

## RF Test Data for 2.4G Wi-Fi (Conducted Measurements)

| General Description of EUT  |   |
|---|---|
| Product Name:   | Wireless monitor  |
| Test Model:   | M724  |
| Sample ID:  | 20211014-10-2#  |
| Environmental Conditions  |   |
| Temperature:  | 23.8℃   |
| Relative Humidity:  | 48%   |
| Test Voltage:   | Adapter: CS12N050200FUF<br>Input: 100-240V~, 50/60Hz 500mA<br>Output: DC 5V, 2.0A<br>DC 3.7V by 2000mAh Rechargeable Li-ion Battery |
| Test Engineer:  | Huang jian ping   |
| Note: For a more detailed features description, please refer to the report TB-FCC184792 |   |

## Contents

|   |    |
|---|----|
| 1. DTS Bandwidth.....                   | 3  |
| 1.1. Test Result.....                   | 3  |
| 1.2. Test Graphs .....                  | 4  |
| 2. Occupied Channel Bandwidth.....      | 6  |
| 2.1. Test Result.....                   | 6  |
| 2.2. Test Graphs .....                  | 7  |
| 3. Maximum conducted output power.....  | 9  |
| 3.1. Test Result.....                   | 9  |
| 4. Maximum power spectral density ..... | 10 |
| 4.1. Test Result.....                   | 10 |
| 4.2. Test Graphs .....                  | 11 |
| 5. Band edge measurements .....         | 13 |
| 5.1. Test Result.....                   | 13 |
| 5.2. Test Graphs .....                  | 14 |
| 6. Conducted Spurious Emission.....     | 16 |
| 6.1. Test Result.....                   | 16 |
| 6.2. Test Graphs .....                  | 17 |
| 7. Duty Cycle .....                     | 23 |
| 7.1. Test Result.....                   | 23 |
| 7.2. Test Graphs .....                  | 24 |
| 8. Emissions in Restricted Bands.....   | 26 |
| 8.1. Test Result.....                   | 26 |
| 8.2. Test Graphs .....                  | 27 |



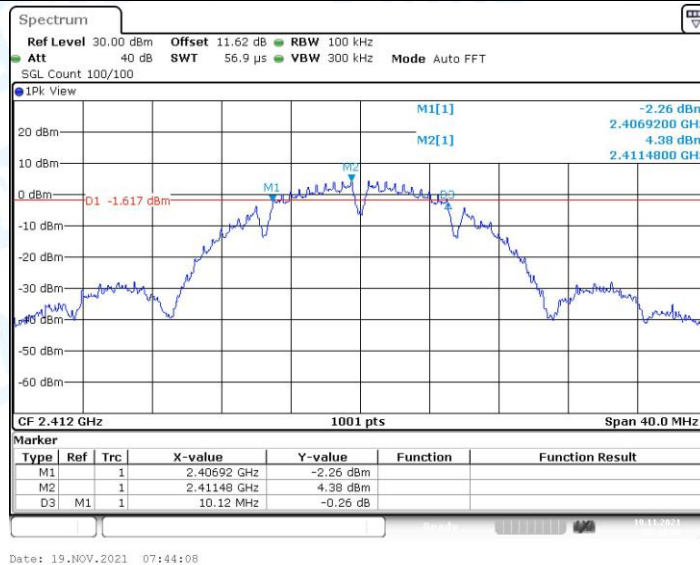
## 1. DTS Bandwidth

### 1.1. Test Result

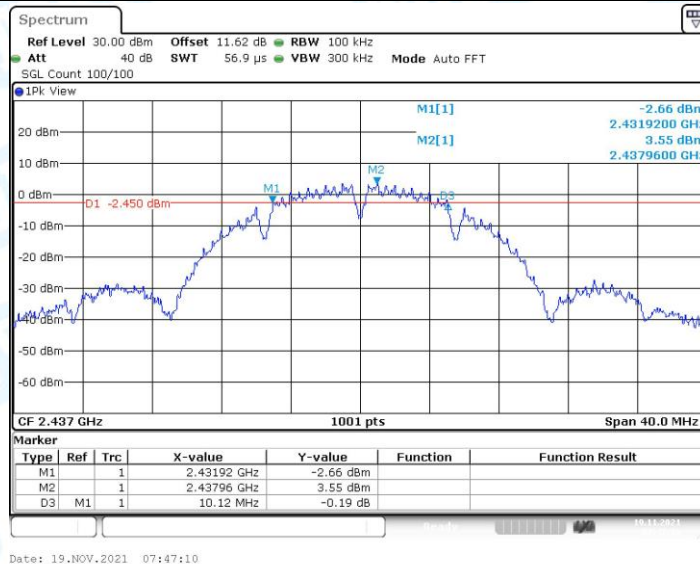
| TestMode | Antenna | Channel | DTS BW [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|---------|--------------|----------|----------|------------|---------|
| 11B      | Ant1    | 2412    | 10.120       | 2406.920 | 2417.040 | 0.5        | PASS    |
|          |         | 2437    | 10.120       | 2431.920 | 2442.040 | 0.5        | PASS    |
|          |         | 2462    | 10.120       | 2456.920 | 2467.040 | 0.5        | PASS    |
| 11G      | Ant1    | 2412    | 16.680       | 2403.640 | 2420.320 | 0.5        | PASS    |
|          |         | 2437    | 16.400       | 2428.800 | 2445.200 | 0.5        | PASS    |
|          |         | 2462    | 16.520       | 2453.760 | 2470.280 | 0.5        | PASS    |

## 1.2. Test Graphs

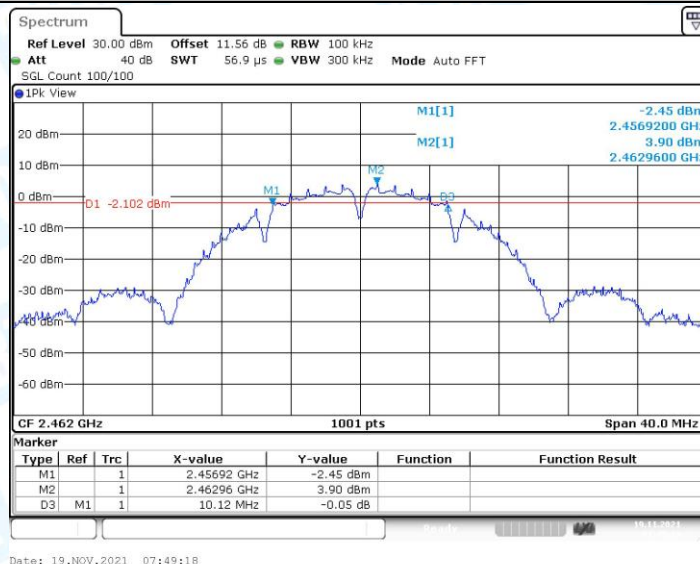
11B\_Ant1\_2412



11B\_Ant1\_2437

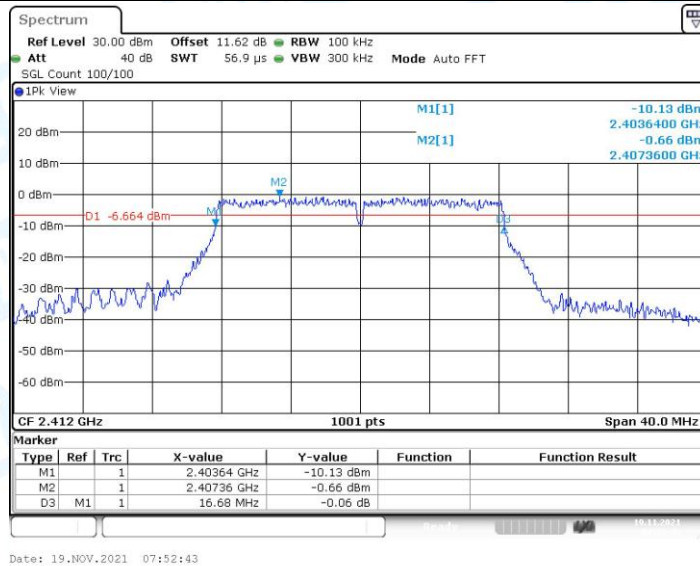


11B\_Ant1\_2462

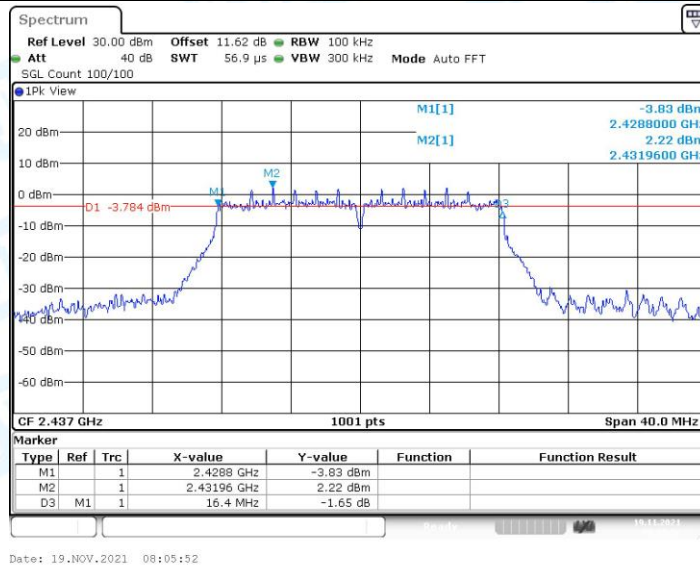




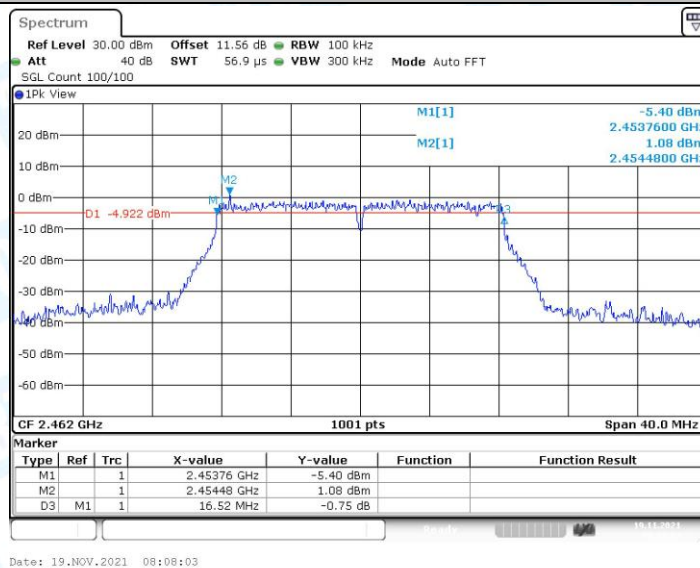
## 11G\_Ant1\_2412



## 11G\_Ant1\_2437



## 11G\_Ant1\_2462



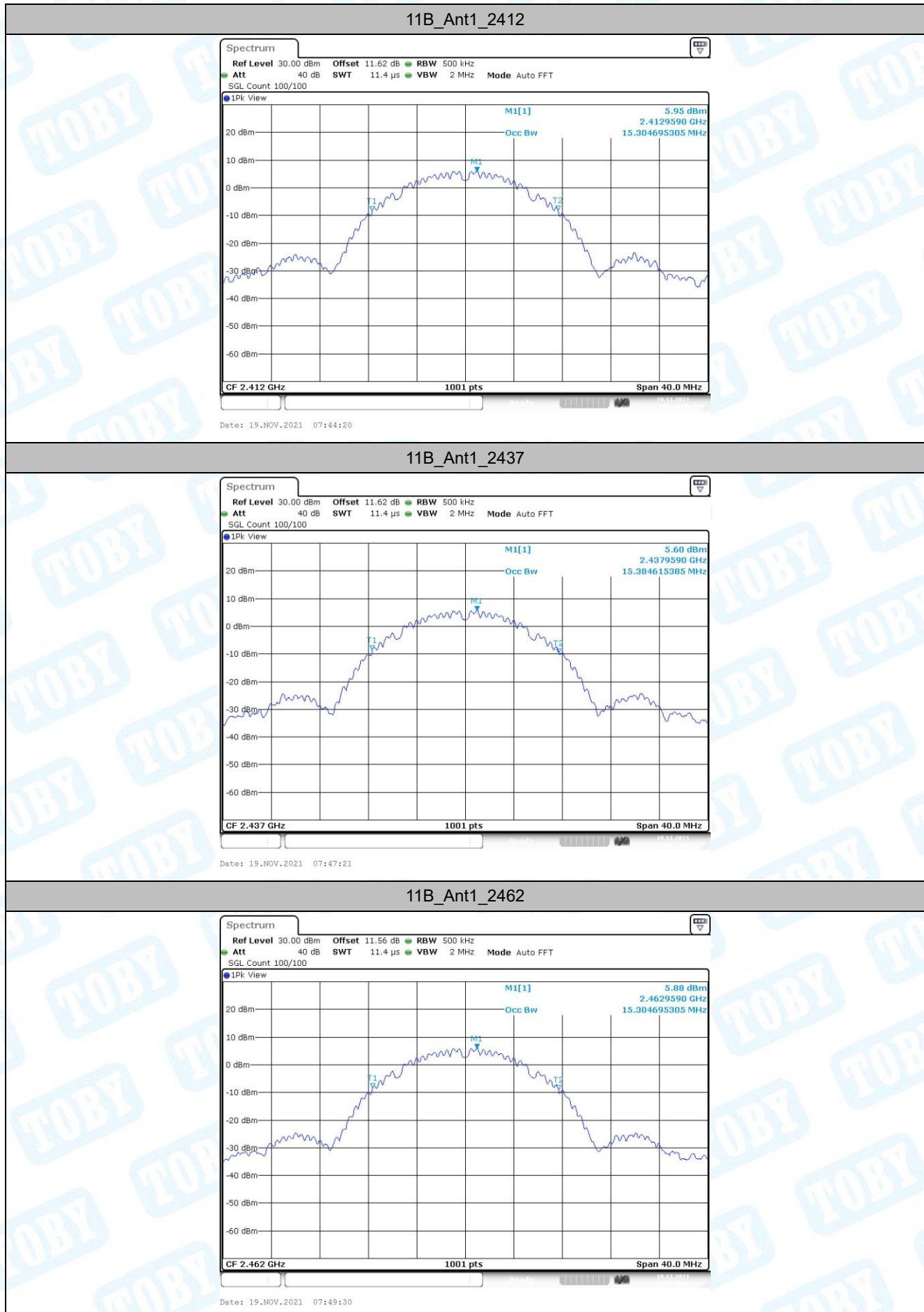
## 2. Occupied Channel Bandwidth

### 2.1. Test Result

| TestMode | Antenna | Channel | OCB [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|---------|-----------|----------|----------|------------|---------|
| 11B      | Ant1    | 2412    | 15.305    | 2404.328 | 2419.632 | ---        | PASS    |
|          |         | 2437    | 15.385    | 2429.328 | 2444.712 | ---        | PASS    |
|          |         | 2462    | 15.305    | 2454.368 | 2469.672 | ---        | PASS    |
| 11G      | Ant1    | 2412    | 17.263    | 2403.409 | 2420.671 | ---        | PASS    |
|          |         | 2437    | 17.183    | 2428.409 | 2445.591 | ---        | PASS    |
|          |         | 2462    | 17.303    | 2453.409 | 2470.711 | ---        | PASS    |



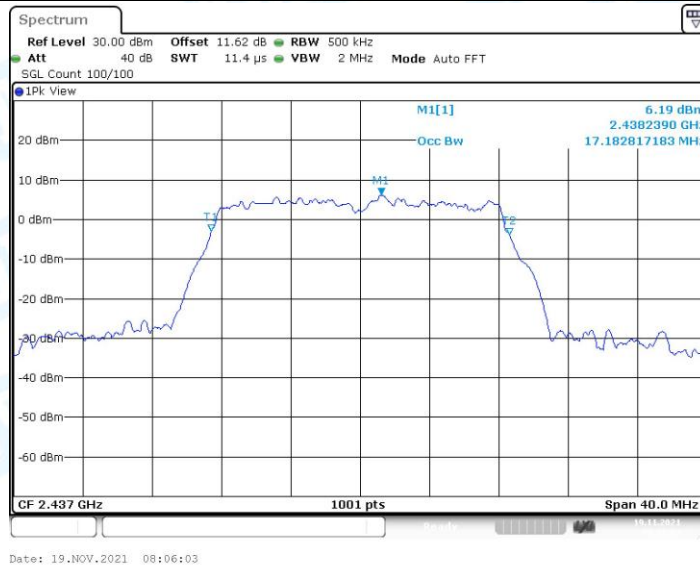
## 2.2. Test Graphs



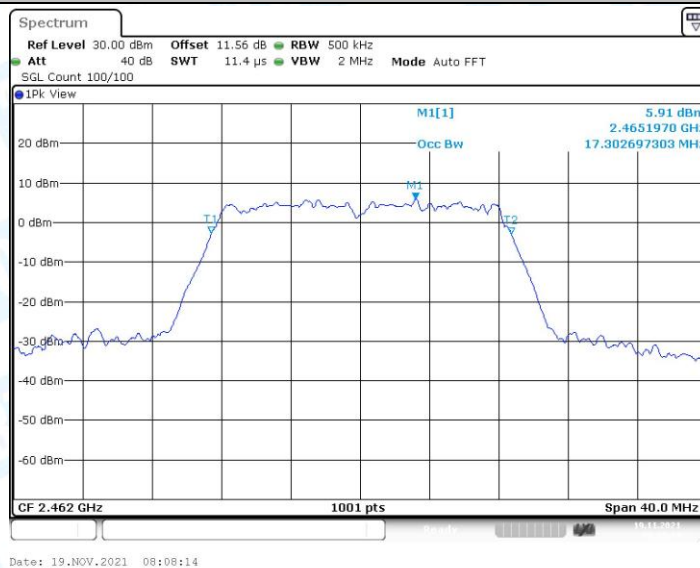
## 11G\_Ant1\_2412



## 11G\_Ant1\_2437



## 11G\_Ant1\_2462





### 3. Maximum conducted output power

#### 3.1. Test Result

| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| 11B      | Ant1    | 2412    | 16.04       | ≤30        | PASS    |
|          |         | 2437    | 15.97       | ≤30        | PASS    |
|          |         | 2462    | 16.24       | ≤30        | PASS    |
| 11G      | Ant1    | 2412    | 17.10       | ≤30        | PASS    |
|          |         | 2437    | 16.94       | ≤30        | PASS    |
|          |         | 2462    | 17.11       | ≤30        | PASS    |

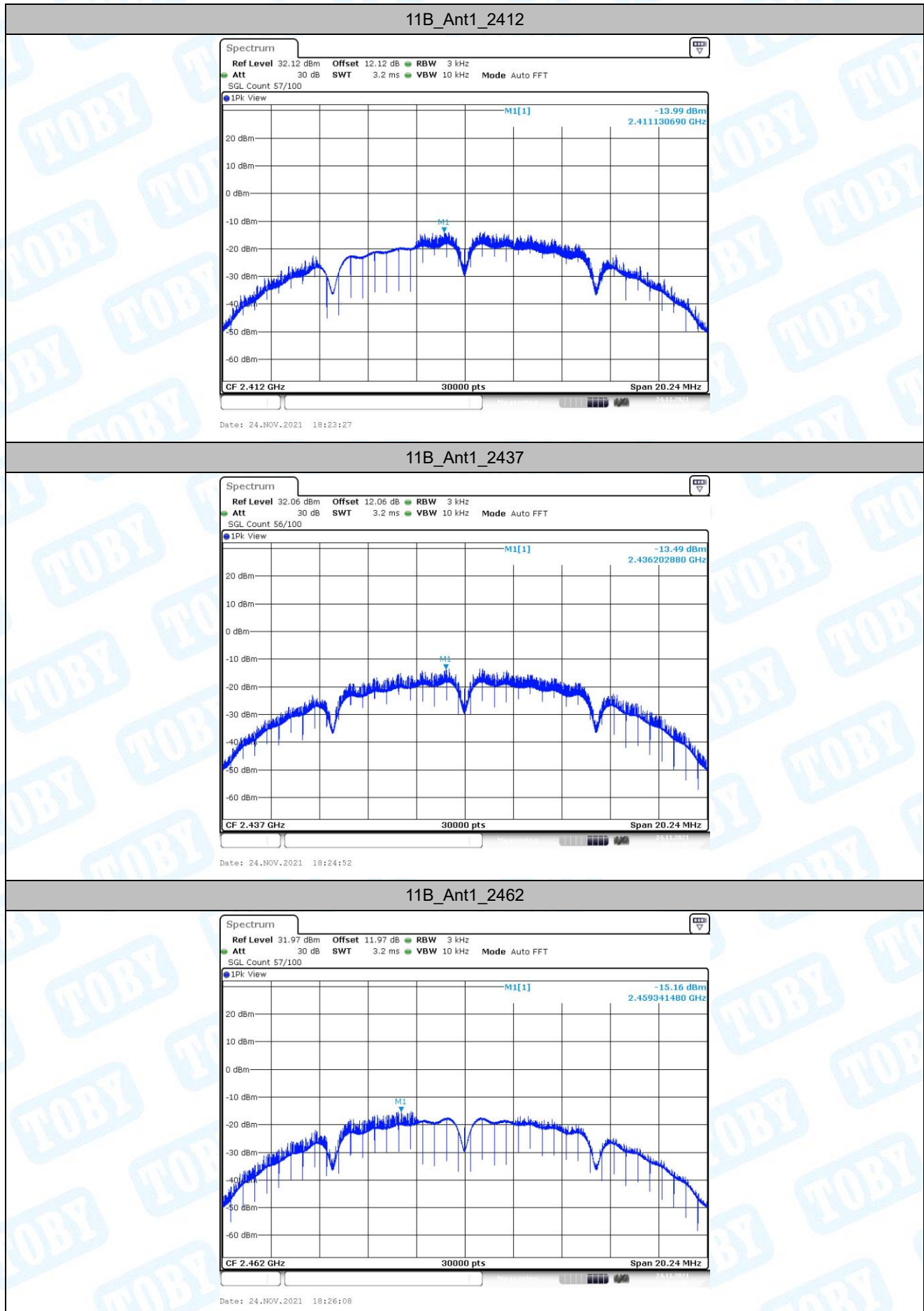
## 4. Maximum power spectral density

### 4.1. Test Result

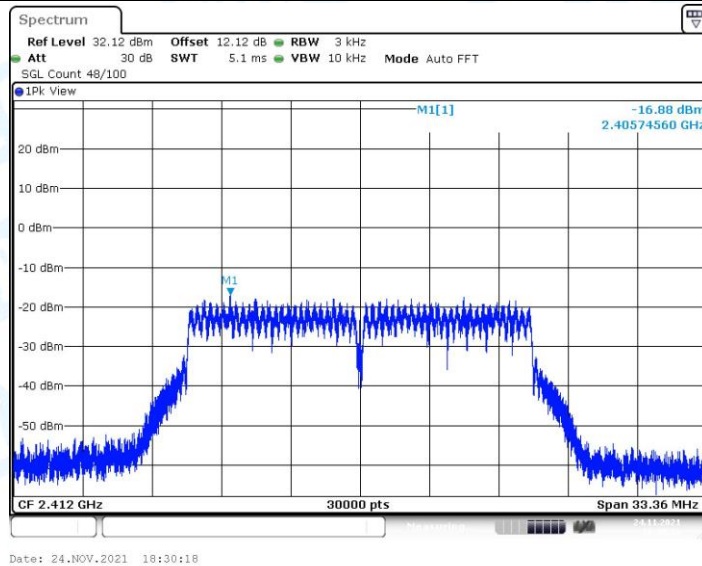
| TestMode | Antenna | Channel | Result[dBm/3kHz] | Limit[dBm/3kHz] | Verdict |
|----------|---------|---------|------------------|-----------------|---------|
| 11B      | Ant1    | 2412    | -13.99           | ≤8              | PASS    |
|          |         | 2437    | -13.49           | ≤8              | PASS    |
|          |         | 2462    | -15.16           | ≤8              | PASS    |
| 11G      | Ant1    | 2412    | -16.88           | ≤8              | PASS    |
|          |         | 2437    | -17.65           | ≤8              | PASS    |
|          |         | 2462    | -17.34           | ≤8              | PASS    |



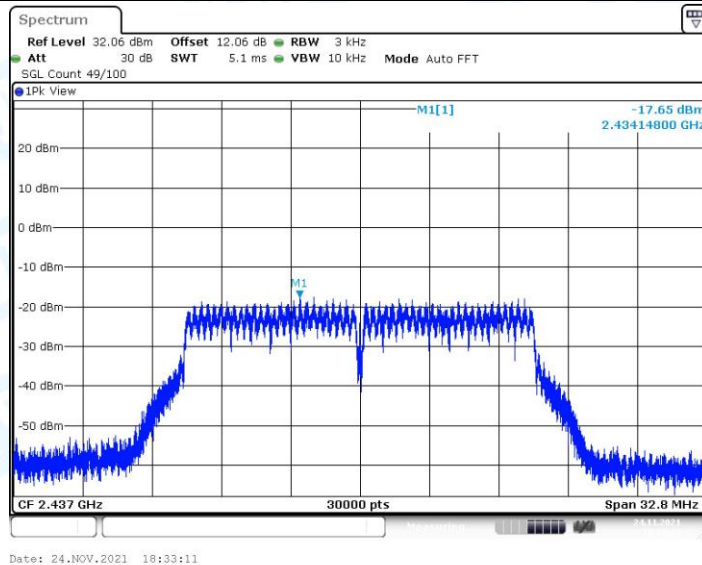
## 4.2. Test Graphs



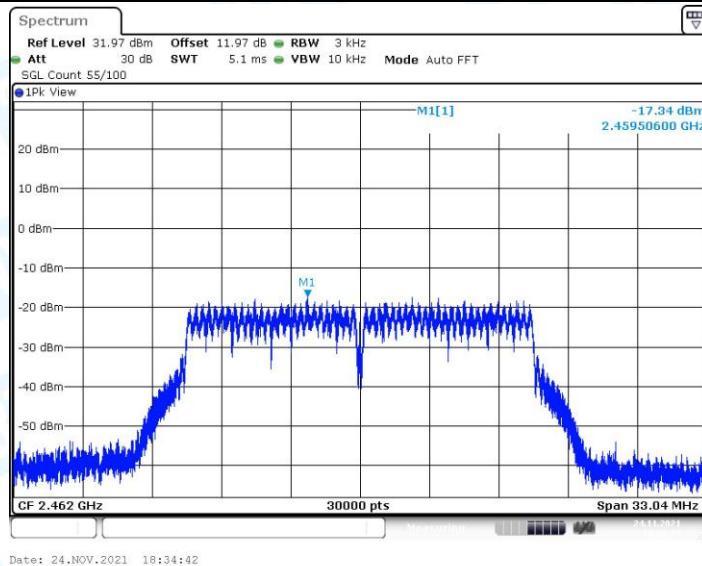
## 11G\_Ant1\_2412



## 11G\_Ant1\_2437



## 11G\_Ant1\_2462





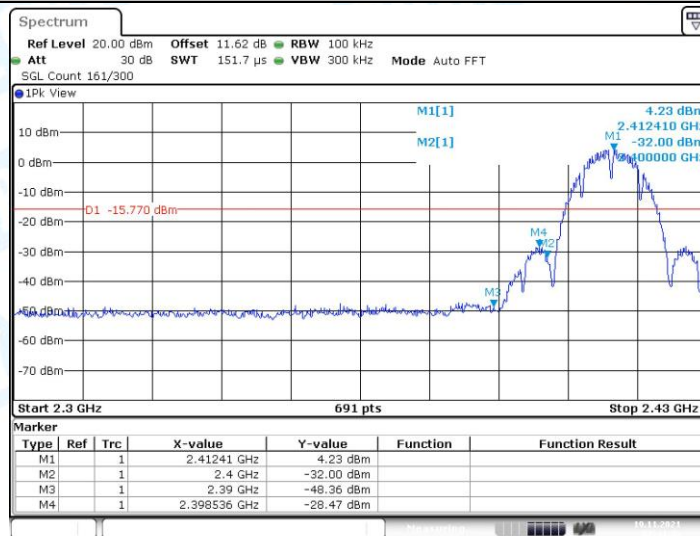
## 5. Band edge measurements

### 5.1. Test Result

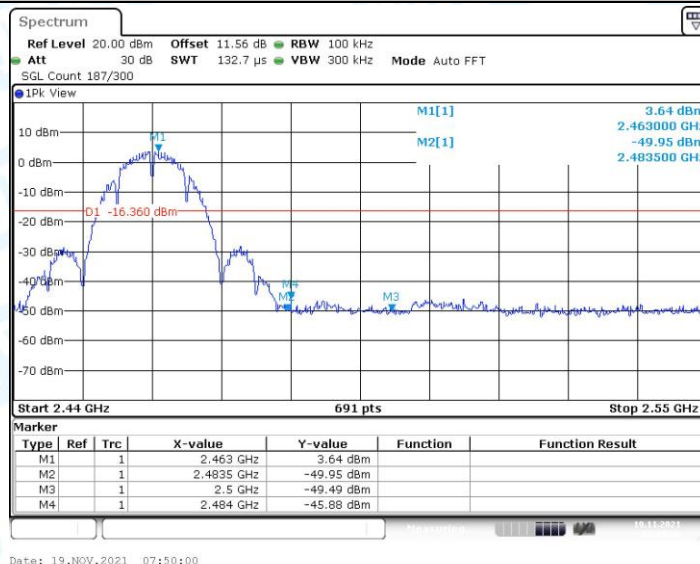
| TestMode | Antenna | ChName | Channel | RefLevel[dBm] | Result[dBm] | Limit[dBm]    | Verdict |
|----------|---------|--------|---------|---------------|-------------|---------------|---------|
| 11B      | Ant1    | Low    | 2412    | 4.23          | -28.47      | $\leq -15.77$ | PASS    |
|          |         | High   | 2462    | 3.64          | -45.88      | $\leq -16.36$ | PASS    |
| 11G      | Ant1    | Low    | 2412    | 2.67          | -30.44      | $\leq -17.33$ | PASS    |
|          |         | High   | 2462    | -0.85         | -44.86      | $\leq -20.85$ | PASS    |

## 5.2. Test Graphs

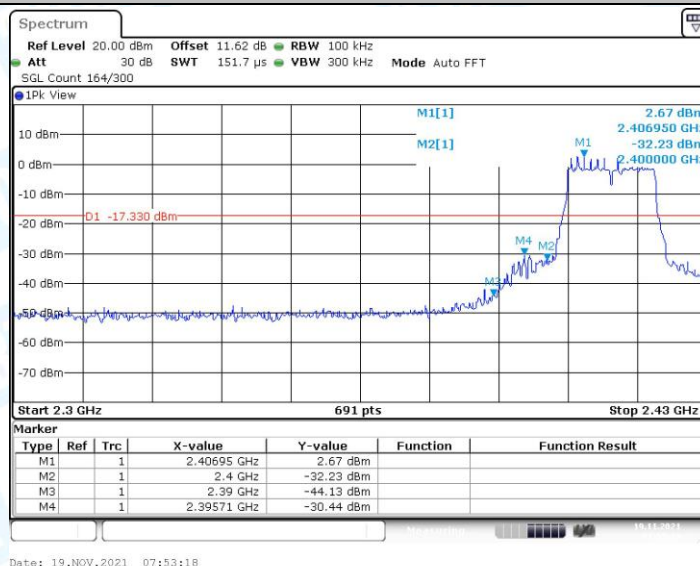
11B\_Ant1\_Low\_2412



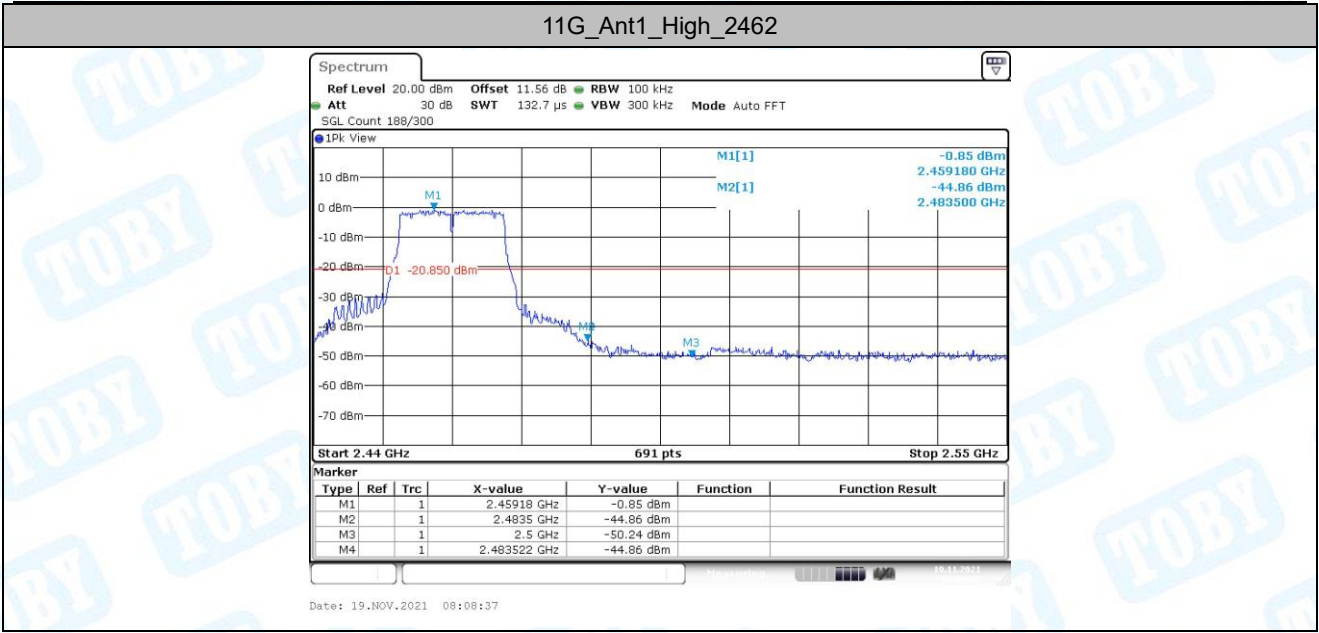
11B\_Ant1\_High\_2462



11G\_Ant1\_Low\_2412







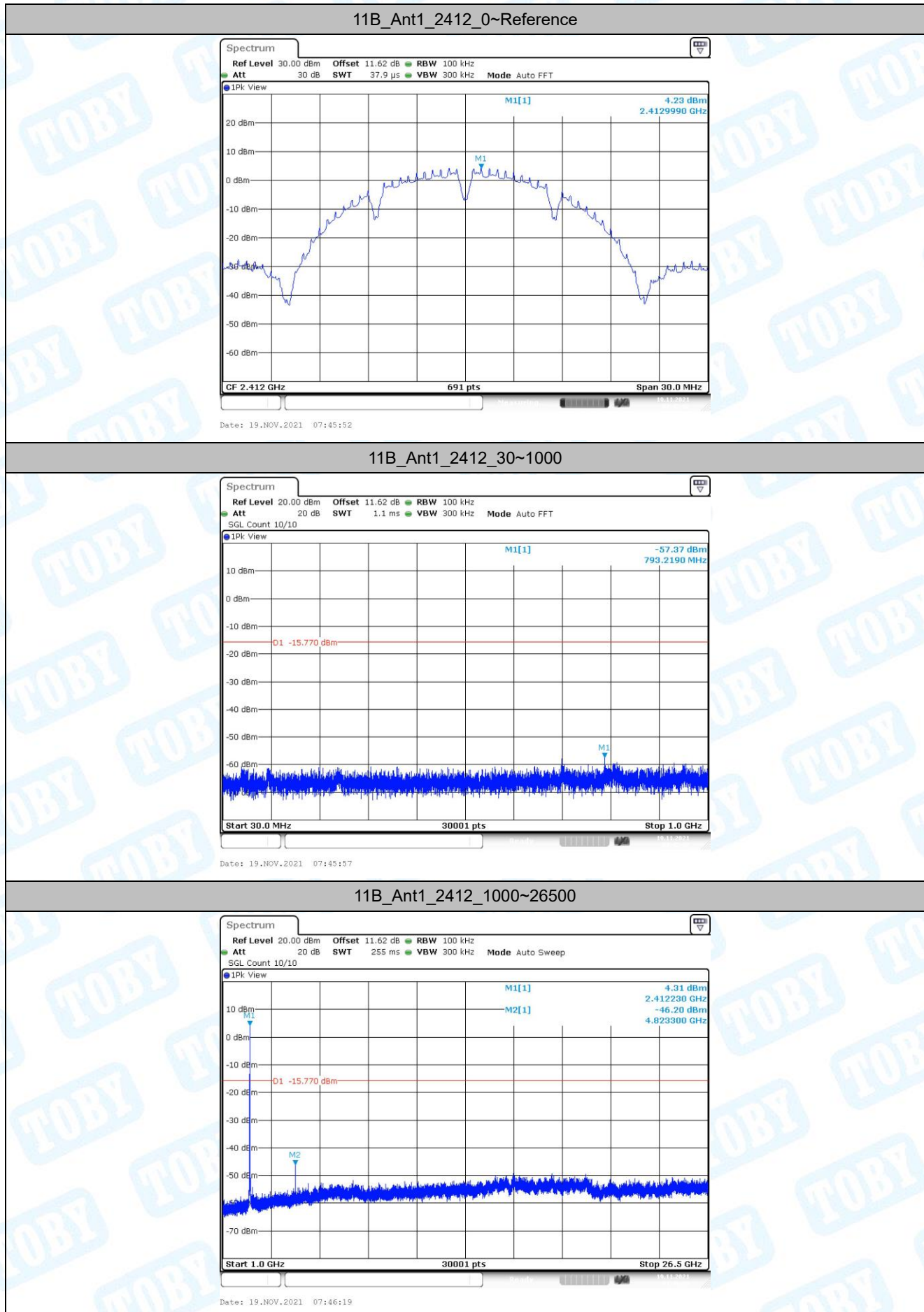
## 6. Conducted Spurious Emission

### 6.1. Test Result

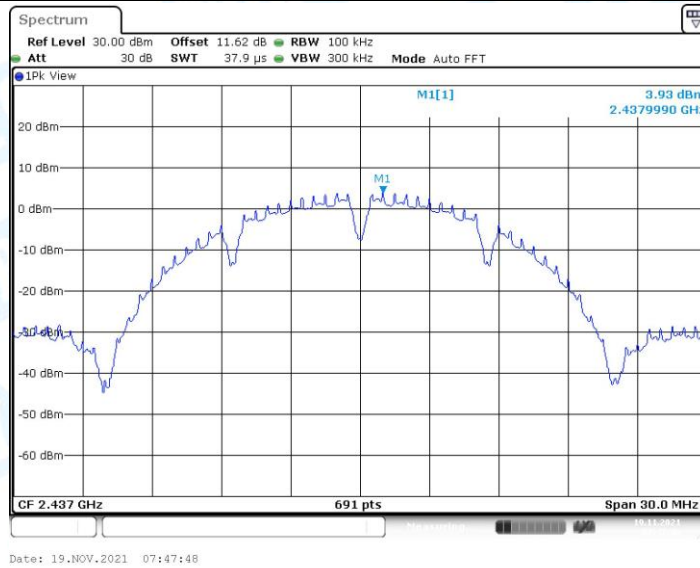
| TestMode | Antenna | Channel | FreqRange<br>[Mhz] | RefLevel<br>[dBm] | Result<br>[dBm] | Limit<br>[dBm] | Verdict |
|----------|---------|---------|--------------------|-------------------|-----------------|----------------|---------|
| 11B      | Ant1    | 2412    | Reference          | 4.23              | 4.23            | ---            | PASS    |
|          |         |         | 30~1000            | 4.23              | -57.37          | $\leq -15.77$  | PASS    |
|          |         |         | 1000~26500         | 4.23              | -46.2           | $\leq -15.77$  | PASS    |
|          |         | 2437    | Reference          | 3.93              | 3.93            | ---            | PASS    |
|          |         |         | 30~1000            | 3.93              | -58.28          | $\leq -16.07$  | PASS    |
|          |         |         | 1000~26500         | 3.93              | -49.01          | $\leq -16.07$  | PASS    |
|          |         | 2462    | Reference          | 4.06              | 4.06            | ---            | PASS    |
|          |         |         | 30~1000            | 4.06              | -59.57          | $\leq -15.94$  | PASS    |
|          |         |         | 1000~26500         | 4.06              | -49.75          | $\leq -15.94$  | PASS    |
| 11G      | Ant1    | 2412    | Reference          | -0.60             | -0.60           | ---            | PASS    |
|          |         |         | 30~1000            | -0.60             | -57.88          | $\leq -20.6$   | PASS    |
|          |         |         | 1000~26500         | -0.60             | -49.02          | $\leq -20.6$   | PASS    |
|          |         | 2437    | Reference          | -2.24             | -2.24           | ---            | PASS    |
|          |         |         | 30~1000            | -2.24             | -59.08          | $\leq -22.24$  | PASS    |
|          |         |         | 1000~26500         | -2.24             | -49.04          | $\leq -22.24$  | PASS    |
|          |         | 2462    | Reference          | 2.37              | 2.37            | ---            | PASS    |
|          |         |         | 30~1000            | 2.37              | -57.53          | $\leq -17.63$  | PASS    |
|          |         |         | 1000~26500         | 2.37              | -49.34          | $\leq -17.63$  | PASS    |



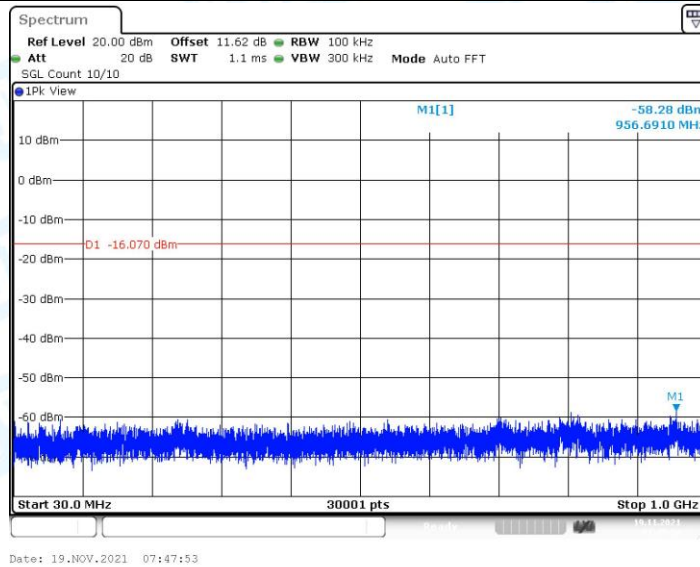
## 6.2. Test Graphs



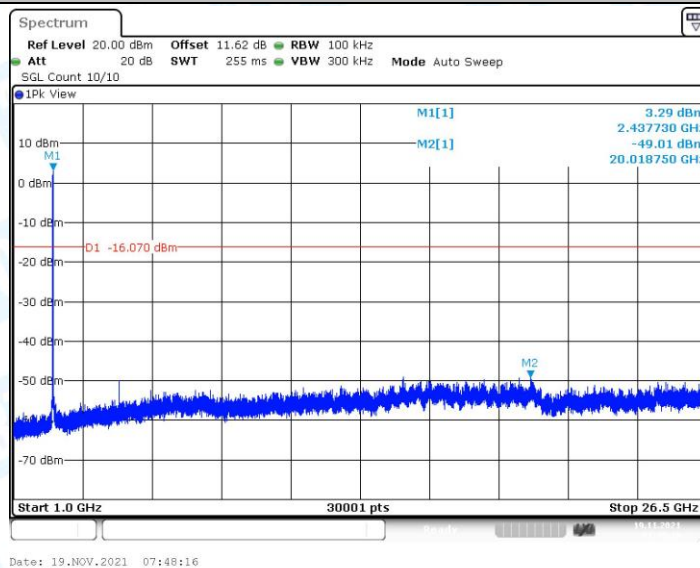
## 11B\_Ant1\_2437\_0~Reference



## 11B\_Ant1\_2437\_30~1000

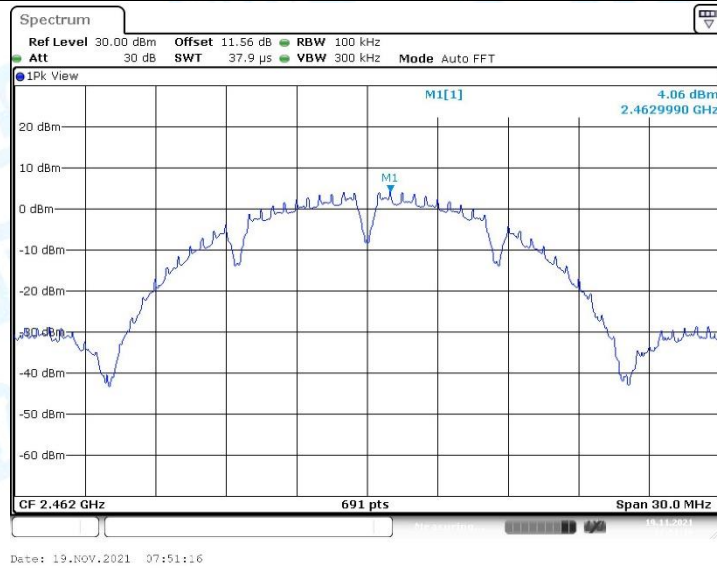


## 11B\_Ant1\_2437\_1000~26500

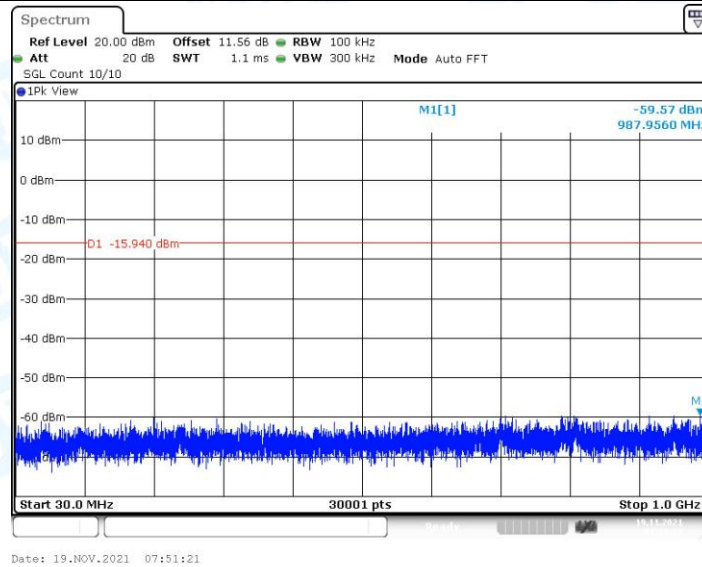




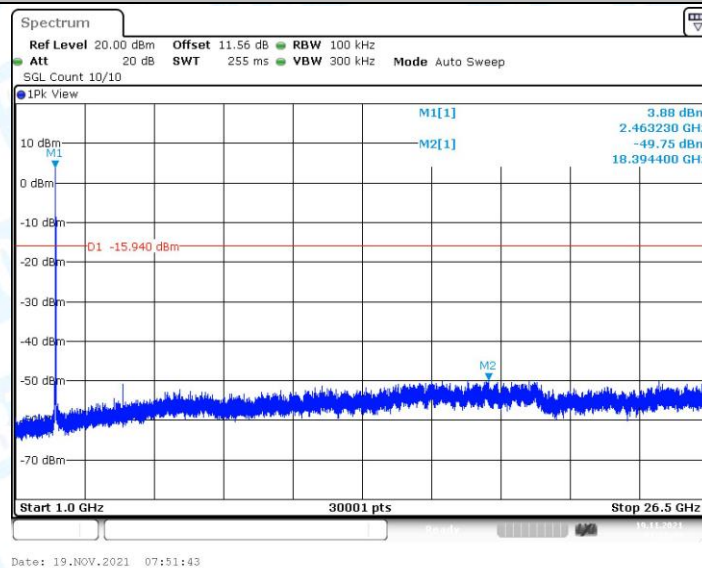
## 11B\_Ant1\_2462\_0~Reference



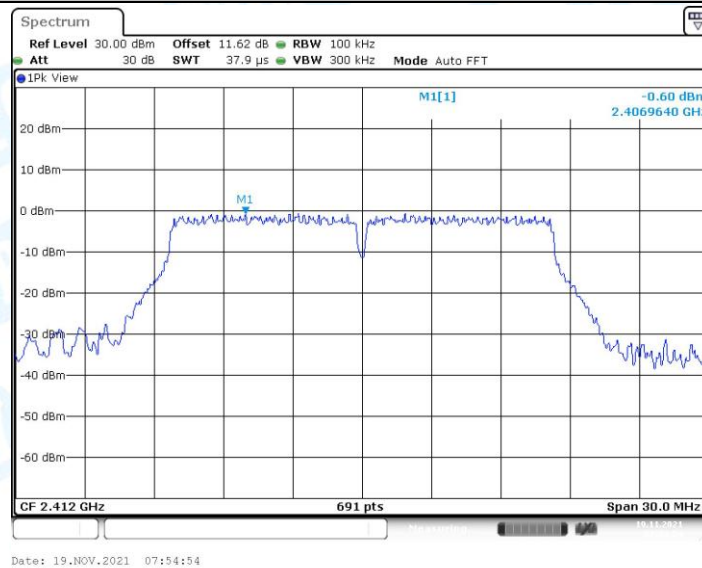
## 11B\_Ant1\_2462\_30~1000



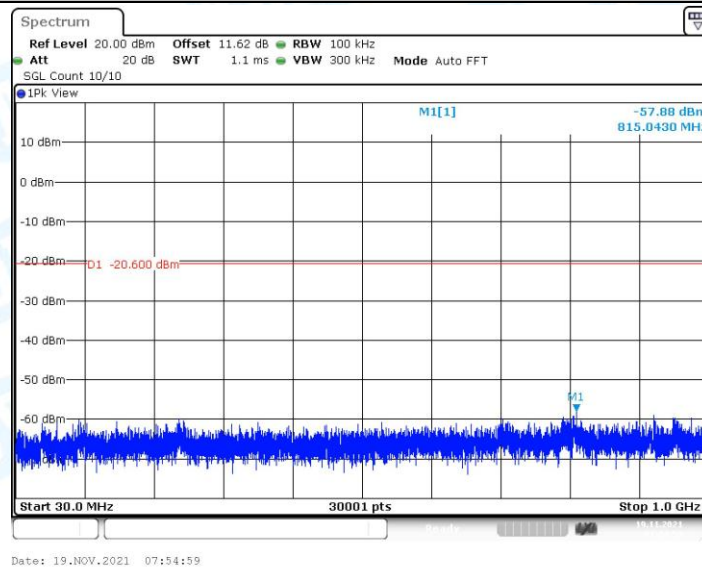
## 11B\_Ant1\_2462\_1000~26500



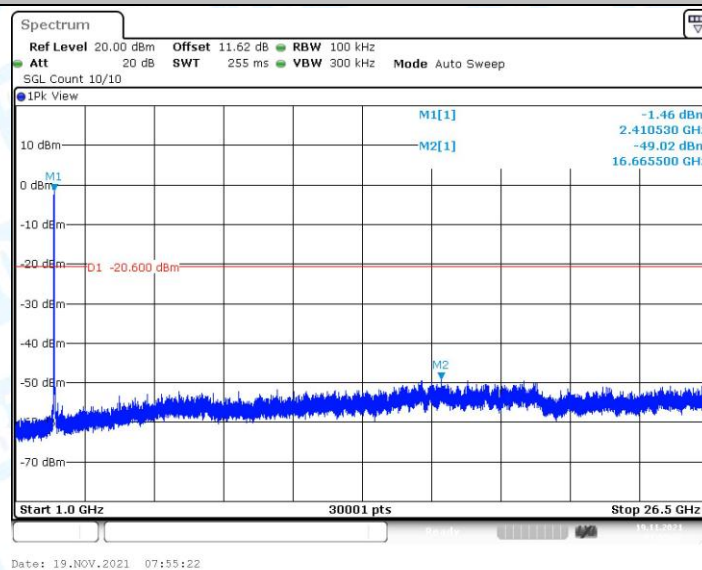
## 11G\_Ant1\_2412\_0~Reference



## 11G\_Ant1\_2412\_30~1000

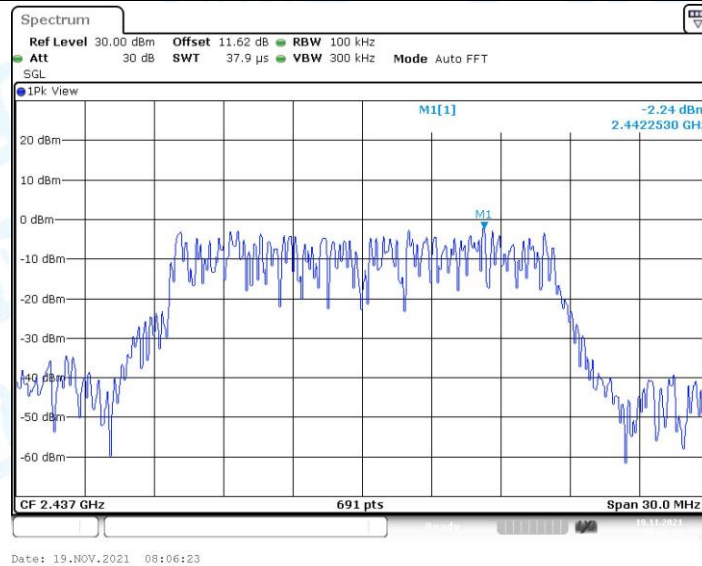


## 11G\_Ant1\_2412\_1000~26500

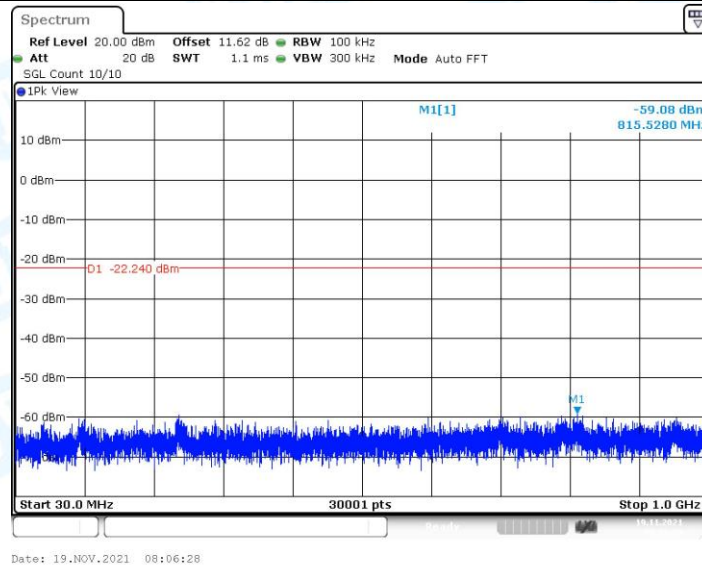




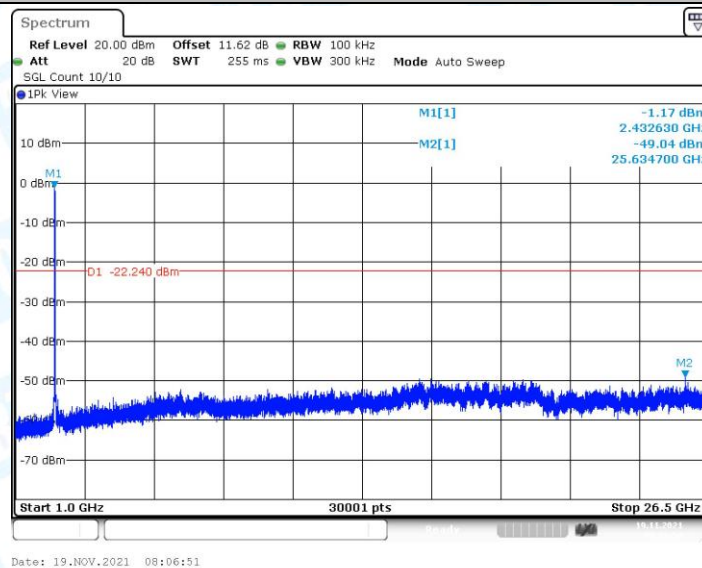
## 11G\_Ant1\_2437\_0~Reference



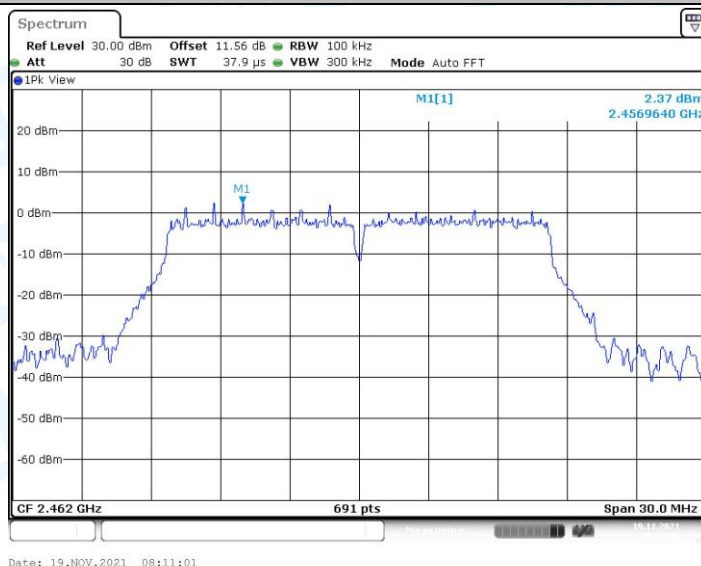
## 11G\_Ant1\_2437\_30~1000



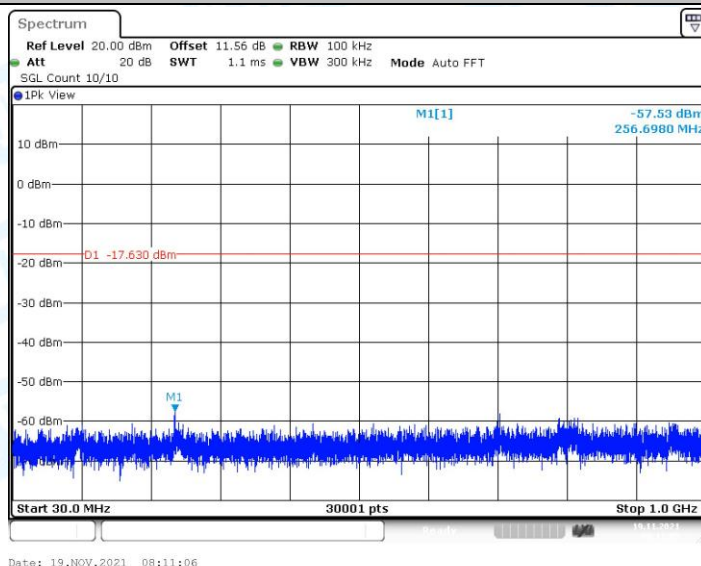
## 11G\_Ant1\_2437\_1000~26500



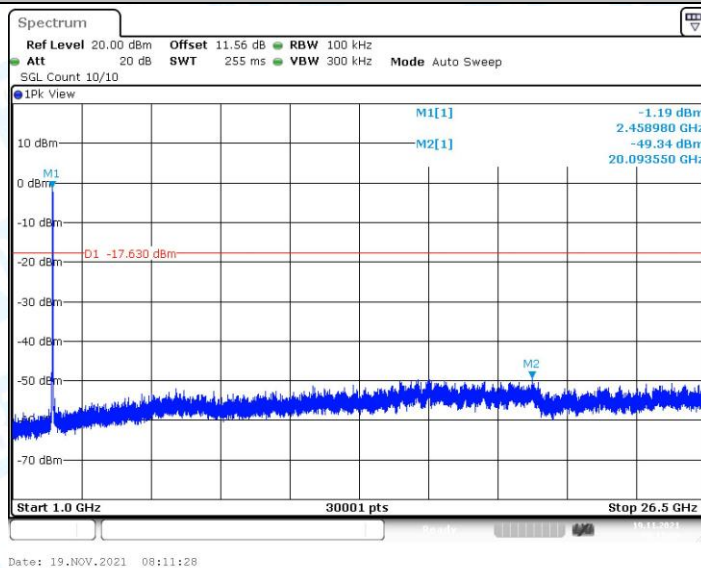
## 11G\_Ant1\_2462\_0~Reference



## 11G\_Ant1\_2462\_30~1000



## 11G\_Ant1\_2462\_1000~26500



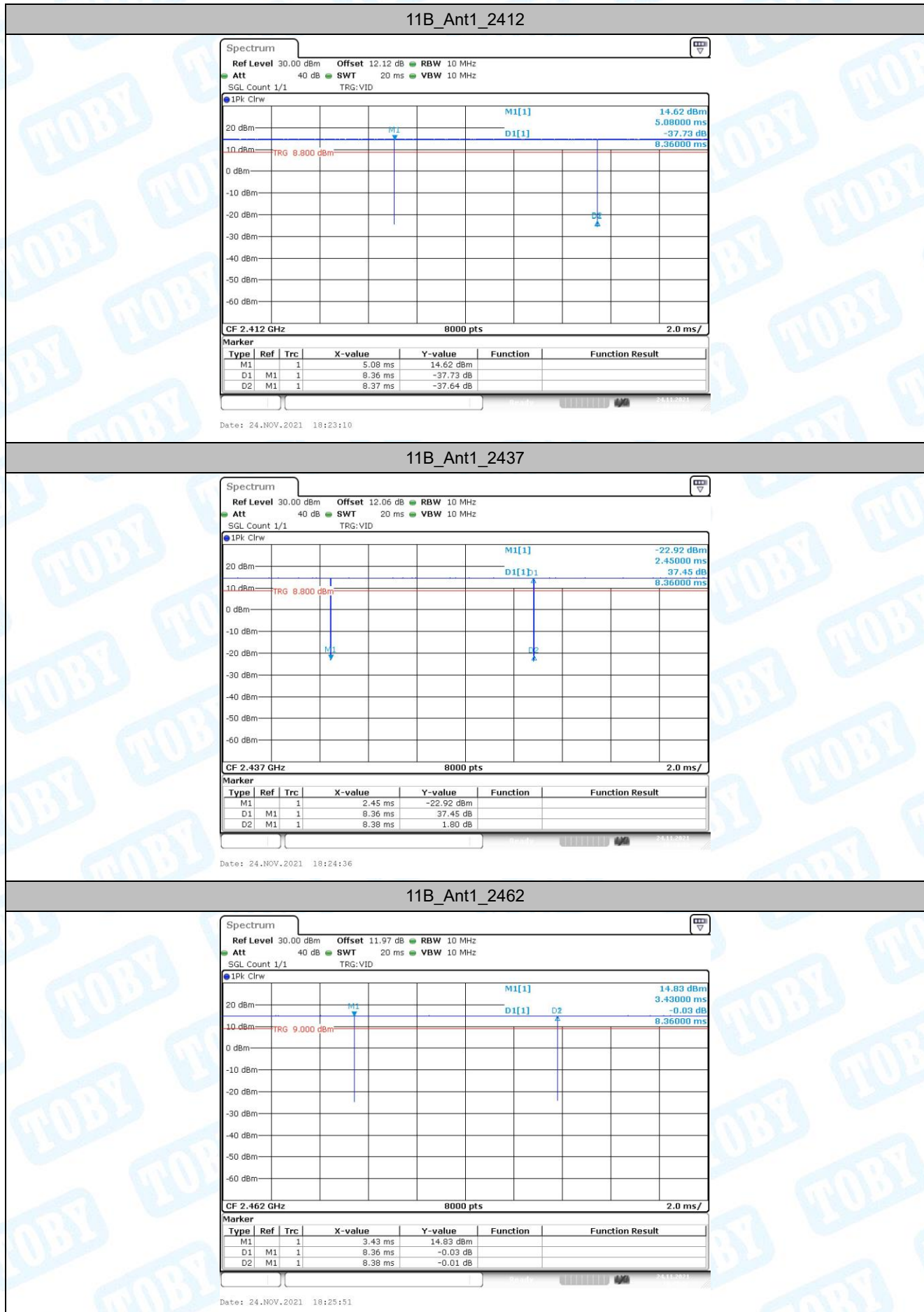


## 7. Duty Cycle

### 7.1. Test Result

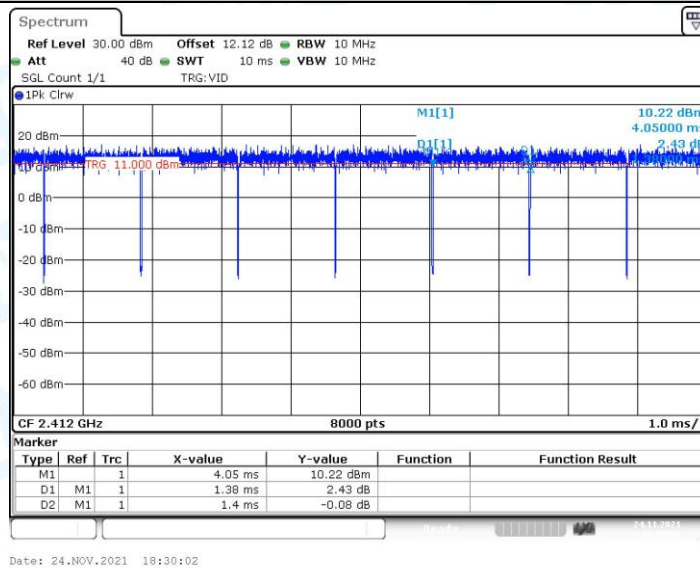
| TestMode | Antenna | Channel | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] | Limit | 1/T [KHz] | Verdict |
|----------|---------|---------|----------------------------|--------------------------|----------------|-------|-----------|---------|
| 11B      | Ant1    | 2412    | 8.36                       | 8.37                     | 99.88          | ---   | 0.119     | PASS    |
|          |         | 2437    | 8.36                       | 8.38                     | 99.76          | ---   | 0.119     | PASS    |
|          |         | 2462    | 8.36                       | 8.38                     | 99.76          | ---   | 0.119     | PASS    |
| 11G      | Ant1    | 2412    | 1.38                       | 1.40                     | 98.57          | ---   | 0.725     | PASS    |
|          |         | 2437    | 1.38                       | 1.40                     | 98.57          | ---   | 0.725     | PASS    |
|          |         | 2462    | 1.38                       | 1.40                     | 98.57          | ---   | 0.725     | PASS    |

## 7.2. Test Graphs

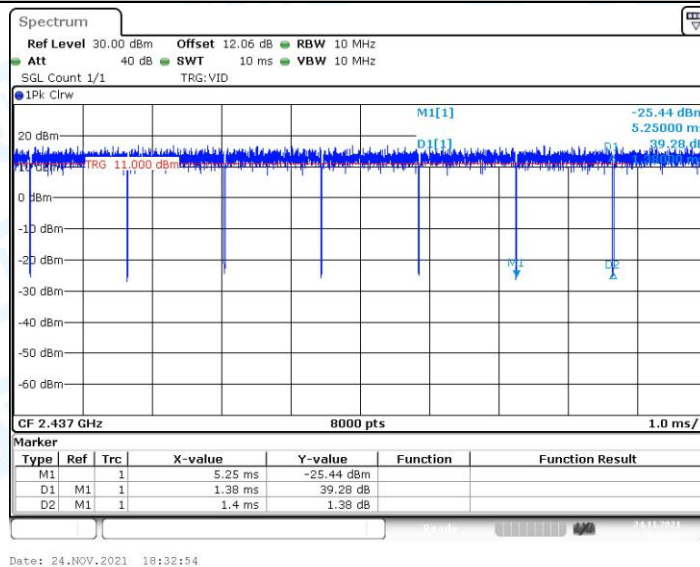




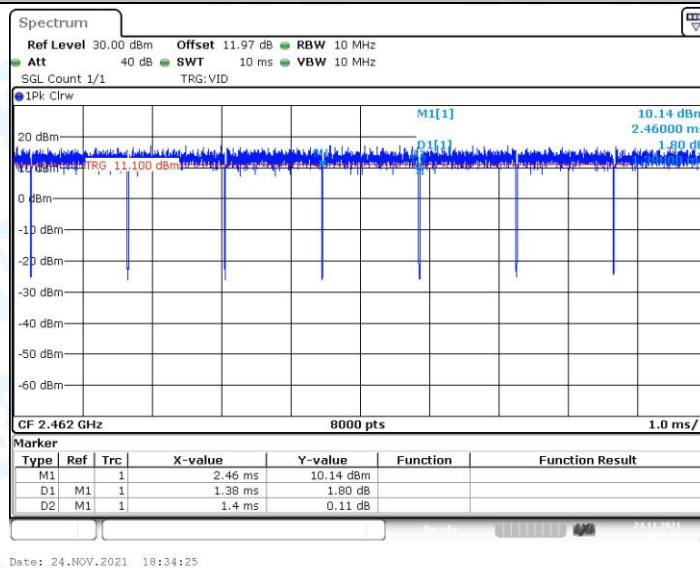
## 11G\_Ant1\_2412



## 11G\_Ant1\_2437



## 11G\_Ant1\_2462



## 8. Emissions in Restricted Bands

### 8.1. Test Result

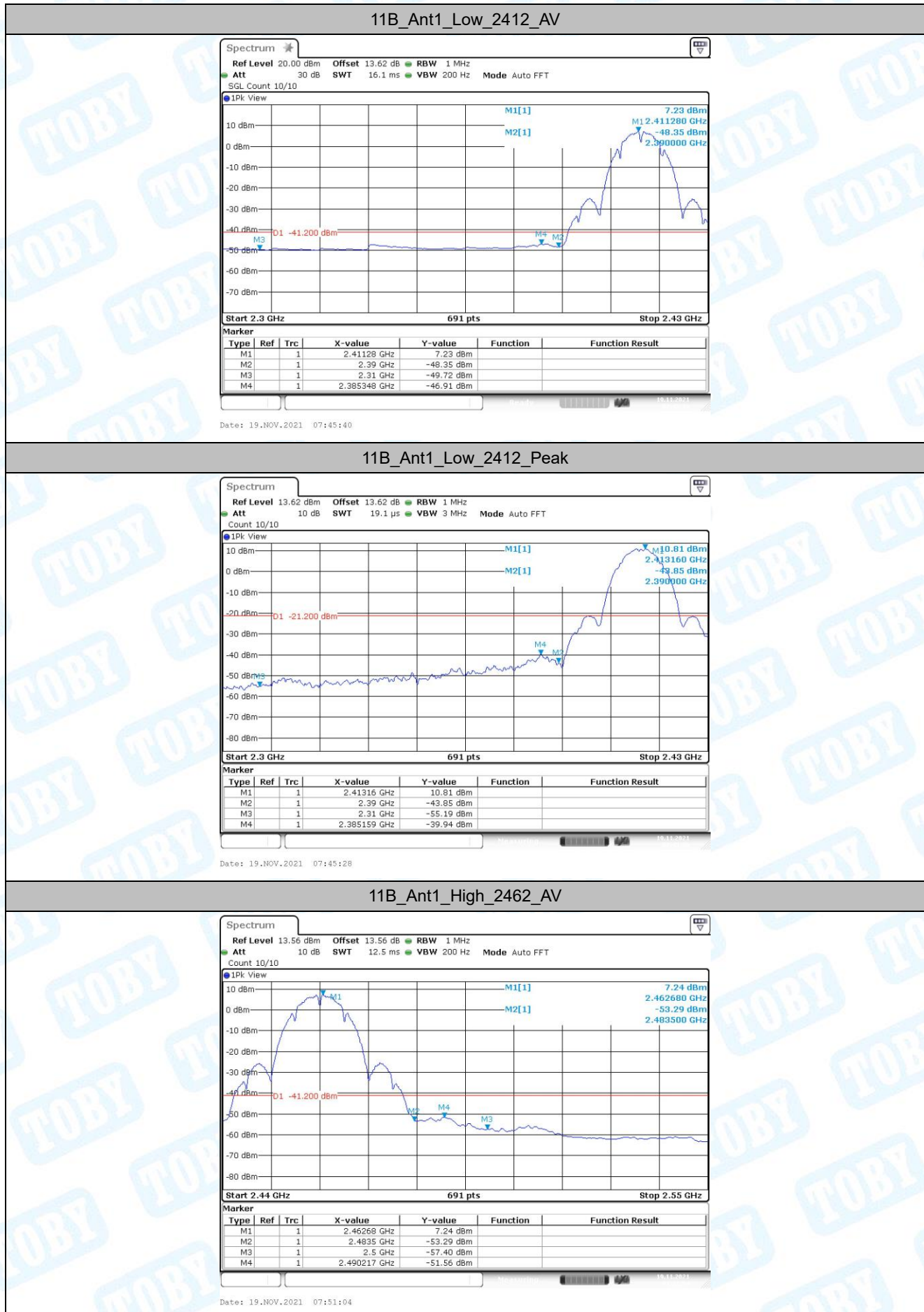
| TestMode | Antenna | ChName | Channel | Detector | Freq [MHz] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|--------|---------|----------|------------|--------------|-------------|---------|
| 11B      | Ant1    | Low    | 2412    | AV       | 2310.000   | -49.72       | ≤-41.20     | PASS    |
|          |         |        |         | AV       | 2385.348   | -46.91       | ≤-41.20     | PASS    |
|          |         |        |         | AV       | 2390.000   | -48.35       | ≤-41.20     | PASS    |
|          |         |        |         | Peak     | 2310.000   | -55.19       | ≤-21.20     | PASS    |
|          |         |        |         | Peak     | 2385.159   | -39.94       | ≤-21.20     | PASS    |
|          |         |        |         | Peak     | 2390.000   | -43.85       | ≤-21.20     | PASS    |
|          |         | High   | 2462    | AV       | 2483.500   | -53.29       | ≤-41.20     | PASS    |
|          |         |        |         | AV       | 2490.217   | -51.56       | ≤-41.20     | PASS    |
|          |         |        |         | AV       | 2500.000   | -57.4        | ≤-41.20     | PASS    |
|          |         |        |         | Peak     | 2483.500   | -43.67       | ≤-21.20     | PASS    |
|          |         |        |         | Peak     | 2491.812   | -42.81       | ≤-21.20     | PASS    |
|          |         |        |         | Peak     | 2500.000   | -46.88       | ≤-21.20     | PASS    |
| 11G      | Ant1    | Low    | 2412    | AV       | 2310.000   | -58.09       | ≤-41.20     | PASS    |
|          |         |        |         | AV       | 2389.870   | -44.96       | ≤-41.20     | PASS    |
|          |         |        |         | AV       | 2390.000   | -44.61       | ≤-41.20     | PASS    |
|          |         |        |         | Peak     | 2310.000   | -49.42       | ≤-21.20     | PASS    |
|          |         |        |         | Peak     | 2389.493   | -33.01       | ≤-21.20     | PASS    |
|          |         |        |         | Peak     | 2390.000   | -32.72       | ≤-21.20     | PASS    |
|          |         | High   | 2462    | AV       | 2483.500   | -44.5        | ≤-41.20     | PASS    |
|          |         |        |         | AV       | 2483.522   | -44.5        | ≤-41.20     | PASS    |
|          |         |        |         | AV       | 2500.000   | -48.33       | ≤-41.20     | PASS    |
|          |         |        |         | Peak     | 2483.500   | -40.03       | ≤-21.20     | PASS    |
|          |         |        |         | Peak     | 2490.536   | -37.08       | ≤-21.20     | PASS    |
|          |         |        |         | Peak     | 2500.000   | -42.11       | ≤-21.20     | PASS    |

Note:

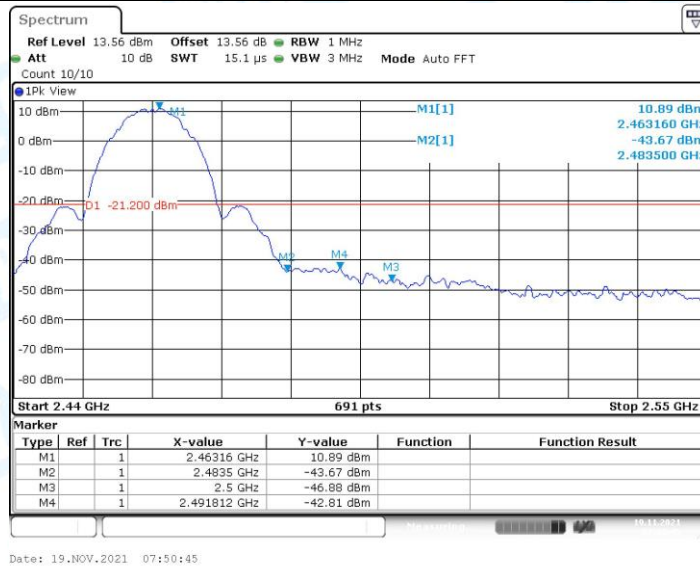
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



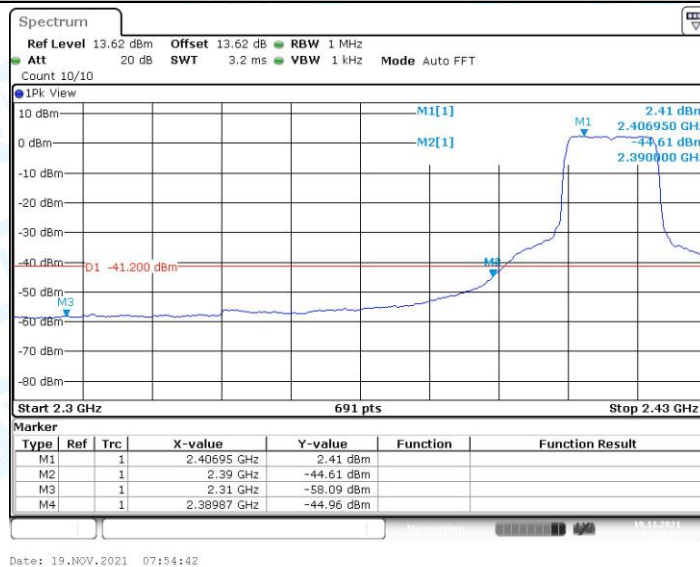
## 8.2. Test Graphs



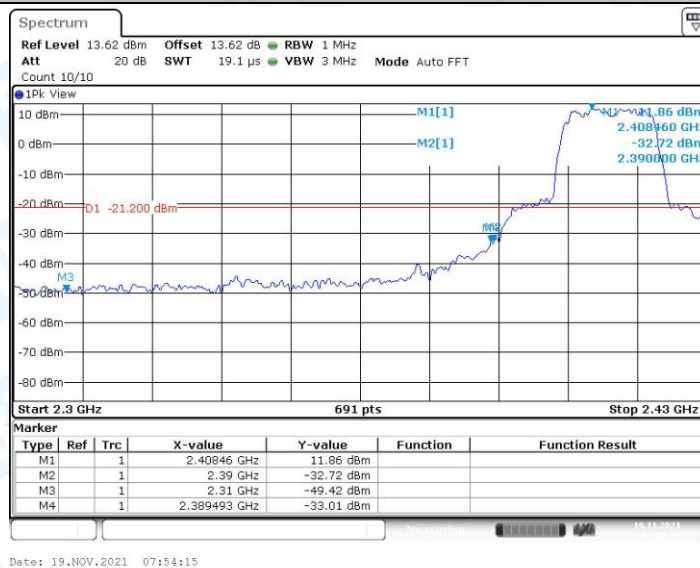
## 11B\_Ant1\_High\_2462\_Peak



## 11G\_Ant1\_Low\_2412\_AV

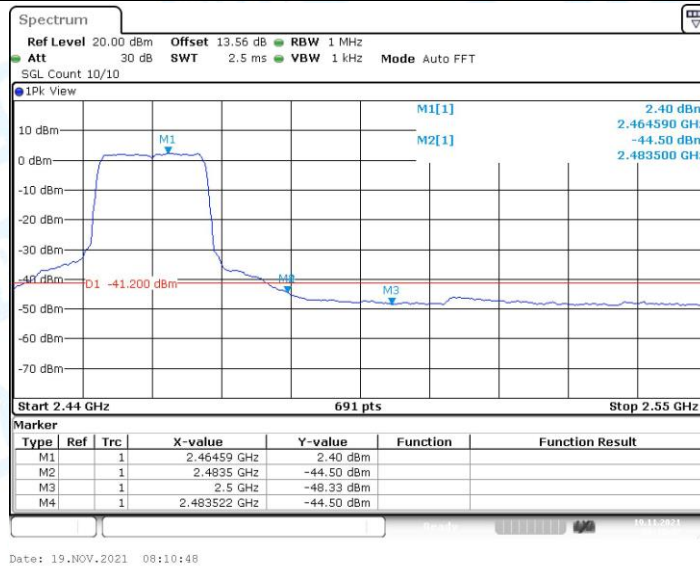


## 11G\_Ant1\_Low\_2412\_Peak

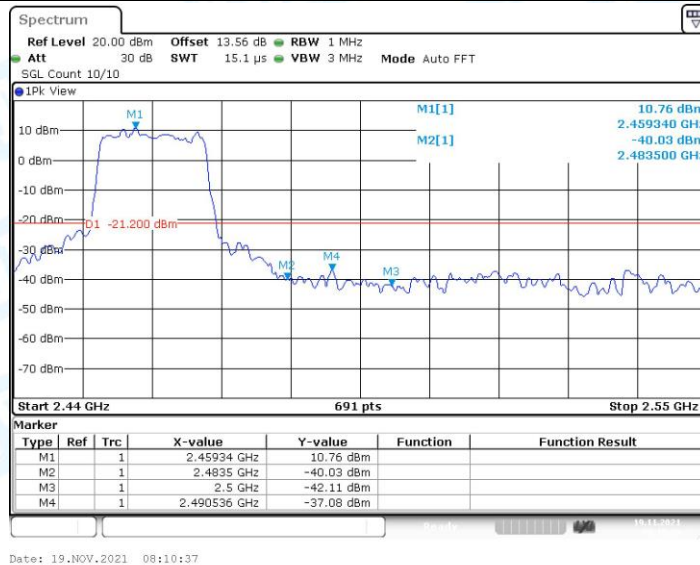




## 11G\_Ant1\_High\_2462\_AV



## 11G\_Ant1\_High\_2462\_Peak



-----End of the report-----