# Appendix C

## RF Test Data for 2.4GWIFI (Conducted Measurement)

**Product Name: UV Photocuring 3D Printer**

**Trade Mark: ELEGOO**

**Test Model: Jupiter 2**

**Environmental Conditions**

| | |
|---|---|
| Temperature: | 25.6° C |
| Relative Humidity: | 52.4% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Emiya lin |
| Supervised by: | Simba Haung |

# Contents

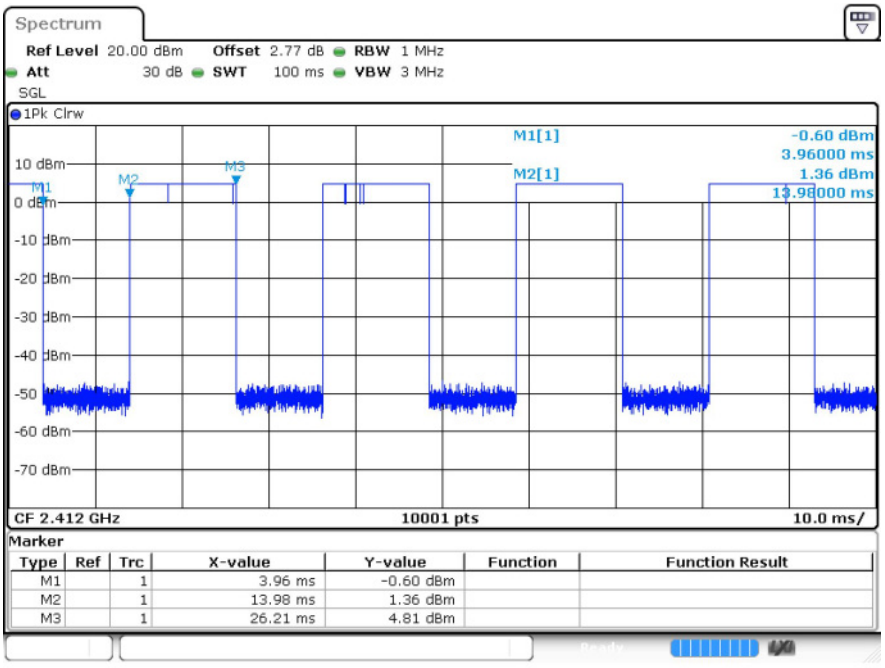
# 1 Duty Cycle

## 1.1 Test Result

| Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor | 1/T (kHz) |
|---|---|---|---|---|---|
| b | 2412 | Ant1 | 52.9 | 2.77 | 0.08 |
| b | 2437 | Ant1 | 59.97 | 2.22 | 0.08 |
| b | 2462 | Ant1 | 58.83 | 2.3 | 0.08 |
| g | 2412 | Ant1 | 16.36 | 7.86 | 0.49 |
| g | 2437 | Ant1 | 17.46 | 7.58 | 0.49 |
| g | 2462 | Ant1 | 16.34 | 7.87 | 0.49 |
| n20 | 2412 | Ant1 | 15.23 | 8.17 | 0.53 |
| n20 | 2437 | Ant1 | 15.22 | 8.18 | 0.53 |
| n20 | 2462 | Ant1 | 17.05 | 7.68 | 0.53 |
| n40 | 2422 | Ant1 | 31.92 | 4.96 | 0.2 |
| n40 | 2437 | Ant1 | 33.65 | 4.73 | 0.2 |
| n40 | 2452 | Ant1 | 34.32 | 4.64 | 0.2 |
| ax20 | 2412 | Ant1 | 27.18 | 5.66 | 0.26 |
| ax20 | 2437 | Ant1 | 27.2 | 5.65 | 0.26 |
| ax20 | 2462 | Ant1 | 28.51 | 5.45 | 0.26 |
| ax40 | 2422 | Ant1 | 27.16 | 5.66 | 0.26 |
| ax40 | 2437 | Ant1 | 29.2 | 5.35 | 0.26 |
| ax40 | 2452 | Ant1 | 28.83 | 5.4 | 0.26 |

## 1.2 Test Graphs

| Test Graphs |
| --- |
| b 2412MHz Ant1 |




| b 2437MHz Ant1 |
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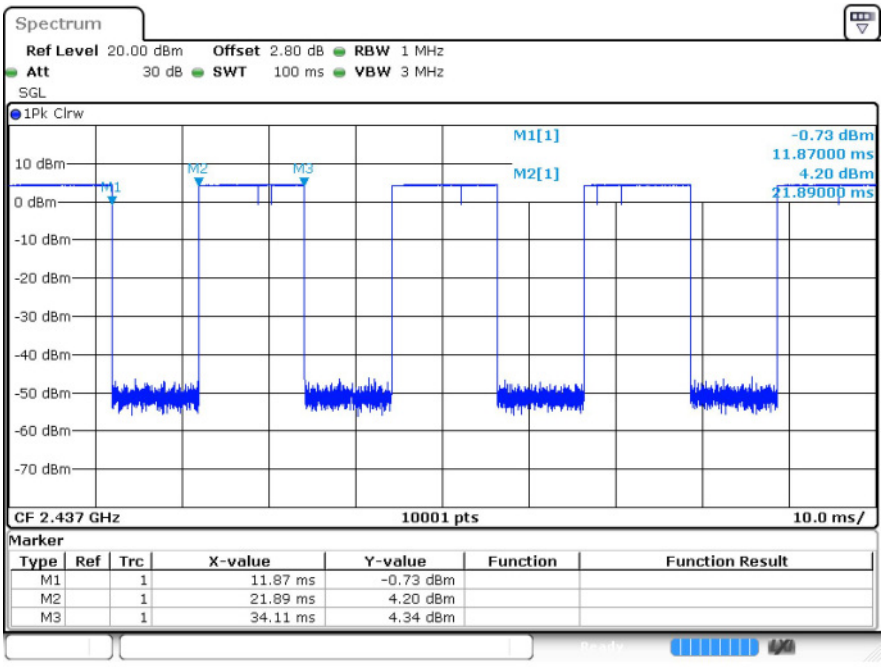
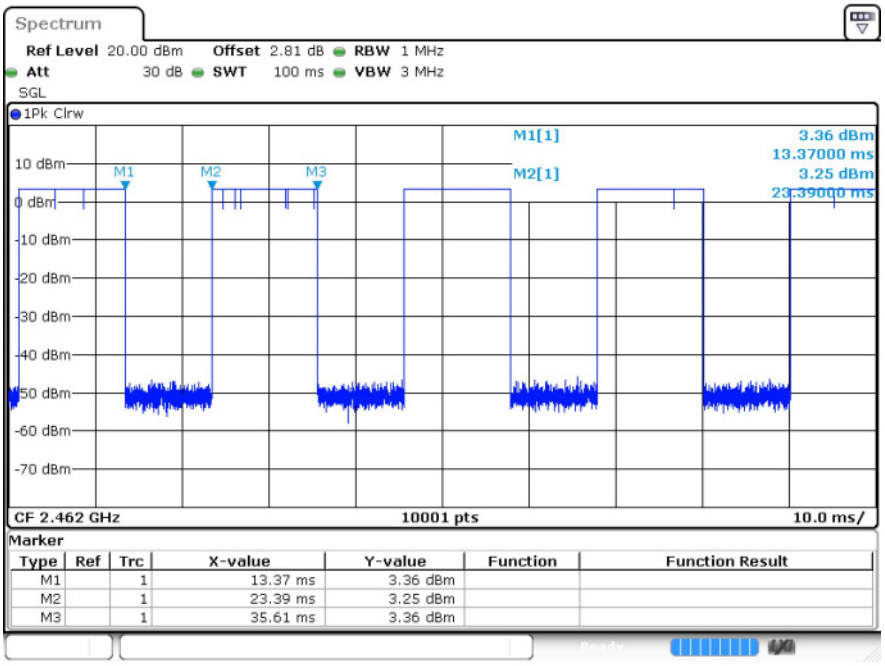
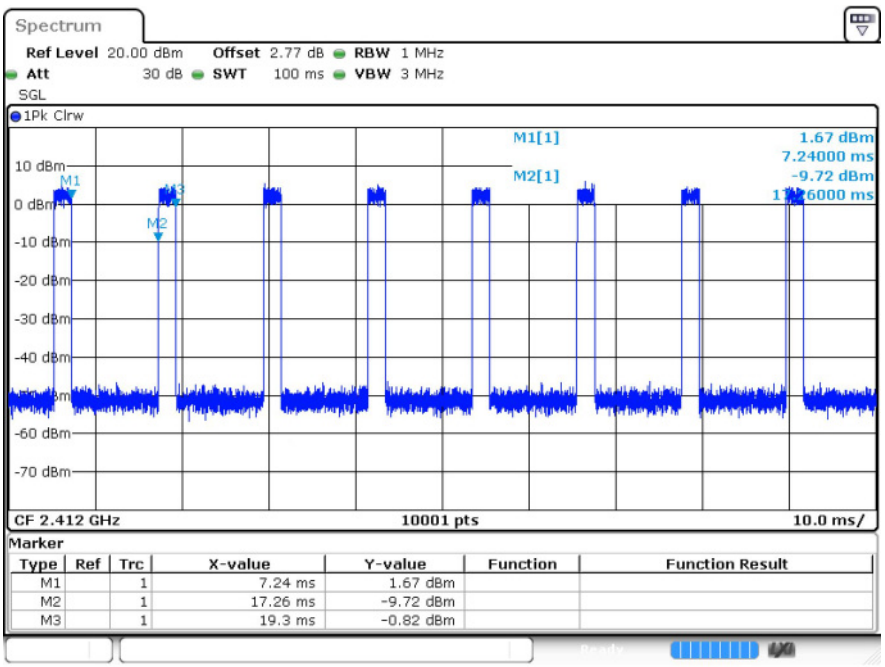


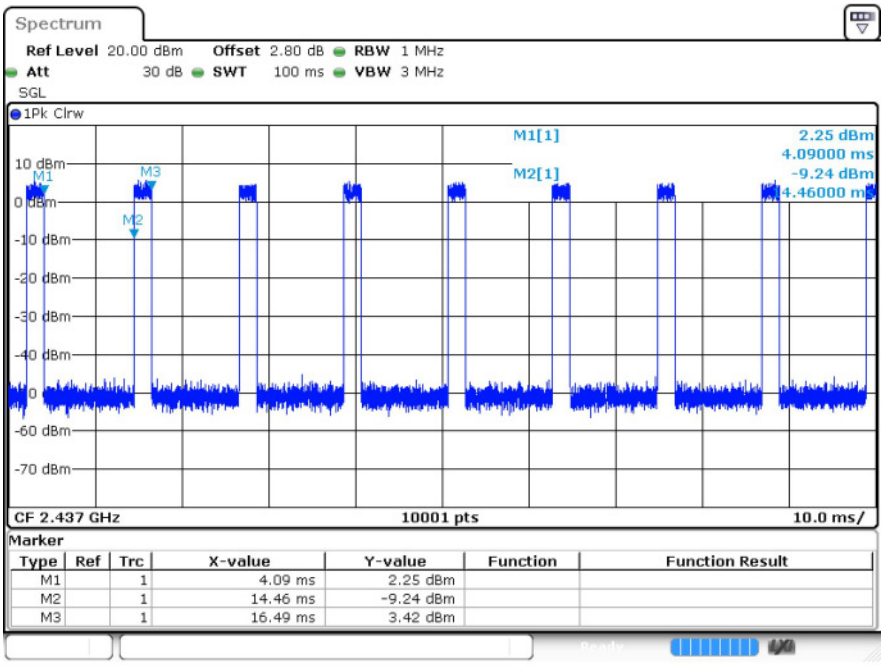
| Test Graphs |
| --- |
| b 2462MHz Ant1 |




| g 2412MHz Ant1 |
| --- |



| Test Graphs |
| --- |
| g 2437MHz Ant1 |




| g 2462MHz Ant1 |
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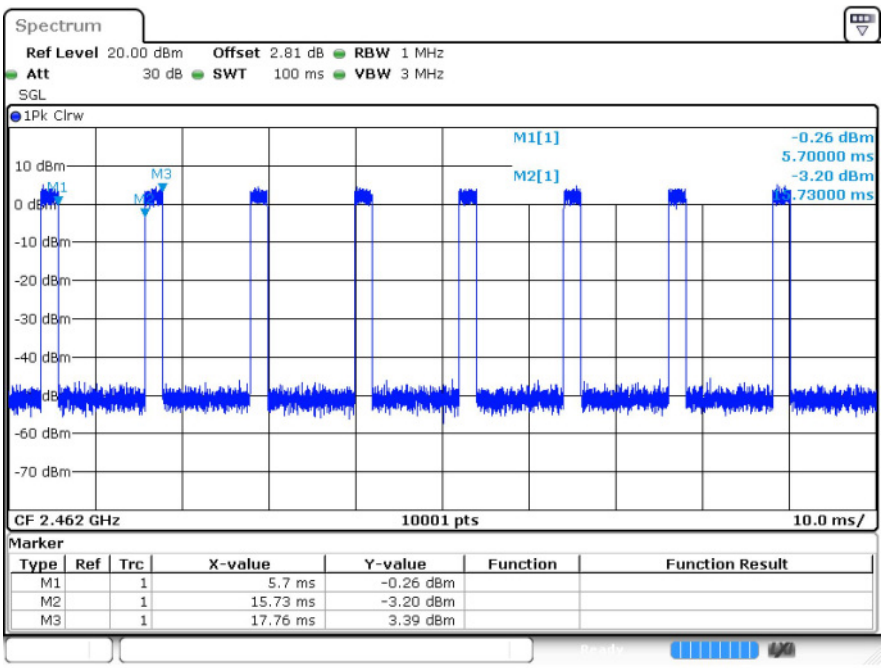
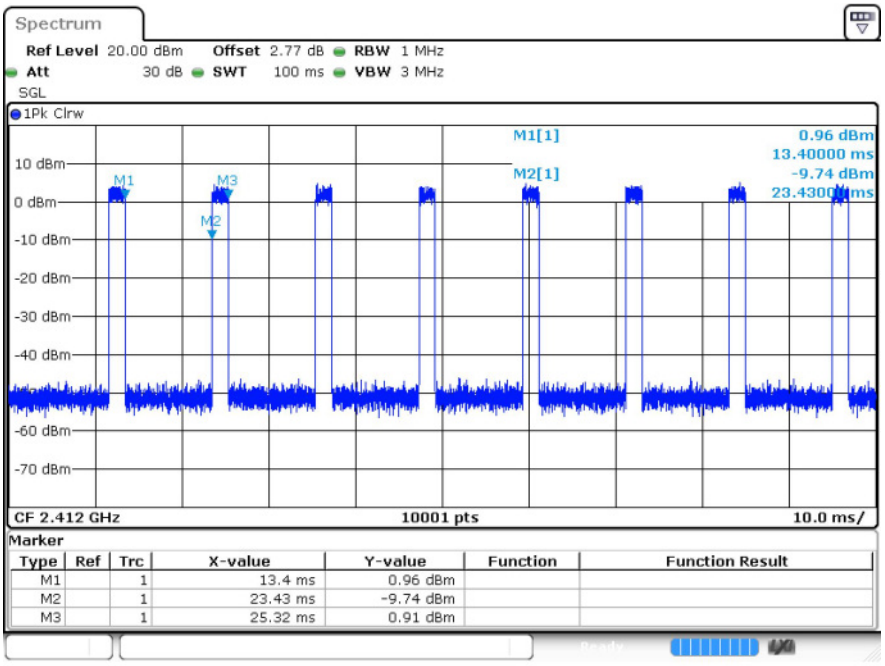


| Test Graphs |
| --- |
| n20 2412MHz Ant1 |




| n20 2437MHz Ant1 |
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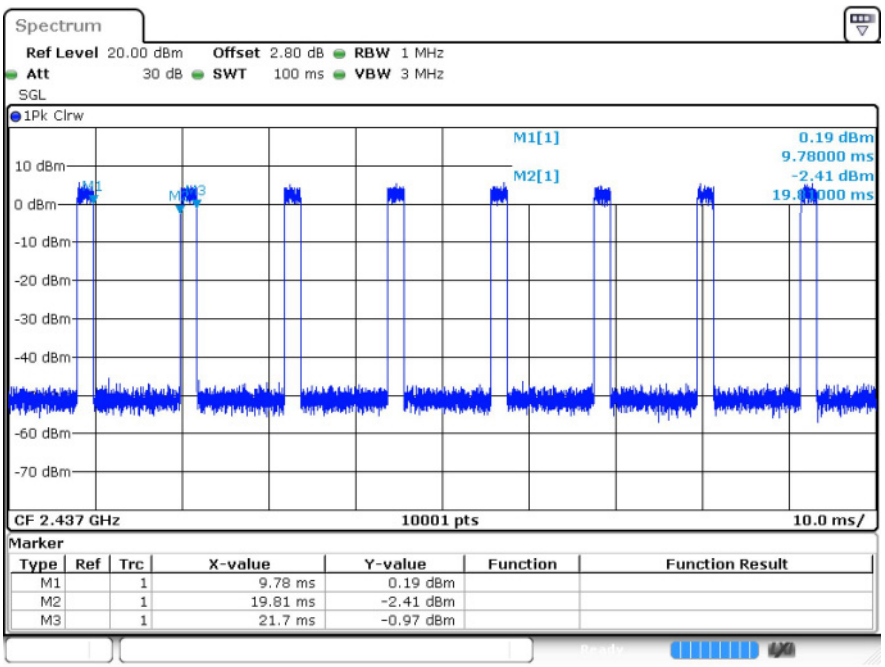

| Test Graphs |
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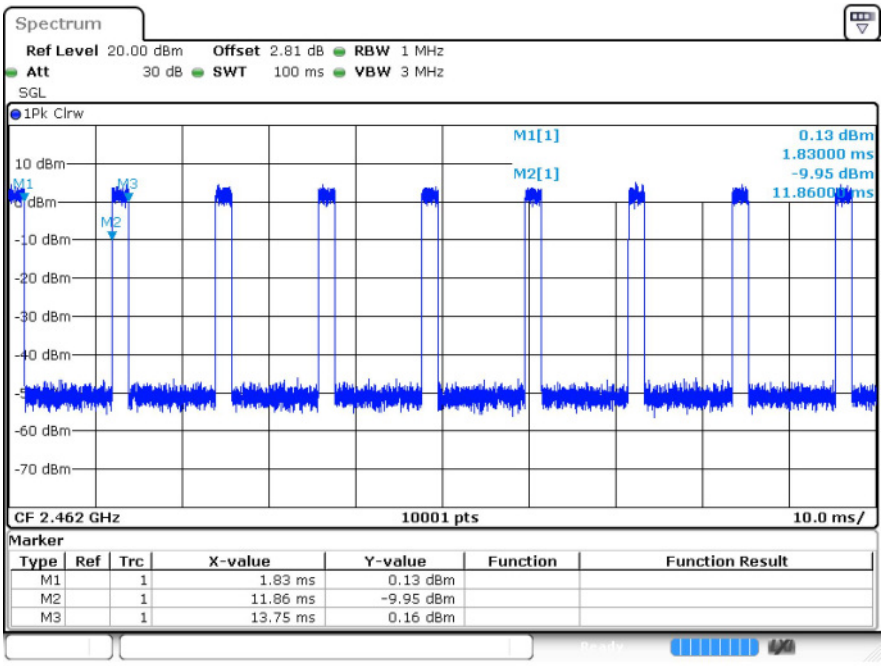
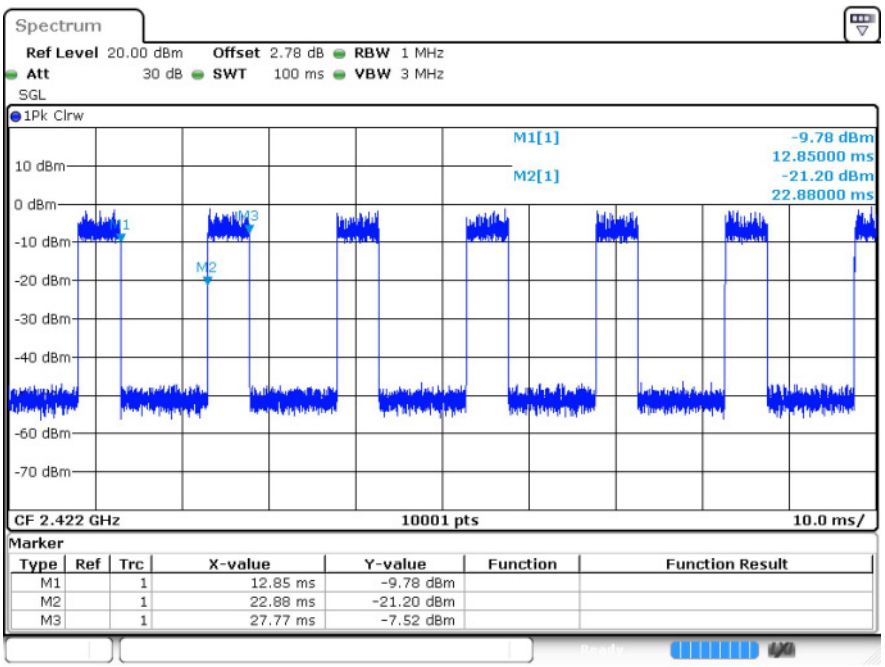
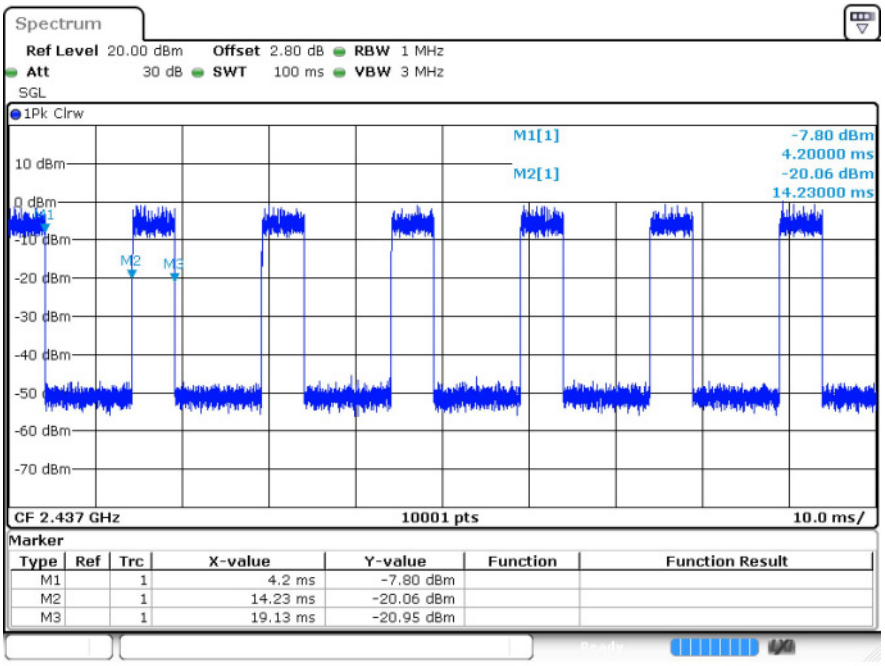
| n20 2462MHz Ant1 |



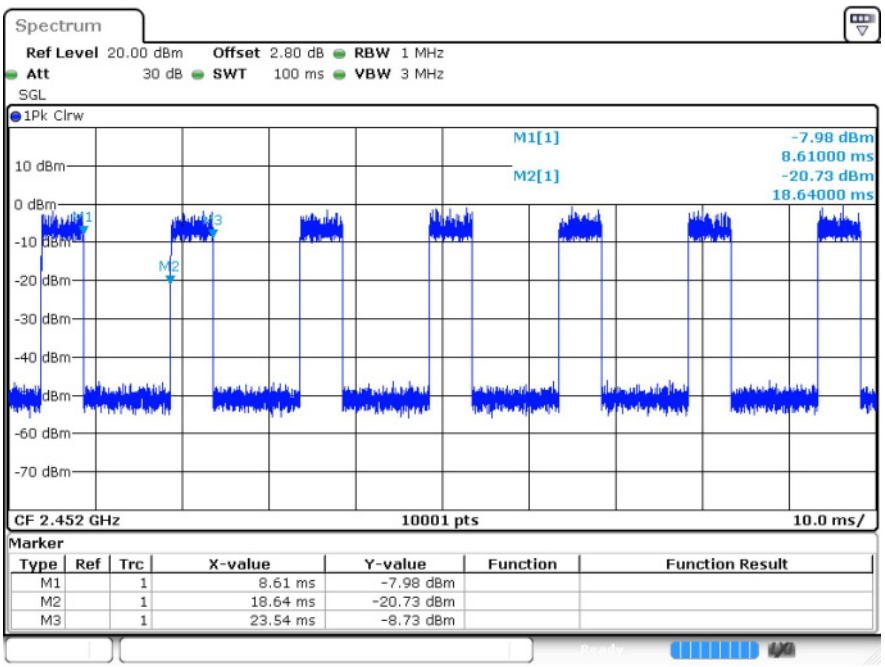

| n40 2422MHz Ant1 |
| --- |



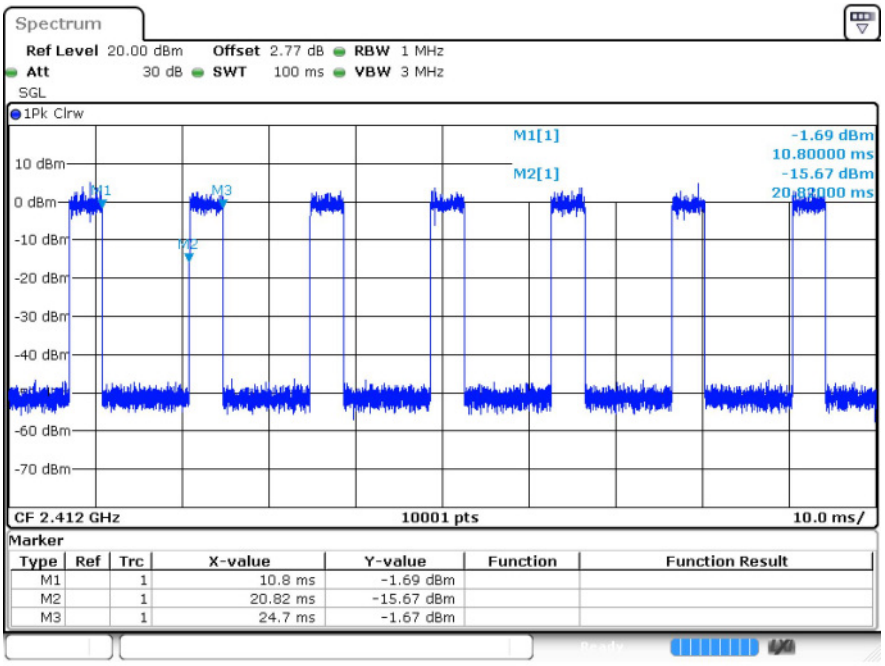
| Test Graphs |
| --- |
| n40 2437MHz Ant1 |




| n40 2452MHz Ant1 |
| --- |



| Test Graphs |
| --- |
| ax20 2412MHz Ant1 |




| ax20 2437MHz Ant1 |
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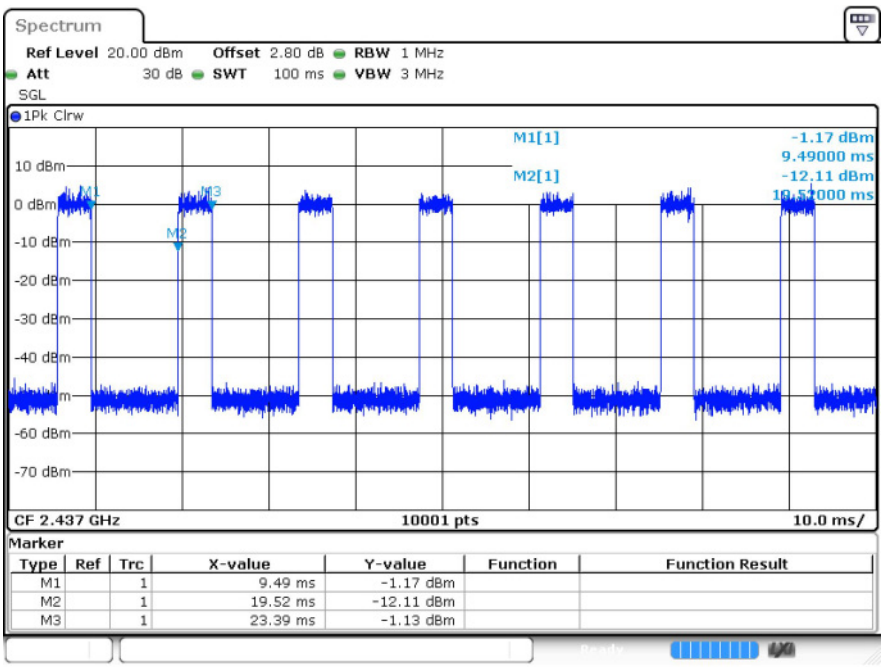
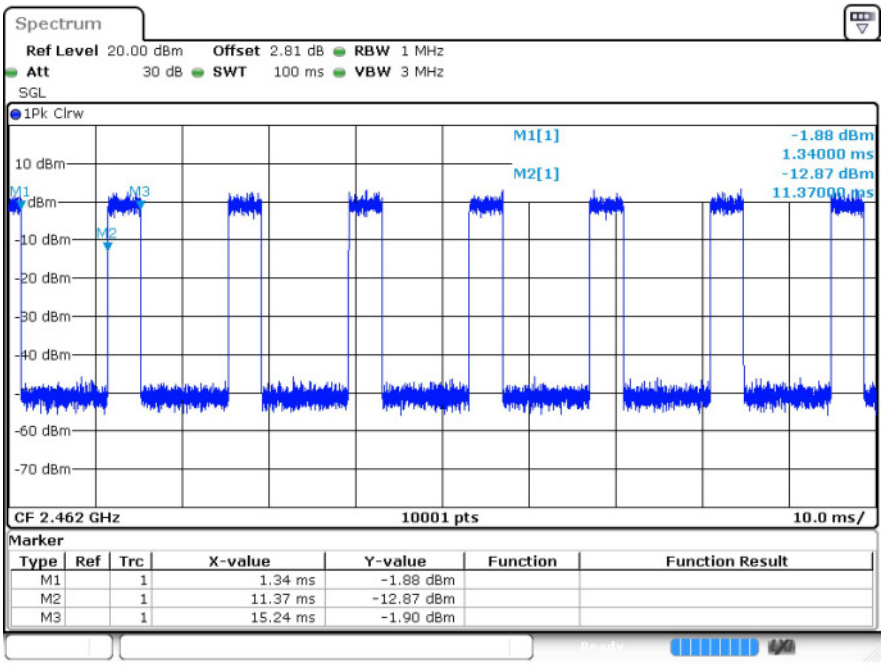
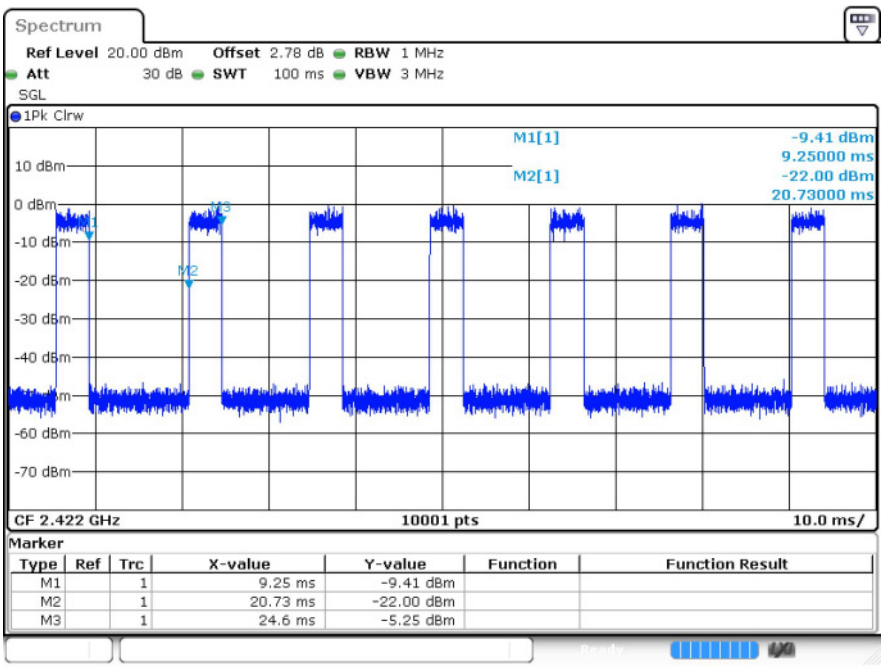


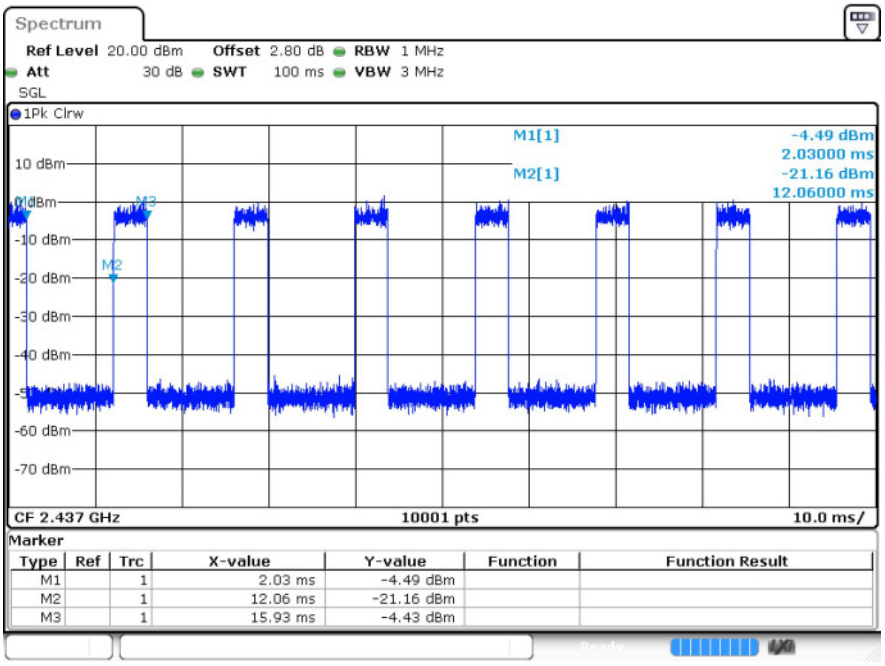
| Test Graphs |
| --- |
| ax20 2462MHz Ant1 |



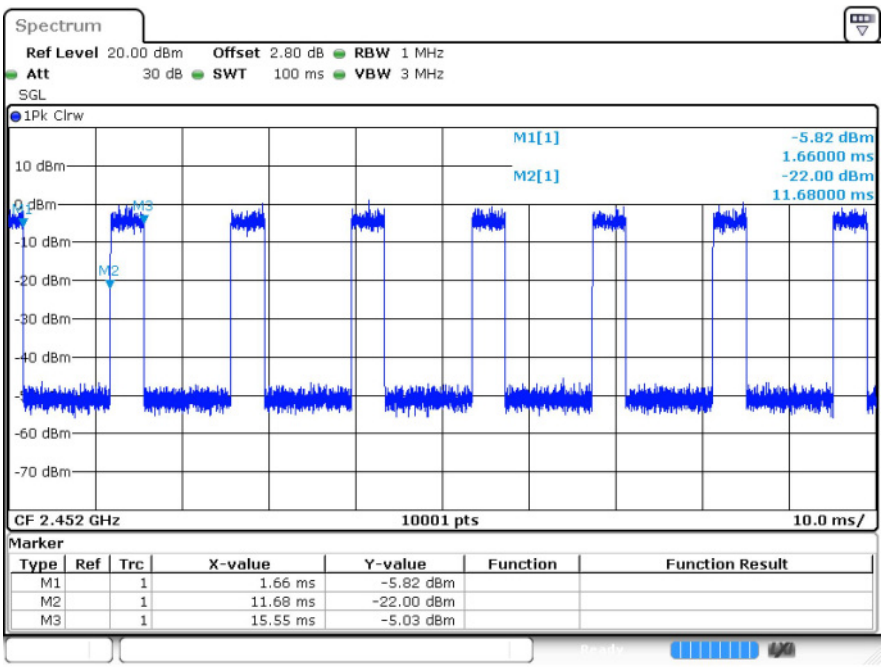

| ax40 2422MHz Ant1 |
| --- |



| Test Graphs |
| --- |
| ax40 2437MHz Ant1 |




| ax40 2452MHz Ant1 |
| --- |



# 2 Maximum Conducted Output Power

## 2.1 Test Result

| Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|
| b | 2412 | Ant1 | 14.41 | 30 | Pass |
| b | 2437 | Ant1 | 13.92 | 30 | Pass |
| b | 2462 | Ant1 | 12.95 | 30 | Pass |
| g | 2412 | Ant1 | 13.83 | 30 | Pass |
| g | 2437 | Ant1 | 14.27 | 30 | Pass |
| g | 2462 | Ant1 | 13.48 | 30 | Pass |
| n20 | 2412 | Ant1 | 13.62 | 30 | Pass |
| n20 | 2437 | Ant1 | 14.15 | 30 | Pass |
| n20 | 2462 | Ant1 | 13.44 | 30 | Pass |
| n40 | 2422 | Ant1 | 13.74 | 30 | Pass |
| n40 | 2437 | Ant1 | 14.28 | 30 | Pass |
| n40 | 2452 | Ant1 | 13.85 | 30 | Pass |
| ax20 | 2412 | Ant1 | 13.13 | 30 | Pass |
| ax20 | 2437 | Ant1 | 13.66 | 30 | Pass |
| ax20 | 2462 | Ant1 | 12.9 | 30 | Pass |
| ax40 | 2422 | Ant1 | 13.13 | 30 | Pass |
| ax40 | 2437 | Ant1 | 13.65 | 30 | Pass |
| ax40 | 2452 | Ant1 | 13.28 | 30 | Pass |

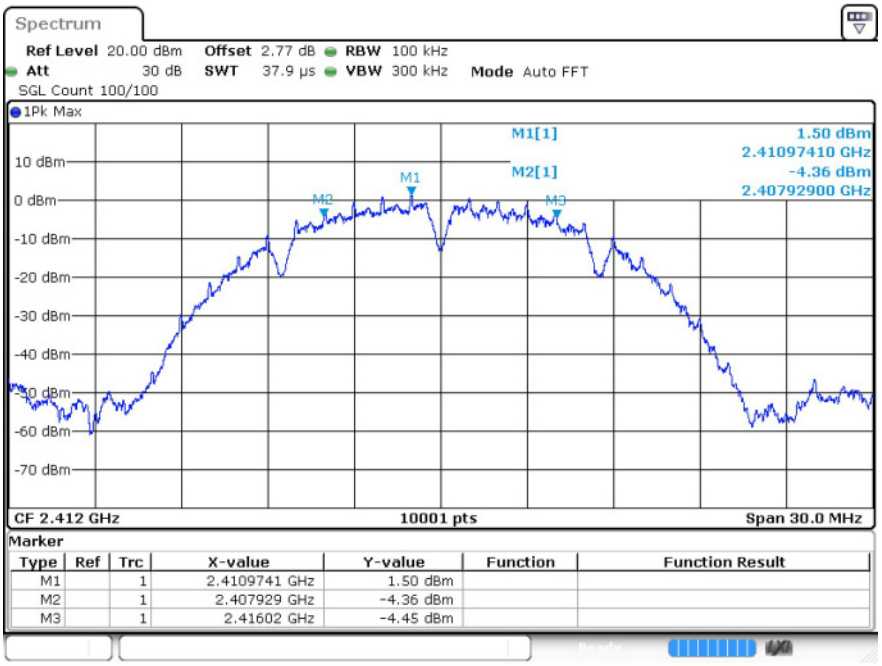
# 3 -6dB Bandwidth

## 3.1 Test Result

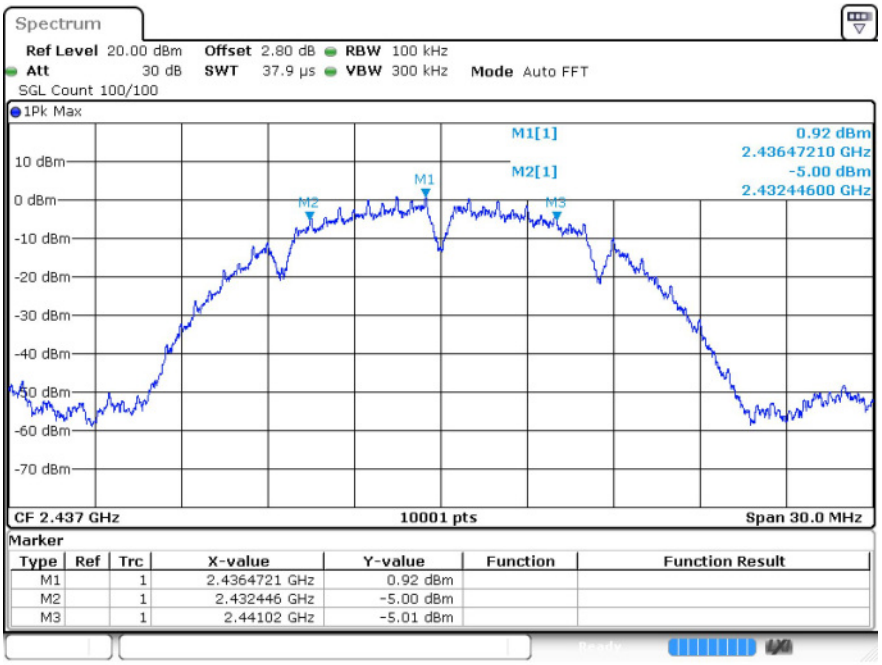
| Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|---|---|---|---|---|---|
| b | 2412 | Ant1 | 8.091 | 0.5 | Pass |
| b | 2437 | Ant1 | 8.574 | 0.5 | Pass |
| b | 2462 | Ant1 | 8.571 | 0.5 | Pass |
| g | 2412 | Ant1 | 16.434 | 0.5 | Pass |
| g | 2437 | Ant1 | 16.434 | 0.5 | Pass |
| g | 2462 | Ant1 | 16.383 | 0.5 | Pass |
| n20 | 2412 | Ant1 | 17.622 | 0.5 | Pass |
| n20 | 2437 | Ant1 | 17.676 | 0.5 | Pass |
| n20 | 2462 | Ant1 | 16.977 | 0.5 | Pass |
| n40 | 2422 | Ant1 | 36.348 | 0.5 | Pass |
| n40 | 2437 | Ant1 | 35.664 | 0.5 | Pass |
| n40 | 2452 | Ant1 | 36.432 | 0.5 | Pass |
| ax20 | 2412 | Ant1 | 18.804 | 0.5 | Pass |
| ax20 | 2437 | Ant1 | 18.888 | 0.5 | Pass |
| ax20 | 2462 | Ant1 | 18.927 | 0.5 | Pass |
| ax40 | 2422 | Ant1 | 27.516 | 0.5 | Pass |
| ax40 | 2437 | Ant1 | 32.934 | 0.5 | Pass |
| ax40 | 2452 | Ant1 | 37.926 | 0.5 | Pass |

## 3.2 Test Graphs

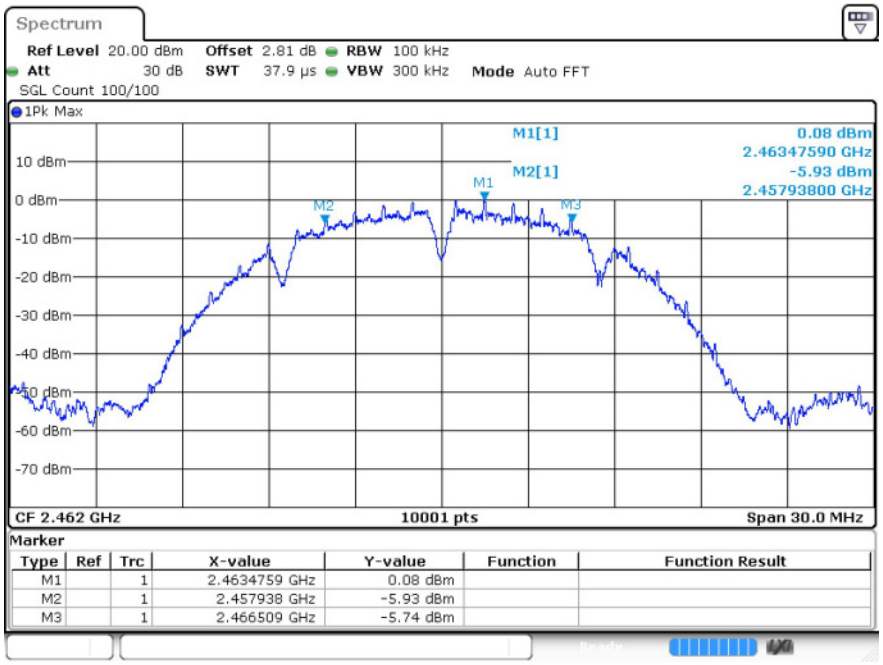
| Test Graphs |
| --- |
| b 2412MHz Ant1 |



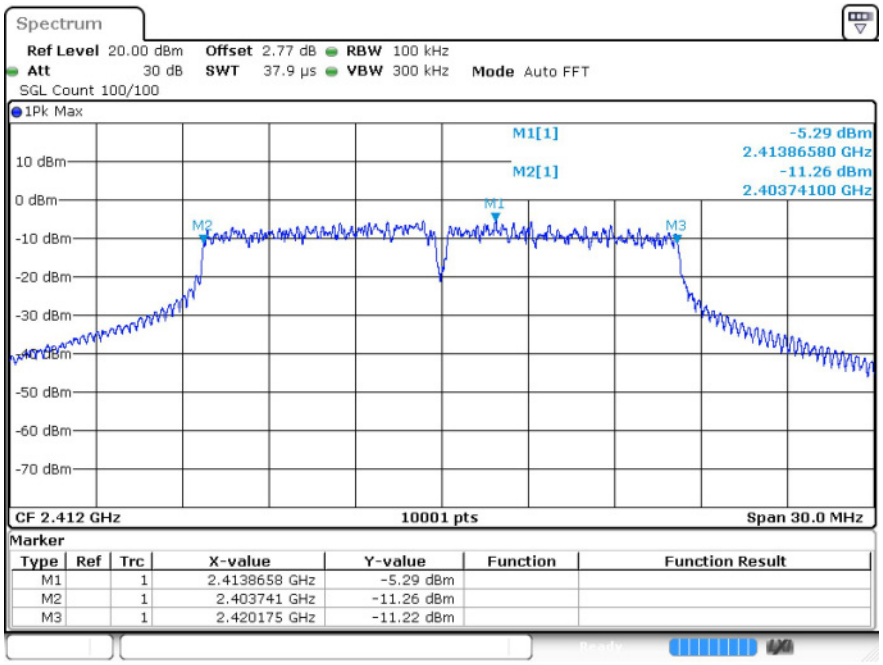

| b 2437MHz Ant1 |
| --- |



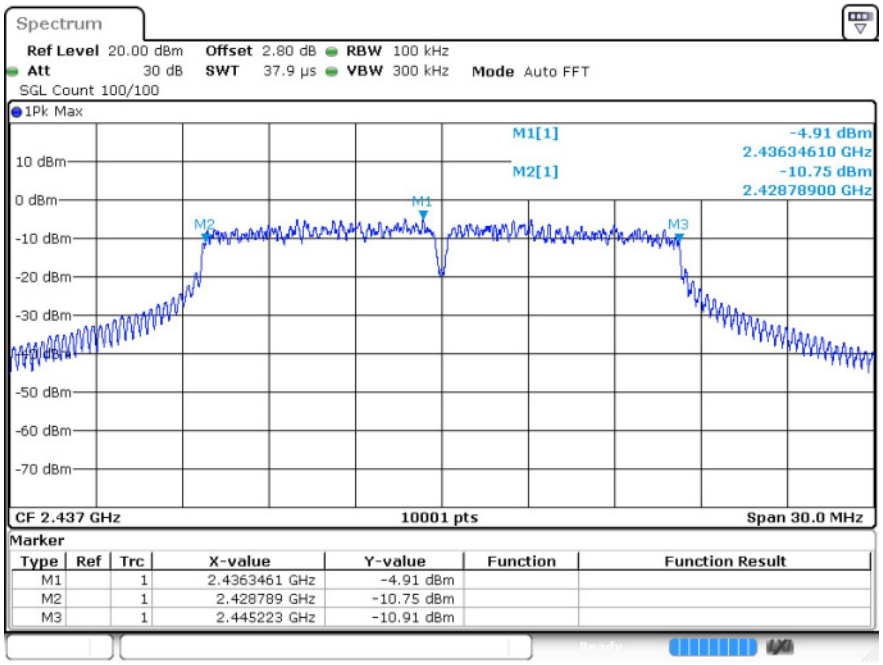
b 2462MHz Ant1



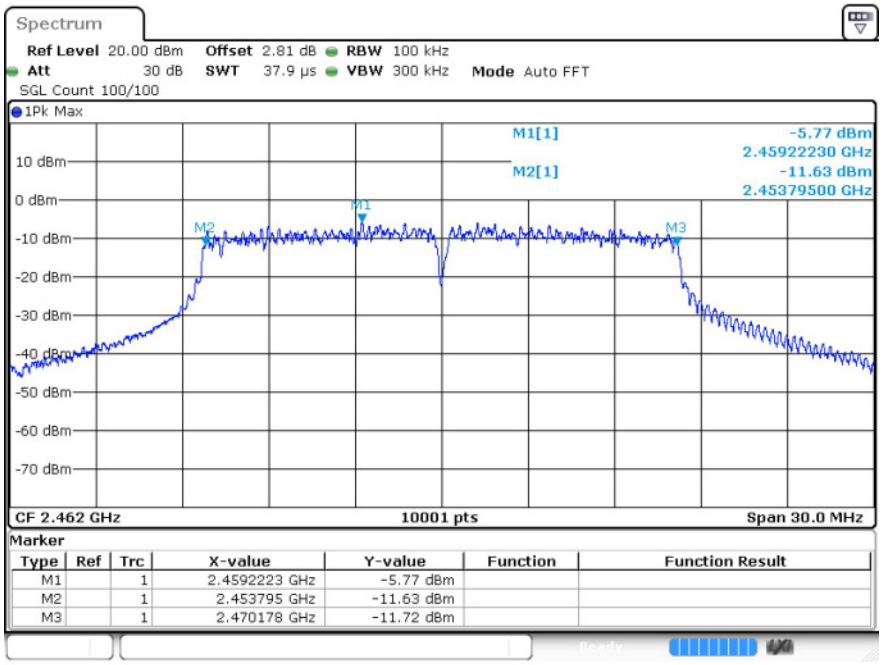

g 2412MHz Ant1



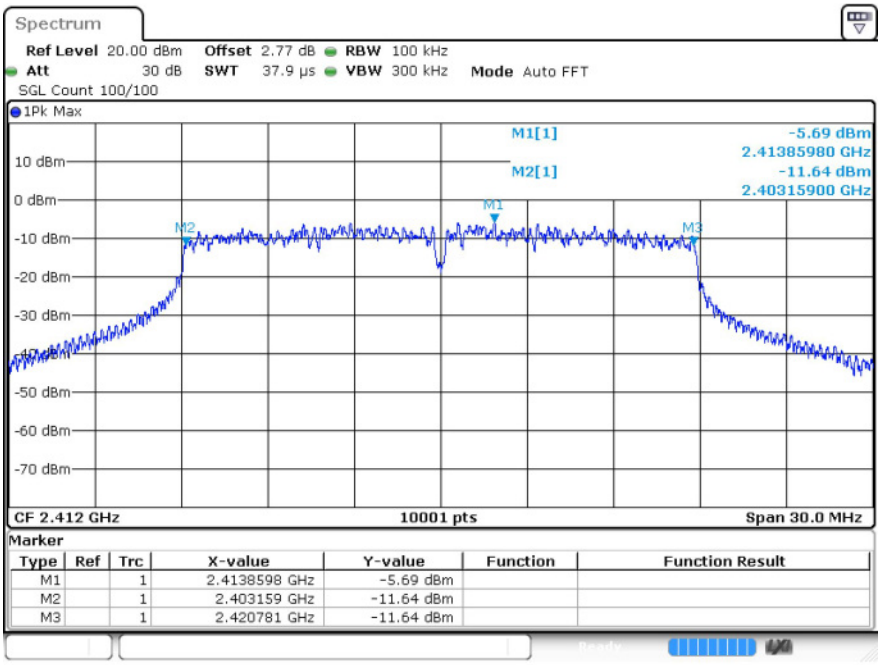
g 2437MHz Ant1



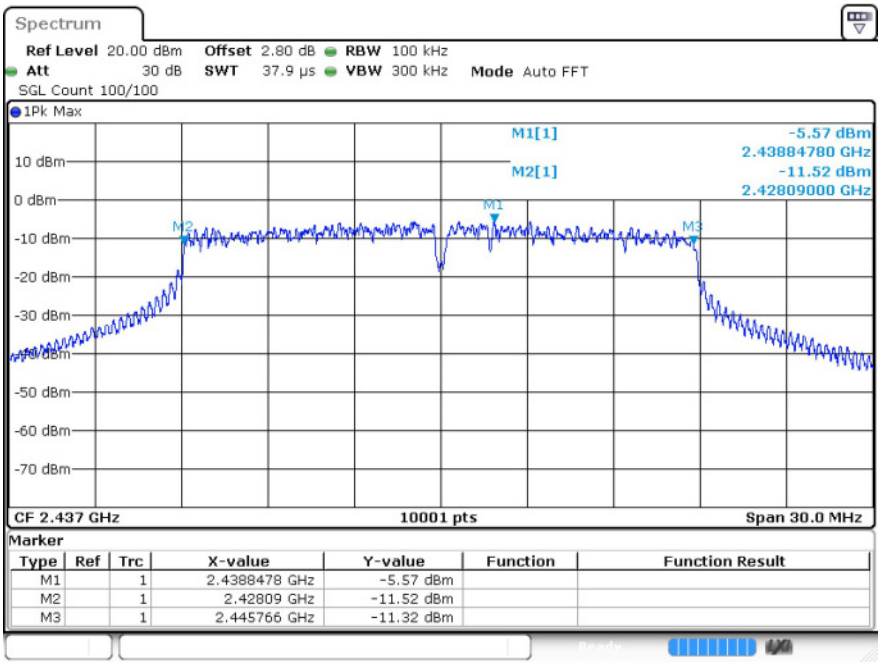

g 2462MHz Ant1



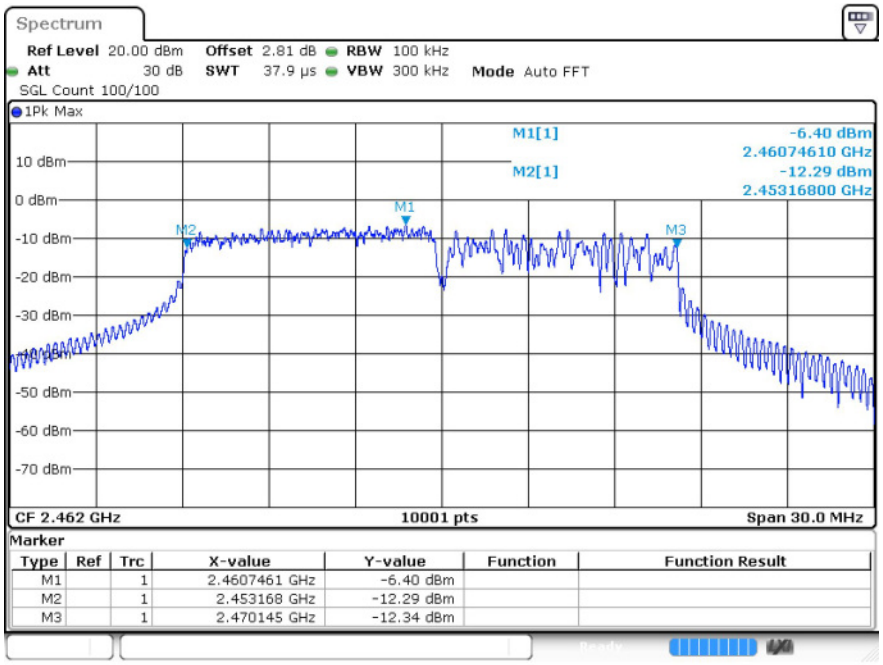
n20 2412MHz Ant1



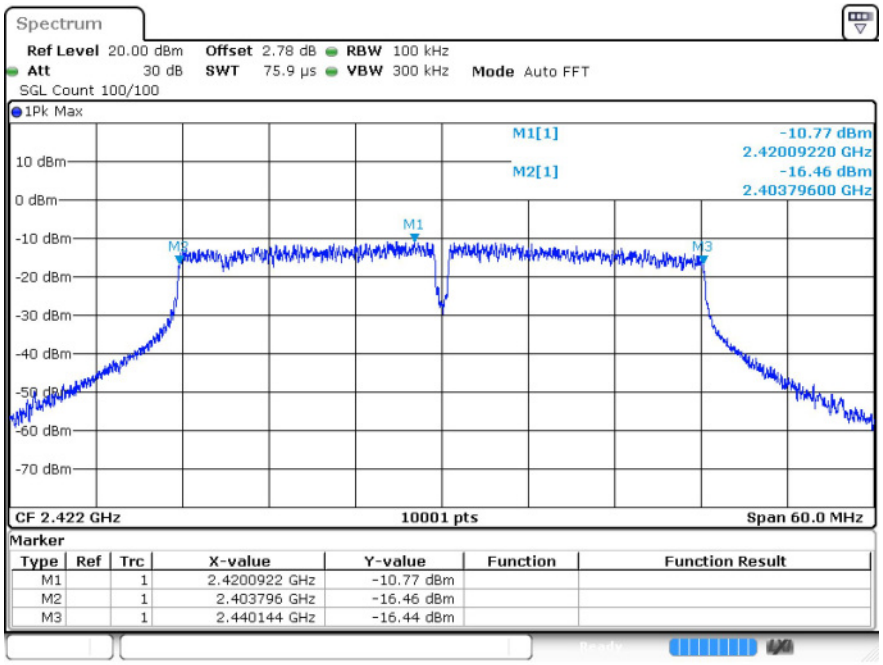

n20 2437MHz Ant1



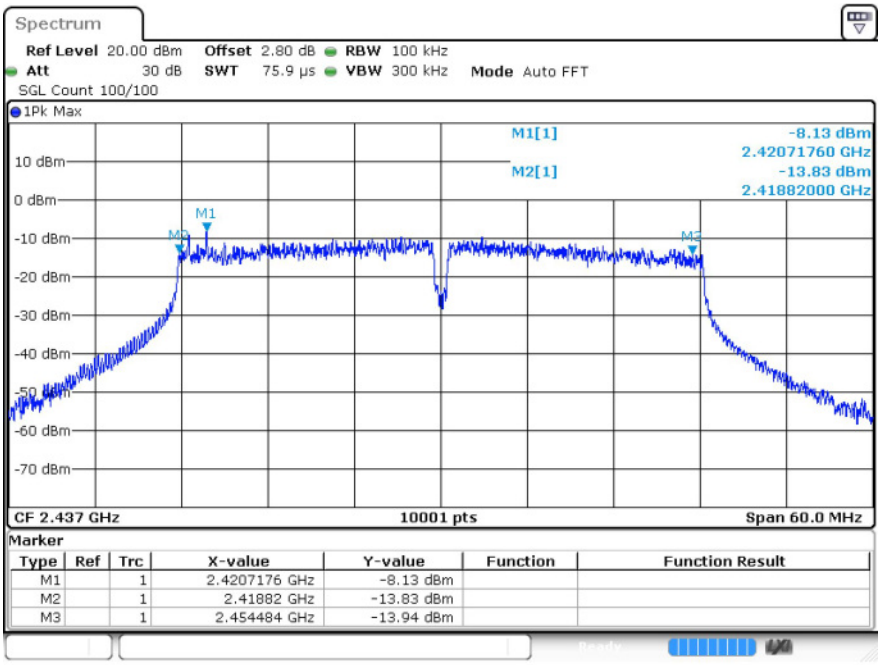
n20 2462MHz Ant1



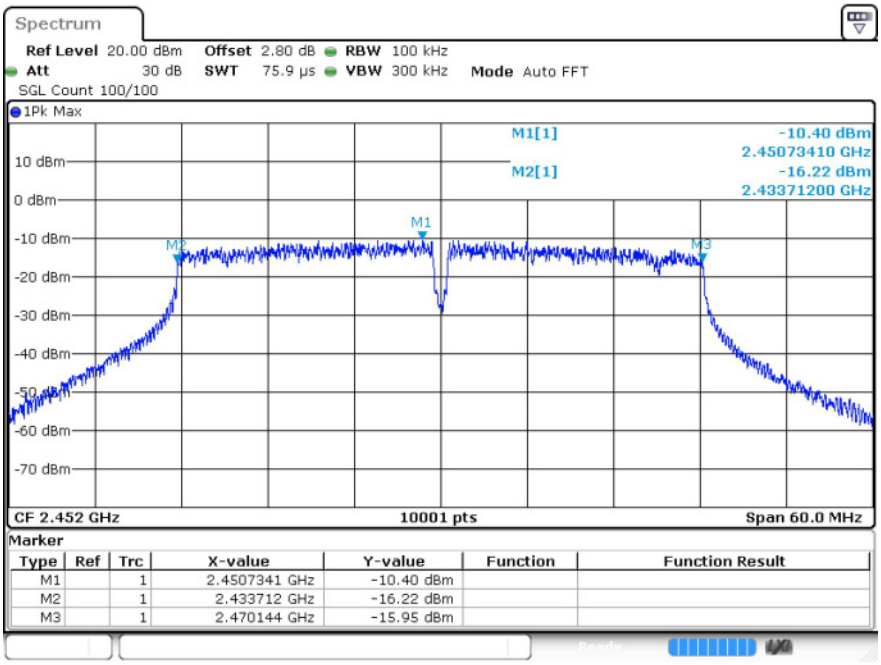

n40 2422MHz Ant1



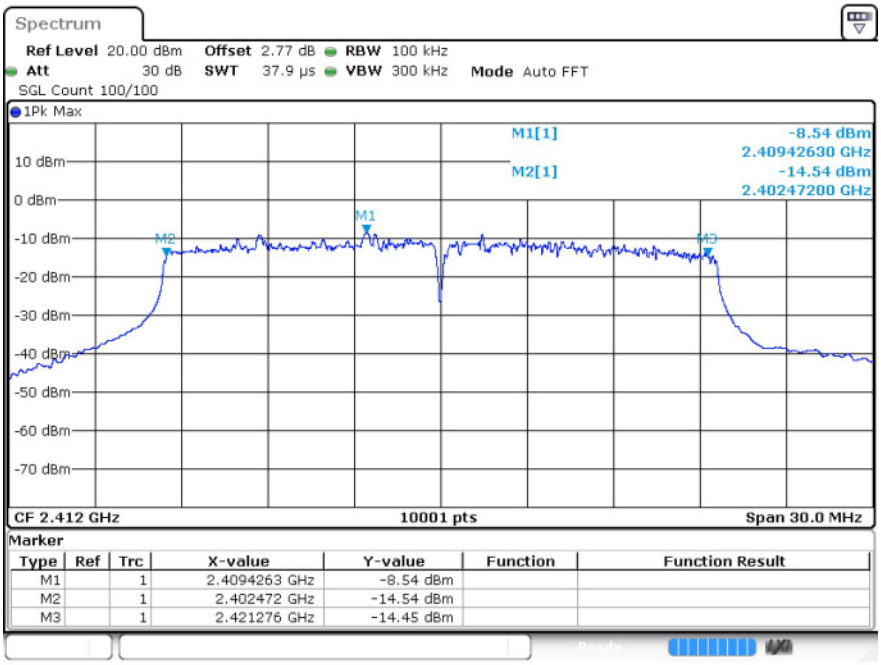
n40 2437MHz Ant1



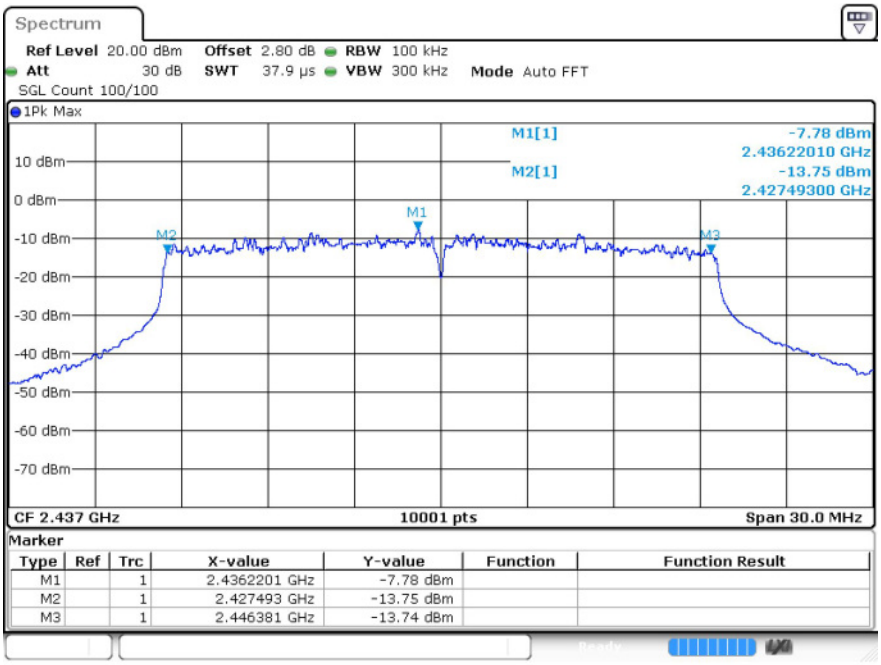

n40 2452MHz Ant1



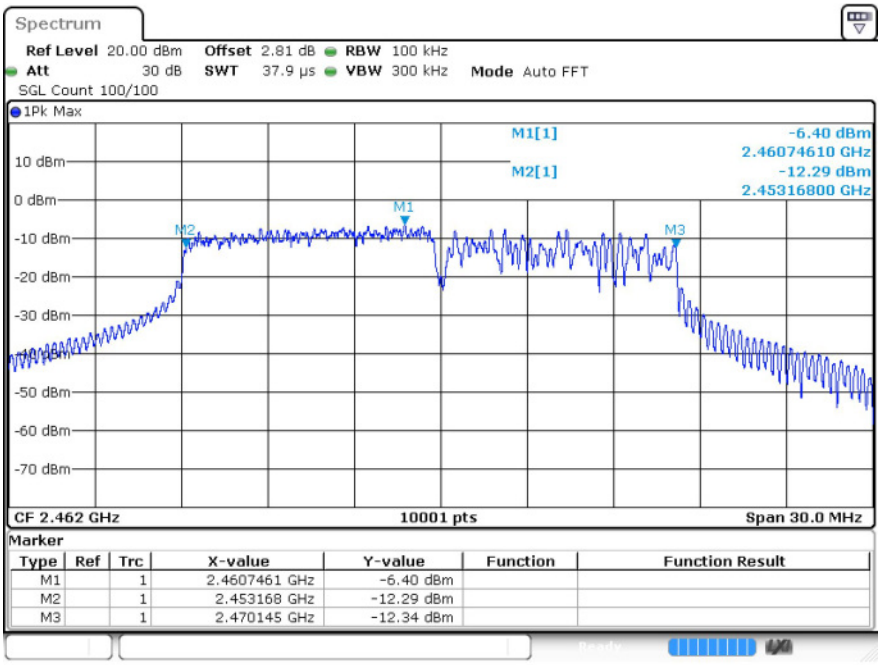
ax20 2412MHz Ant1



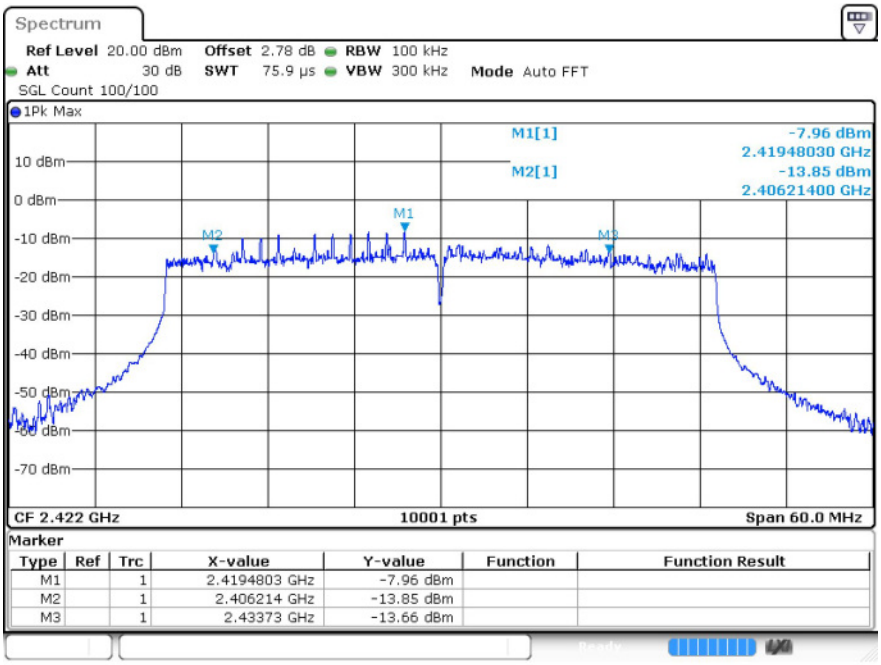

ax20 2437MHz Ant1



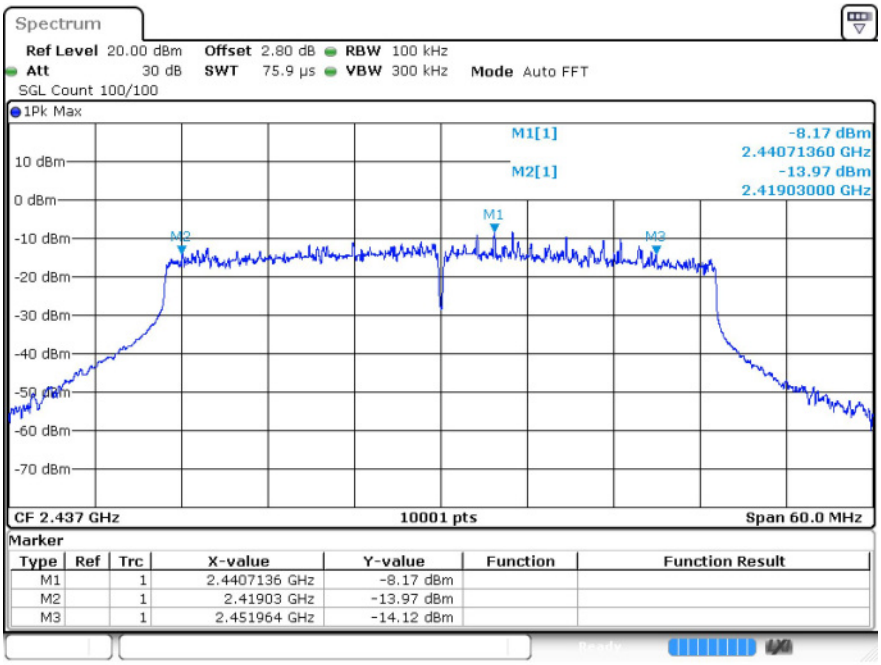
ax20 2462MHz Ant1



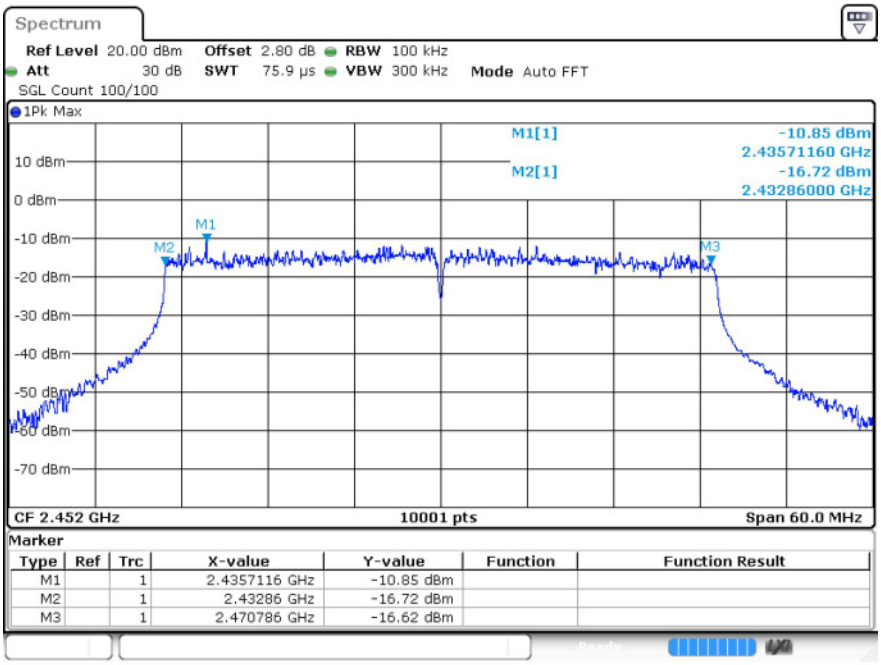

ax40 2422MHz Ant1



ax40 2437MHz Ant1




ax40 2452MHz Ant1



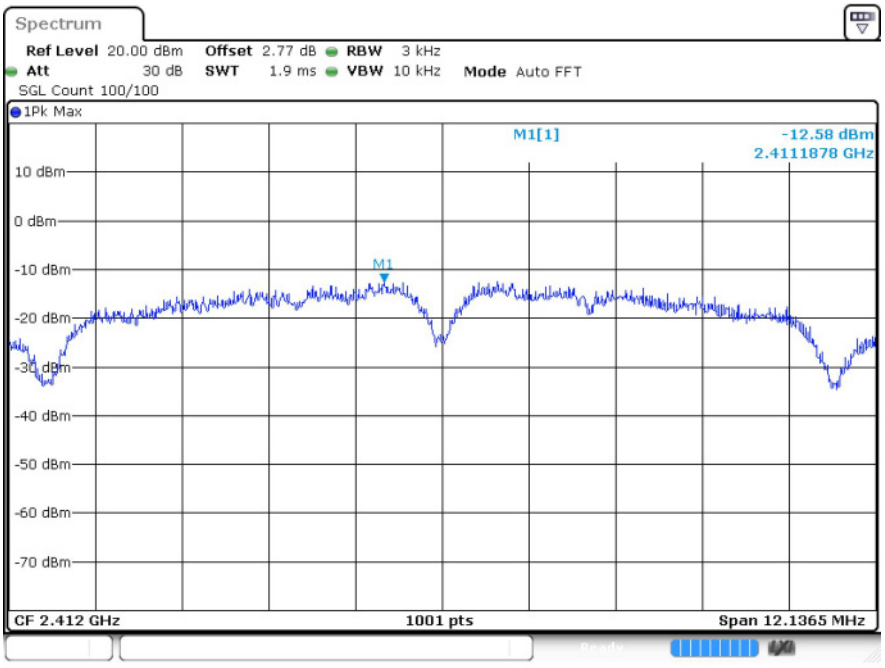
# 4 Maximum Power Spectral Density Level

## 4.1 Test Result

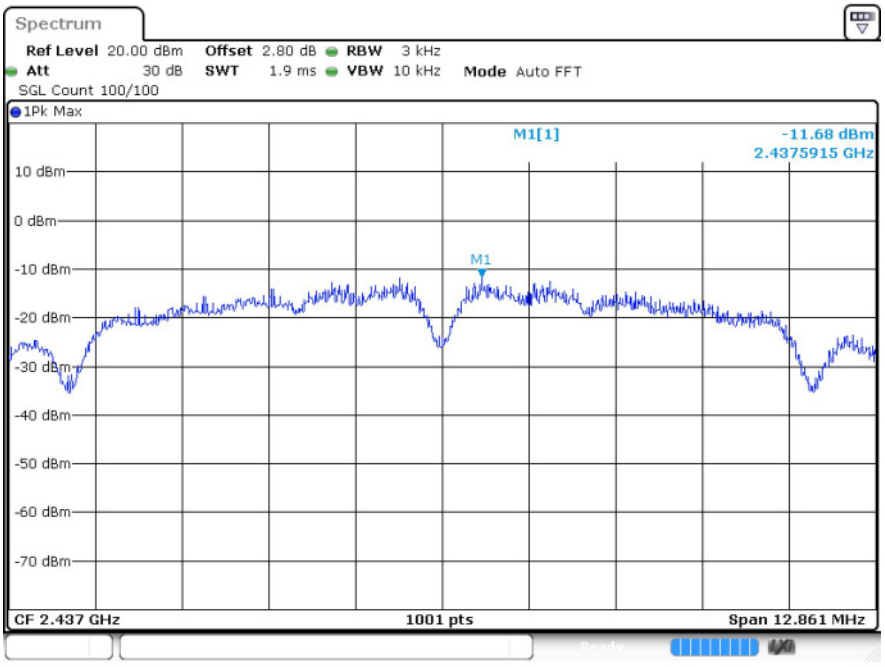
| Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm/3-100kHz) | Limit (dBm/3kHz) | Verdict |
|---|---|---|---|---|---|
| b | 2412 | Ant1 | -12.58 | ≤8 | Pass |
| b | 2437 | Ant1 | -11.68 | ≤8 | Pass |
| b | 2462 | Ant1 | -13.81 | ≤8 | Pass |
| g | 2412 | Ant1 | -16.41 | ≤8 | Pass |
| g | 2437 | Ant1 | -16.05 | ≤8 | Pass |
| g | 2462 | Ant1 | -16.04 | ≤8 | Pass |
| n20 | 2412 | Ant1 | -16.37 | ≤8 | Pass |
| n20 | 2437 | Ant1 | -16.13 | ≤8 | Pass |
| n20 | 2462 | Ant1 | -16.8 | ≤8 | Pass |
| n40 | 2422 | Ant1 | -21.01 | ≤8 | Pass |
| n40 | 2437 | Ant1 | -20.21 | ≤8 | Pass |
| n40 | 2452 | Ant1 | -21.25 | ≤8 | Pass |
| ax20 | 2412 | Ant1 | -8.57 | ≤8 | Pass |
| ax20 | 2437 | Ant1 | -8.05 | ≤8 | Pass |
| ax20 | 2462 | Ant1 | -8.45 | ≤8 | Pass |
| ax40 | 2422 | Ant1 | -11.44 | ≤8 | Pass |
| ax40 | 2437 | Ant1 | -10.74 | ≤8 | Pass |
| ax40 | 2452 | Ant1 | -10.85 | ≤8 | Pass |

## 4.2 Test Graphs

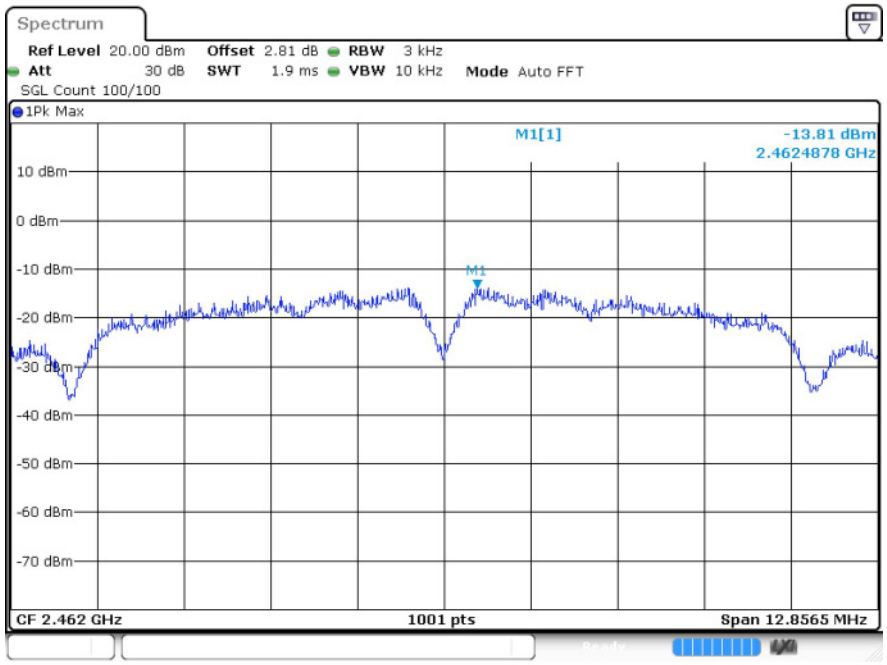
| Test Graphs |
| --- |
| b 2412MHz Ant1 |



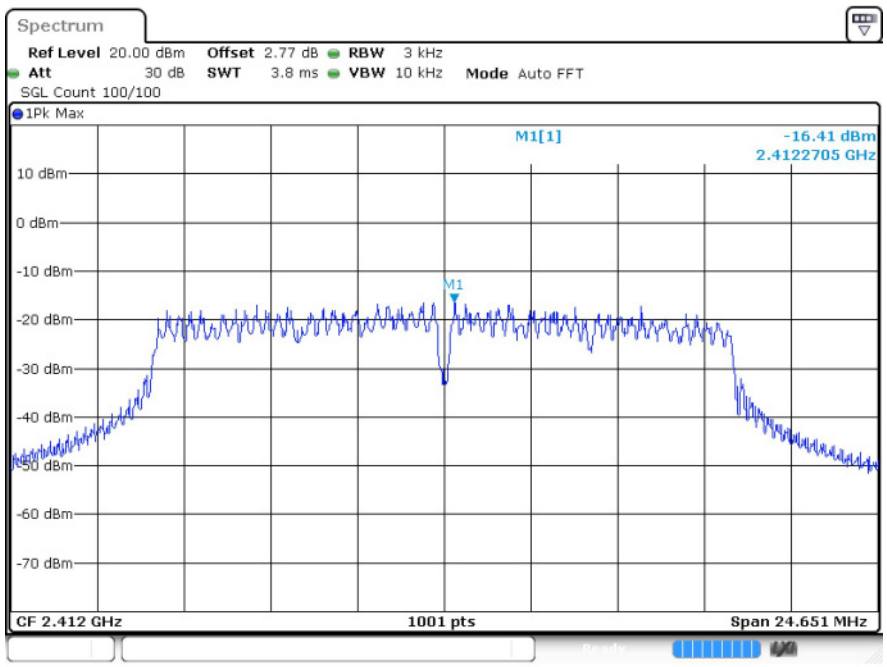

| b 2437MHz Ant1 |
| --- |



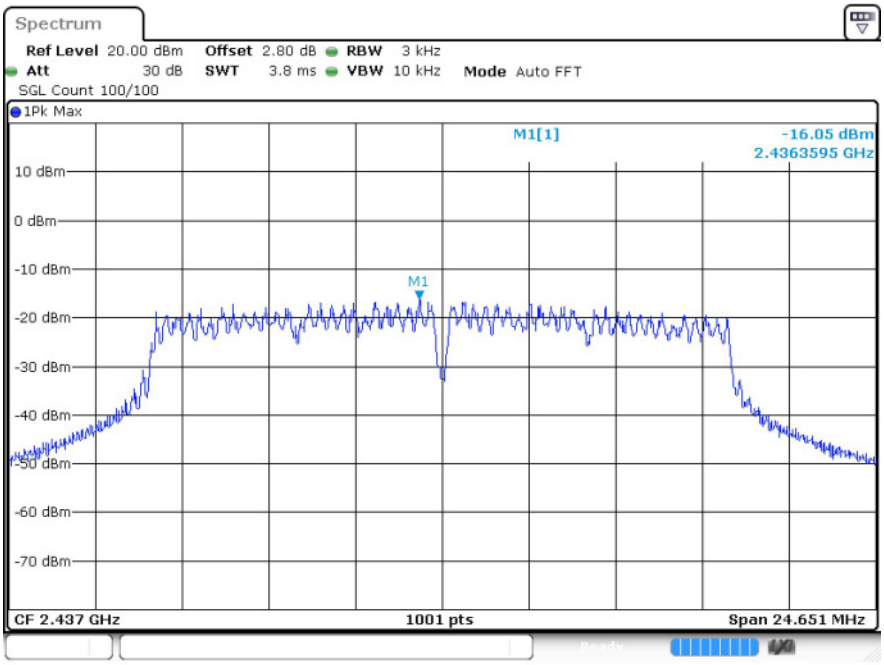
b 2462MHz Ant1



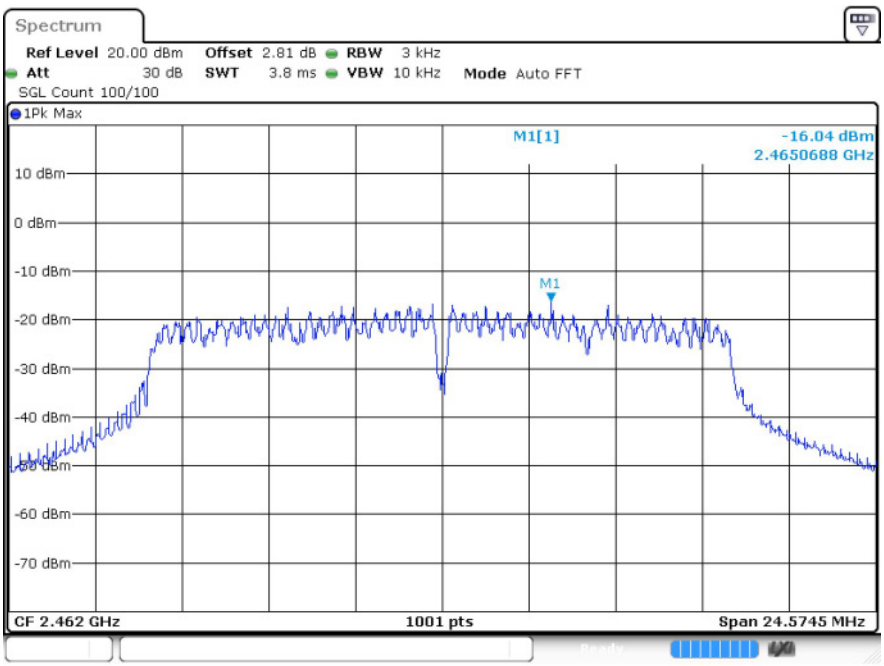

g 2412MHz Ant1



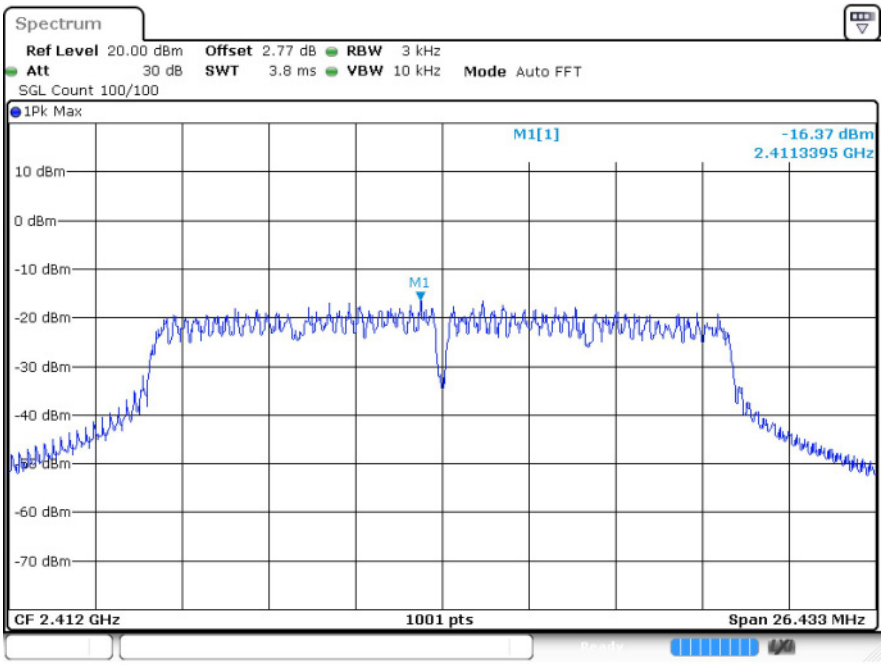
g 2437MHz Ant1



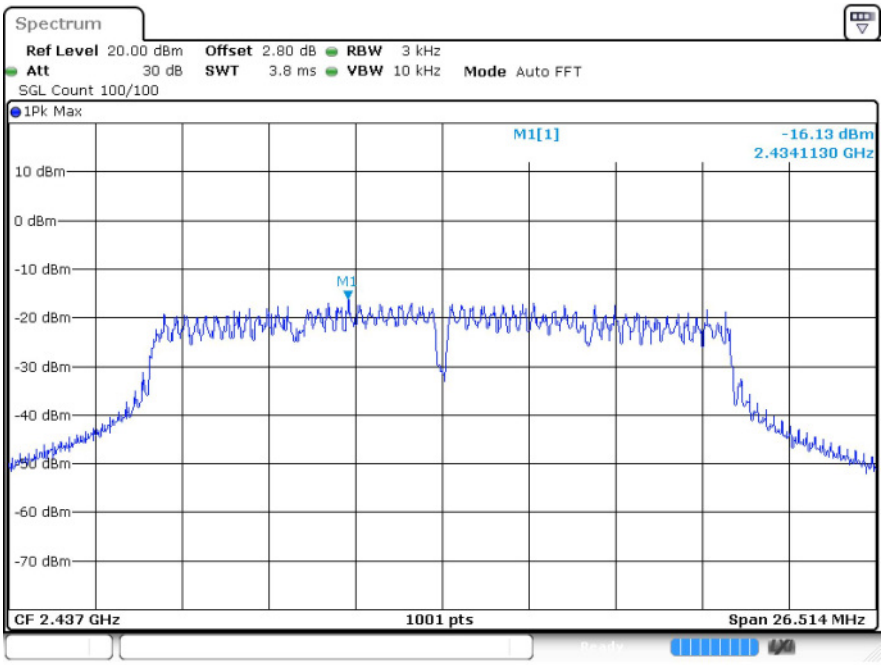

g 2462MHz Ant1



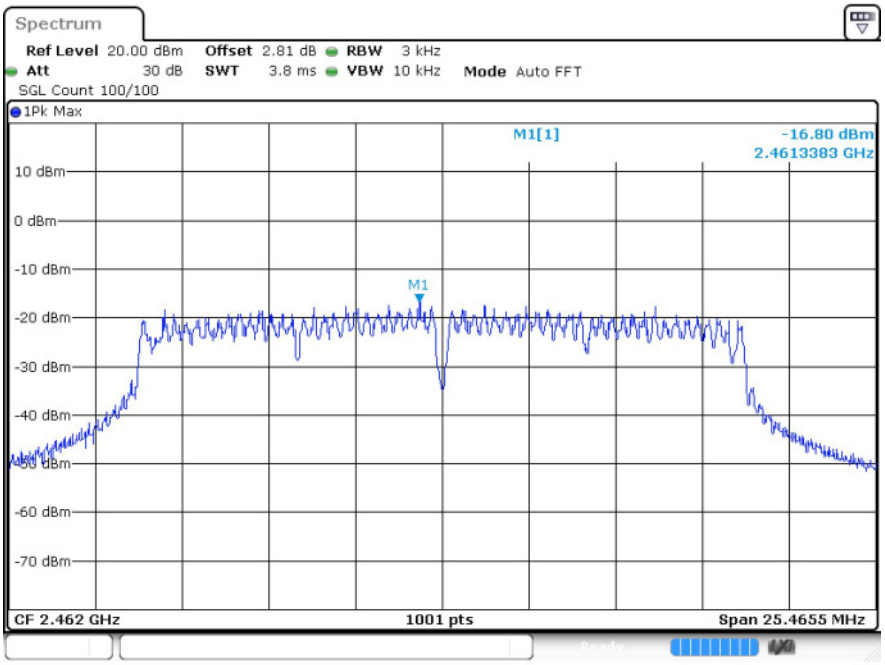
n20 2412MHz Ant1



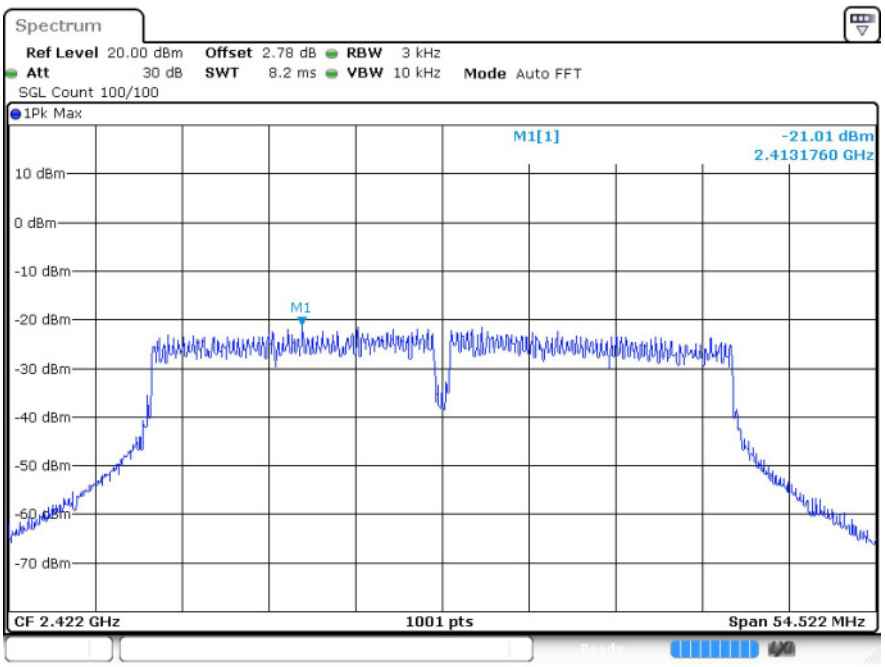

n20 2437MHz Ant1



n20 2462MHz Ant1




n40 2422MHz Ant1



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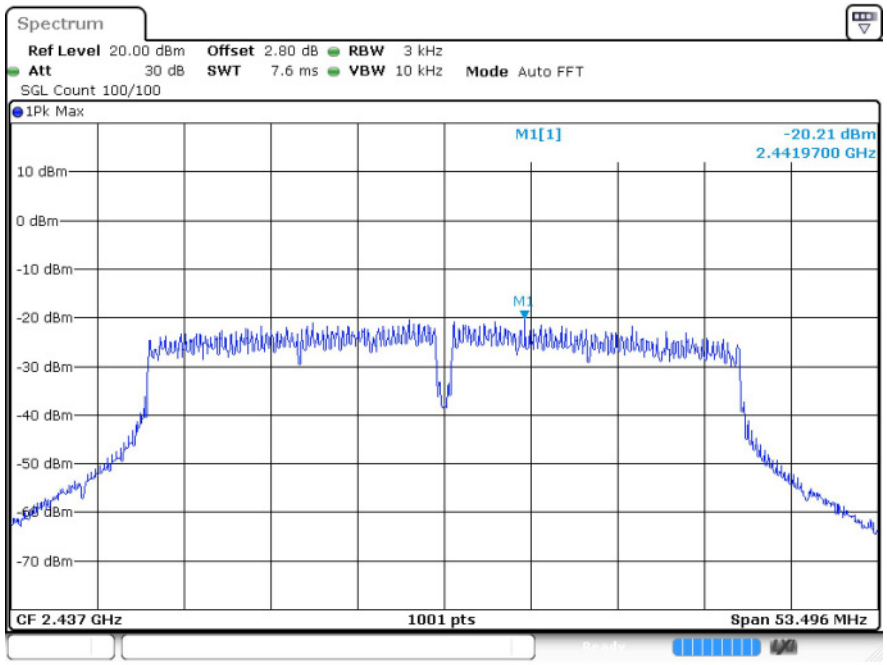
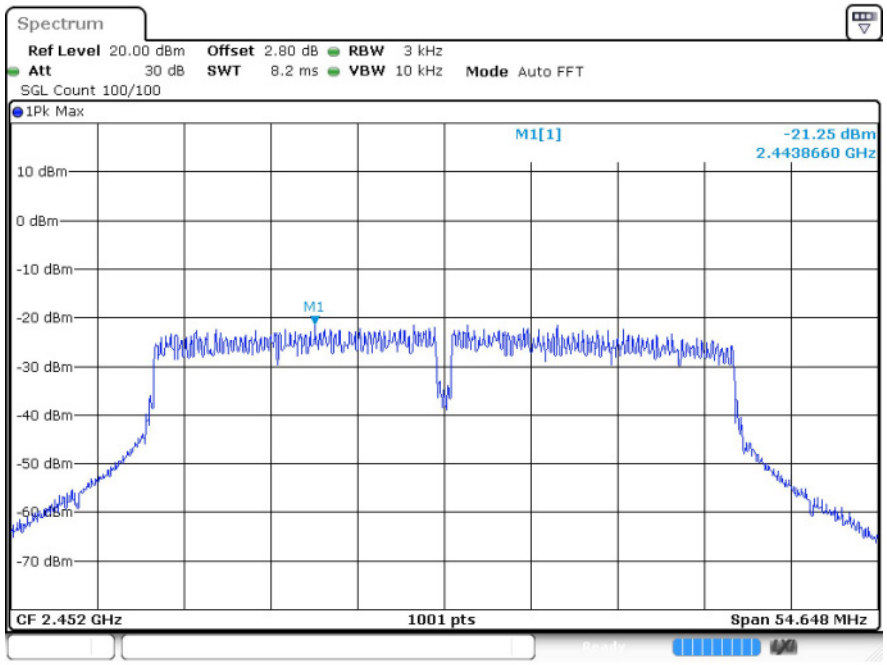
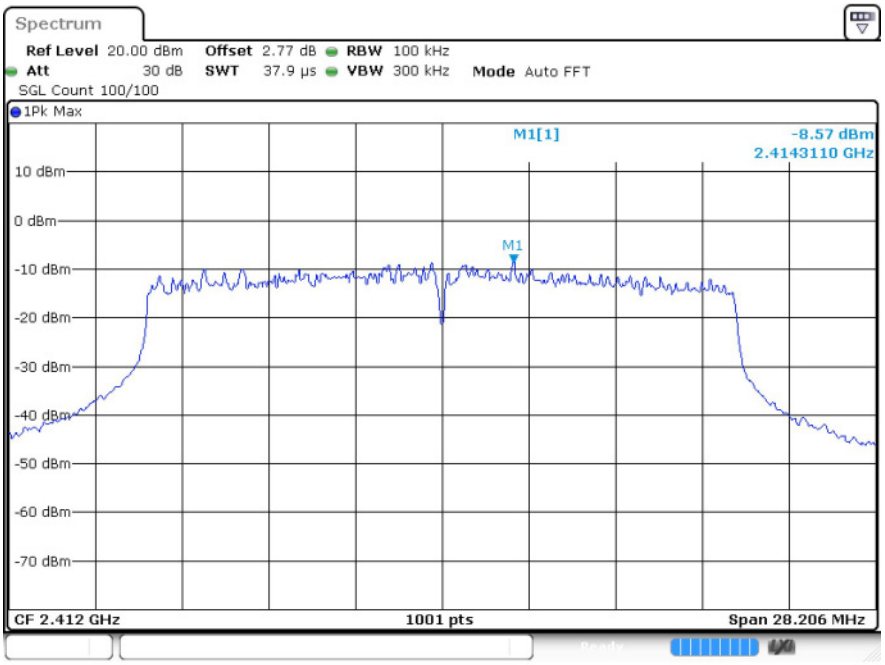



n40 2452MHz Ant1



ax20 2412MHz Ant1




ax20 2437MHz Ant1