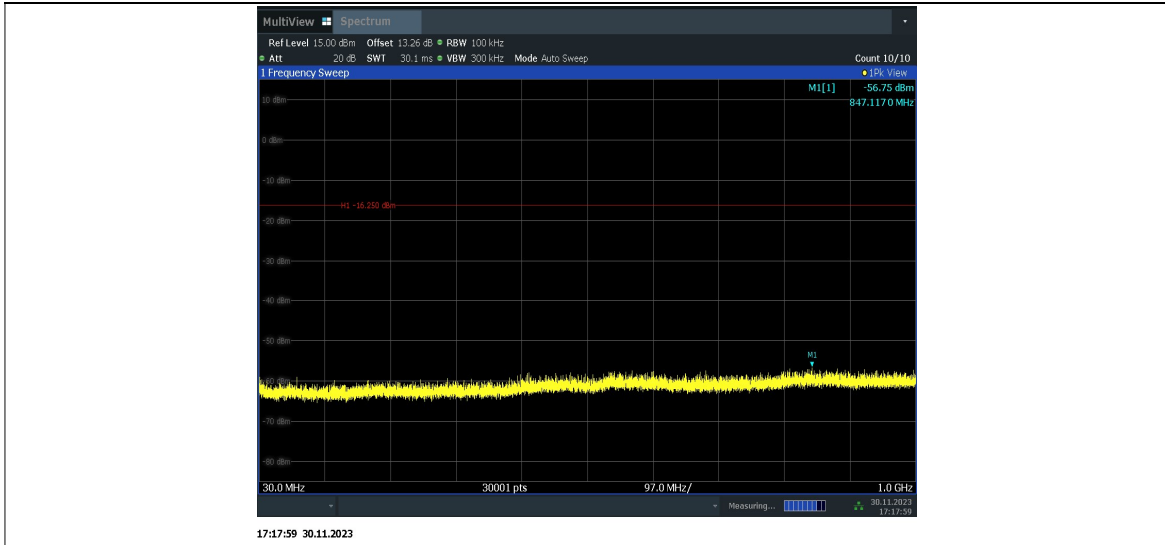
14:58:39 30.11.2023

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17:17:48 30.11.2023

11N20SISO\_Ant6\_2437\_30~1000



17:17:59 30.11.2023

11N20SISO\_Ant6\_2437\_1000~26500



17:18:35 30.11.2023

11N20SISO\_Ant6\_2462\_0~Reference