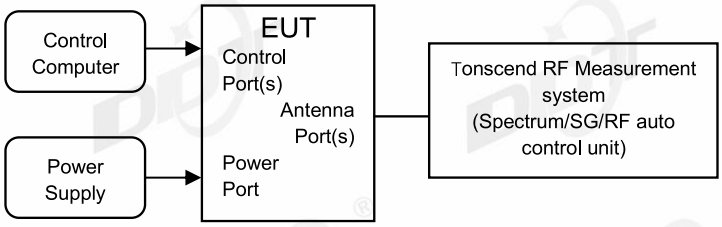
8. Band Edge Compliance (Conducted Method)

8.1. Block diagram of test setup



8.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

8.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.
(2) Establish a reference level by using the following procedure:

RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

Then mark the maximum amplitude of all unwanted emissions outside of the authorized frequency band.

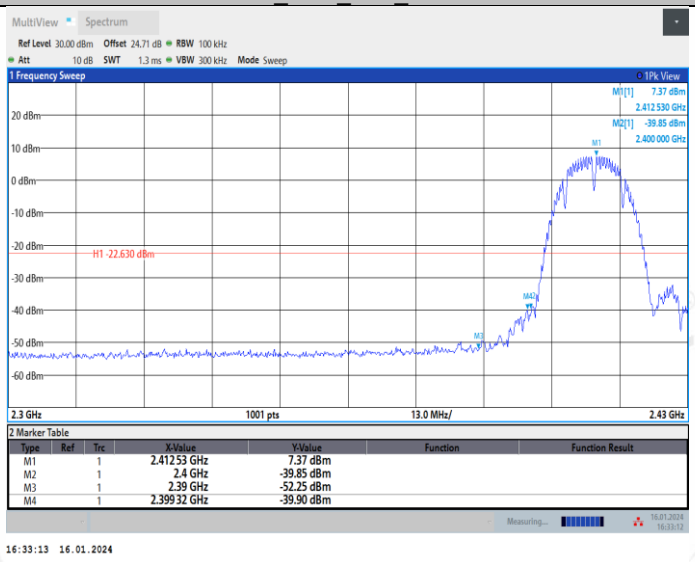
8.4. Test result

Test Engineer:	Haofeng	Test Site:	RF Measuremnet System 4#
Ambient Condition:	23.4℃,37.5%RH	Test Date:	2024.01.05-2024.01.16
Test Power Supply:	DC 5V	EUT:	AIoT Edge Controller
Sample Number:	S23111537-05	Model No.:	MB41

EUT Set Mode	CH or Frequency	Result(dBm)	EUT Set Mode	CH or Frequency	Result (dBm)
11b	CH1	Pass	11g	CH1	Pass
	CH11	Pass		CH11	Pass
11n HT 20	CH1	Pass	11n HT 40	CH3	Pass
	CH11	Pass		CH9	Pass

8.5. Test graphs

11B_Ant1_Low_2412



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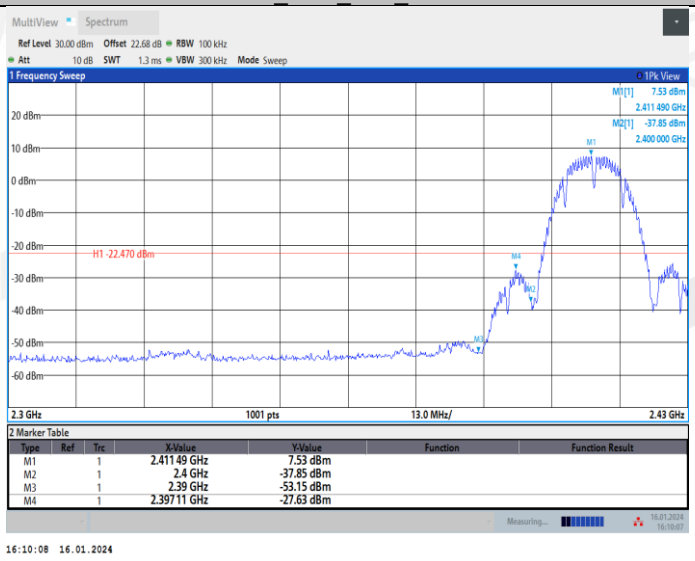

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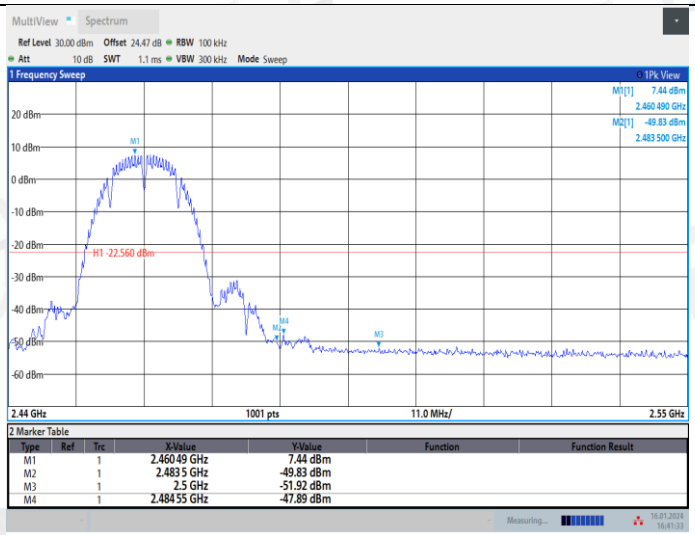

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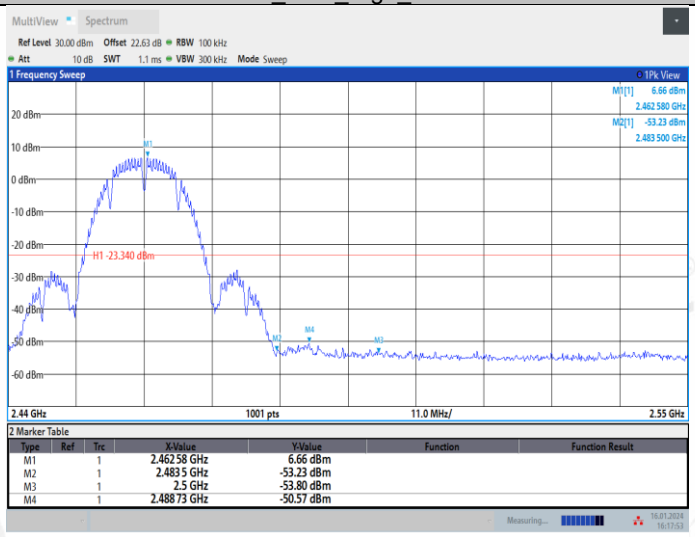

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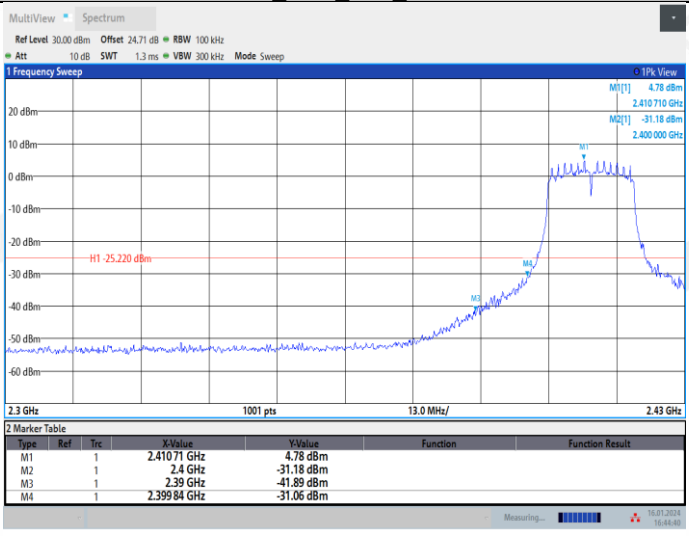

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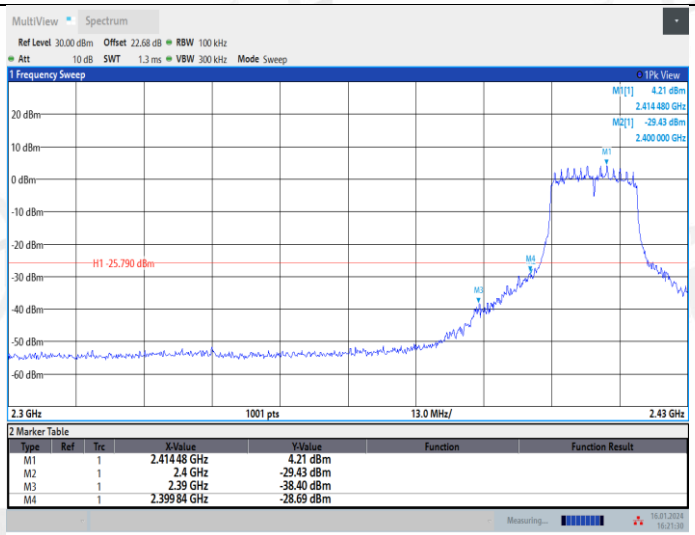

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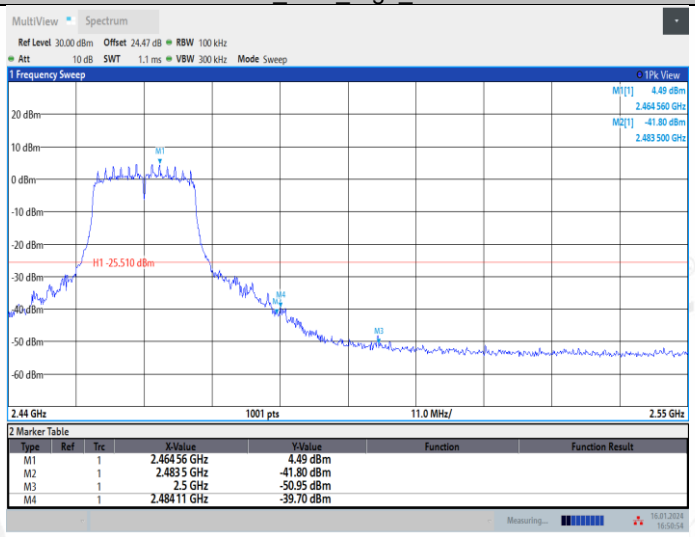

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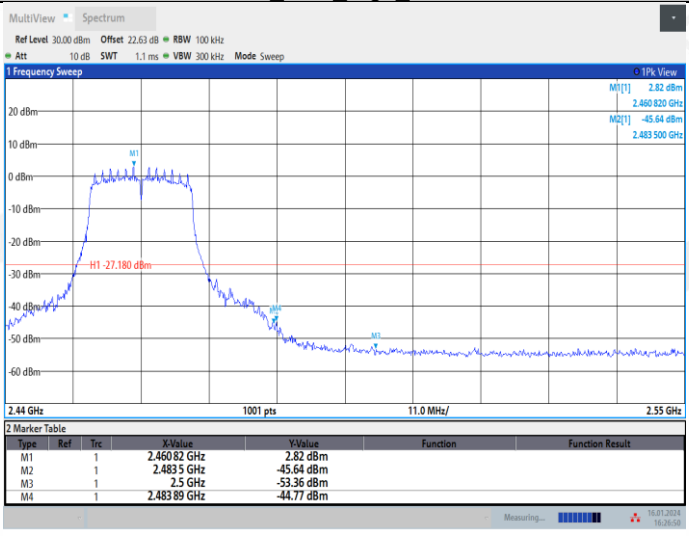
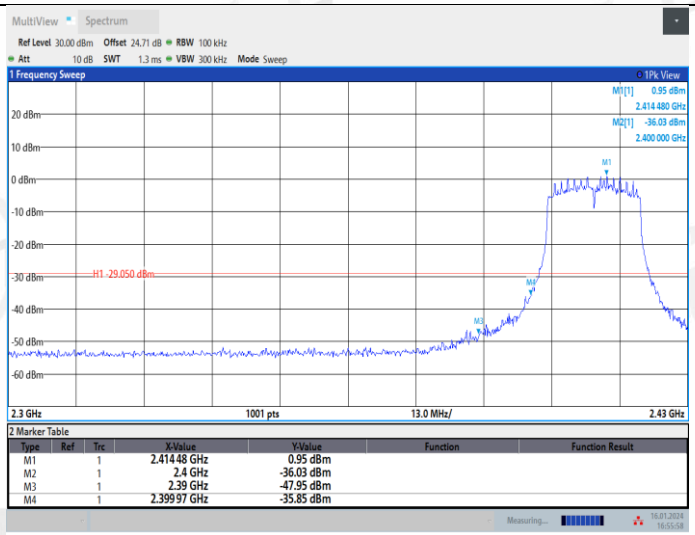


11N20MIMO_Ant1_Low_2412



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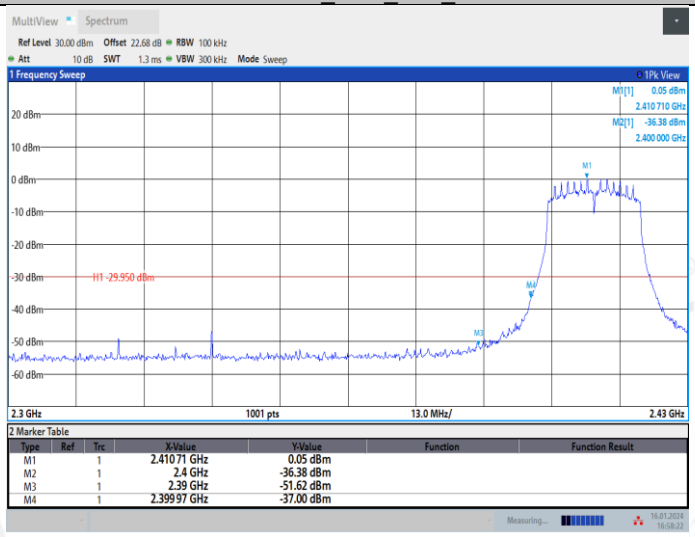

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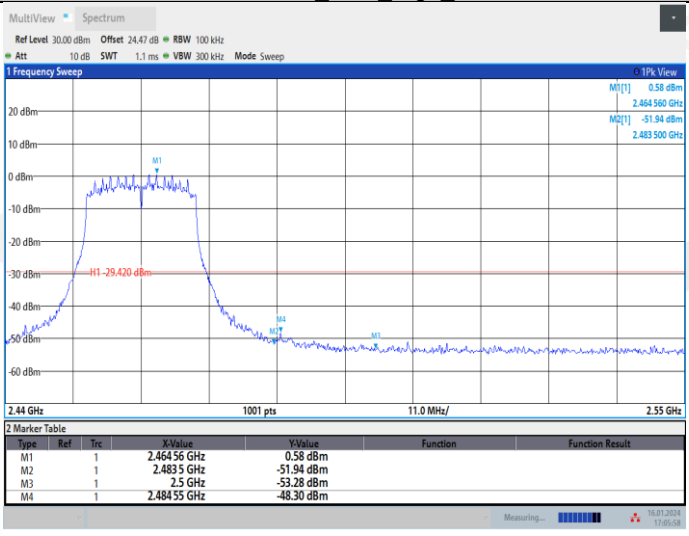

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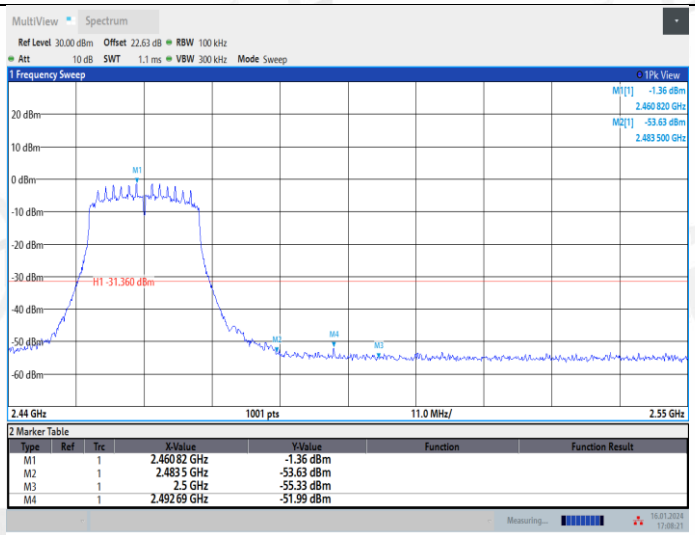
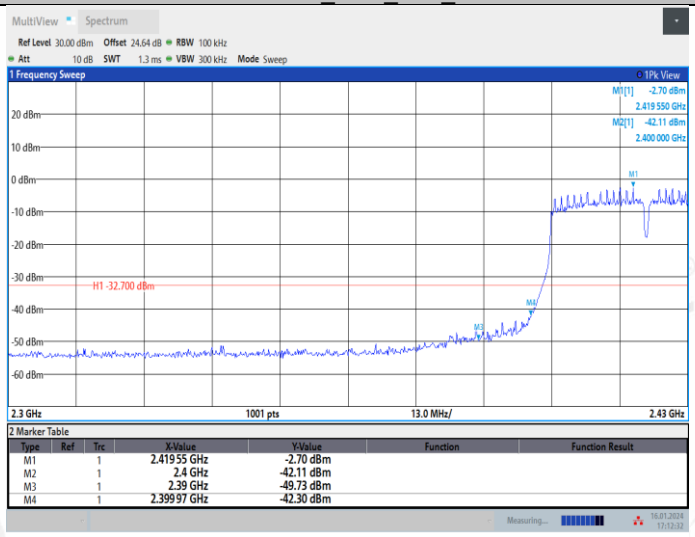


11N40MIMO_Ant1_Low_2422



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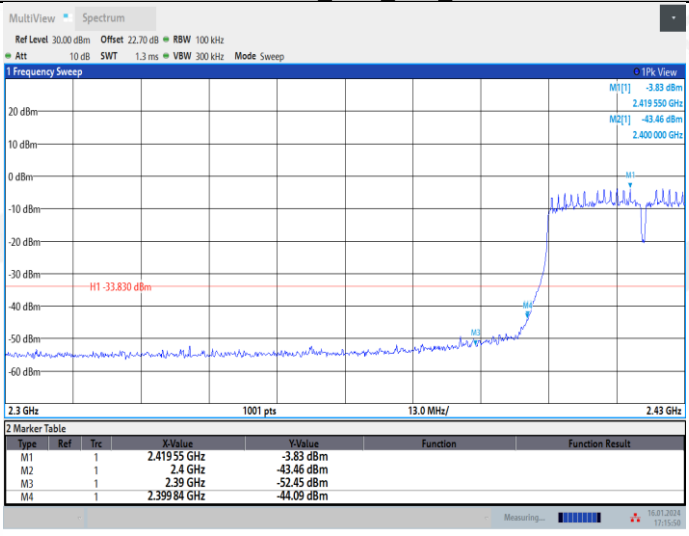

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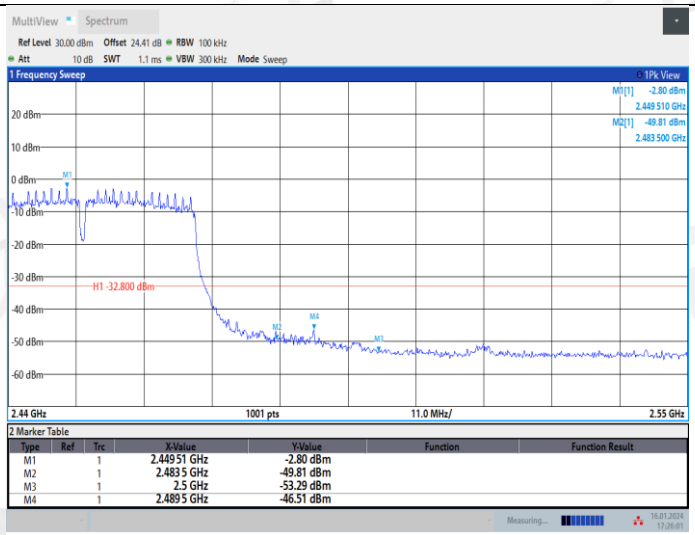

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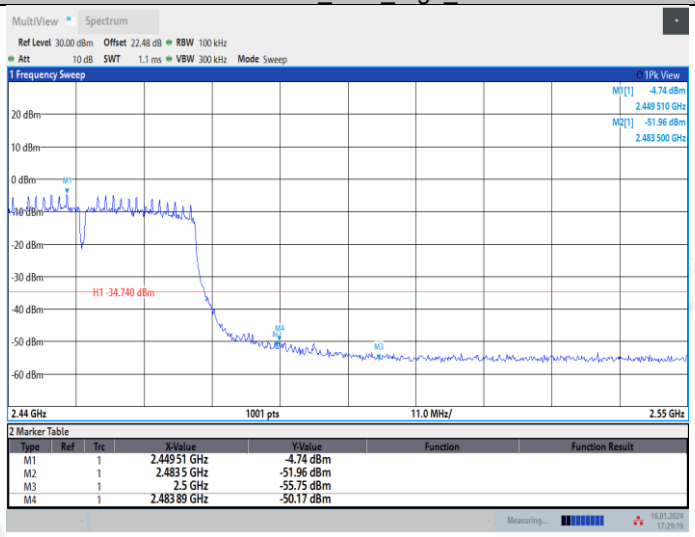
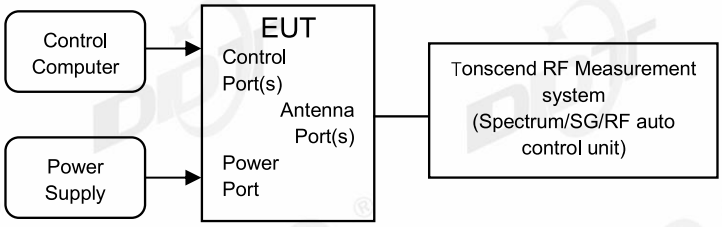


9. RF Conducted Spurious Emissions

9.1. Block diagram of test setup



9.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

9.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.
(2) Establish a reference level by using the following procedure:

Center frequency	Test frequency
RBW:	100 kHz
VBW:	300 kHz
Span	Wide enough to capture the peak level of the in-band emission
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.
(4) Set the spectrum analyzer as follows:

RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Number of measurement points	≥Span/RBW
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(5) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

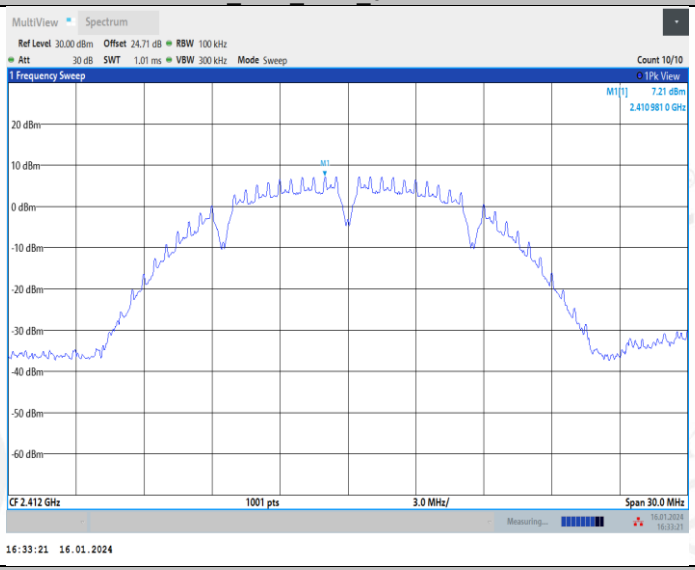
9.4. Test result

Test Engineer:	Haofeng	Test Site:	RF Measuremnet System 4#
Ambient Condition:	23.4℃,37.5%RH	Test Date:	2024.01.05-2024.01.16
Test Power Supply:	DC 5V	EUT:	AIoT Edge Controller
Sample Number:	S23111537-05	Model No.:	MB41

EUT Set Mode	CH or Frequency	Result(dBm)	EUT Set Mode	CH or Frequency	Result (dBm)
11b	CH1	Pass	11g	CH1	Pass
	CH11	Pass		CH11	Pass
11n HT 20	CH1	Pass	11n HT 40	CH3	Pass
	CH11	Pass		CH9	Pass

9.5. Test graphs

11B_Ant1_2412_0~Reference



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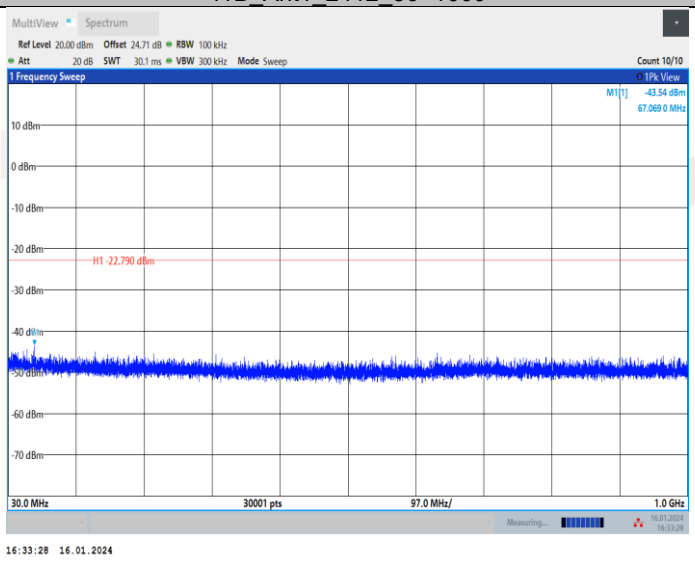
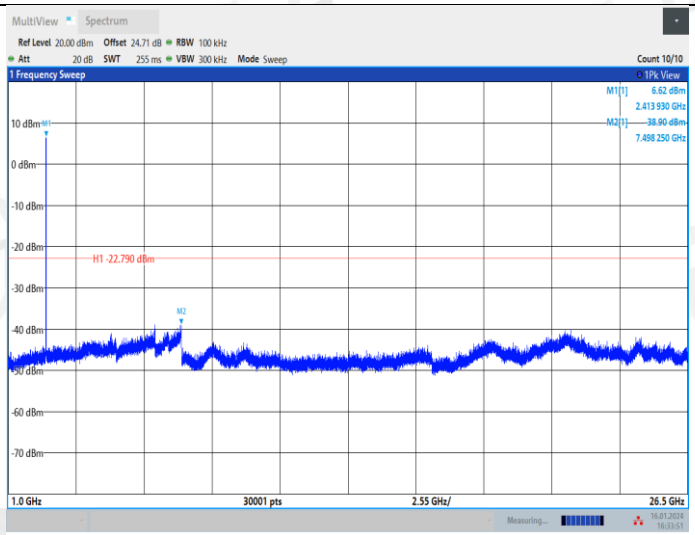


11B_Ant1_2412_1000~26500



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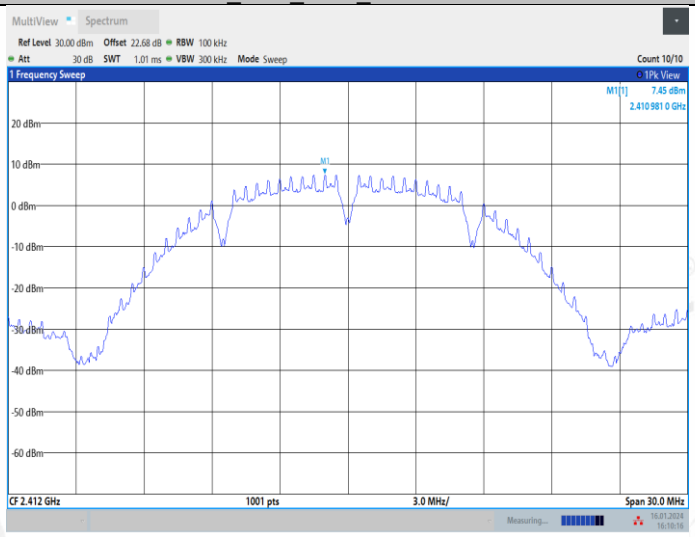

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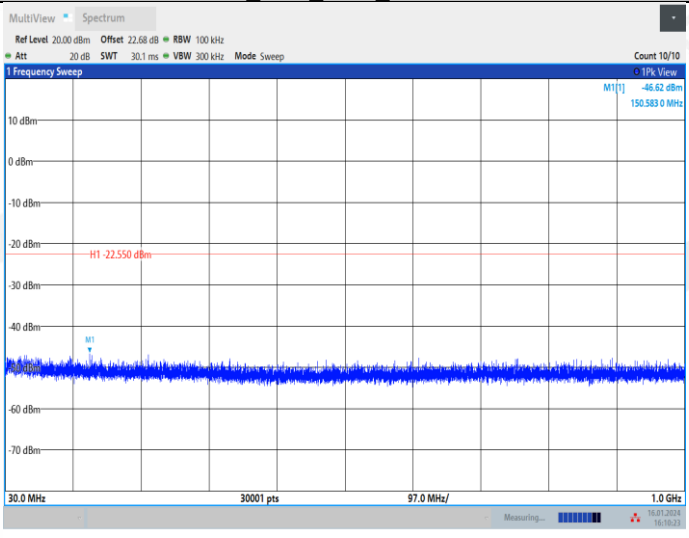

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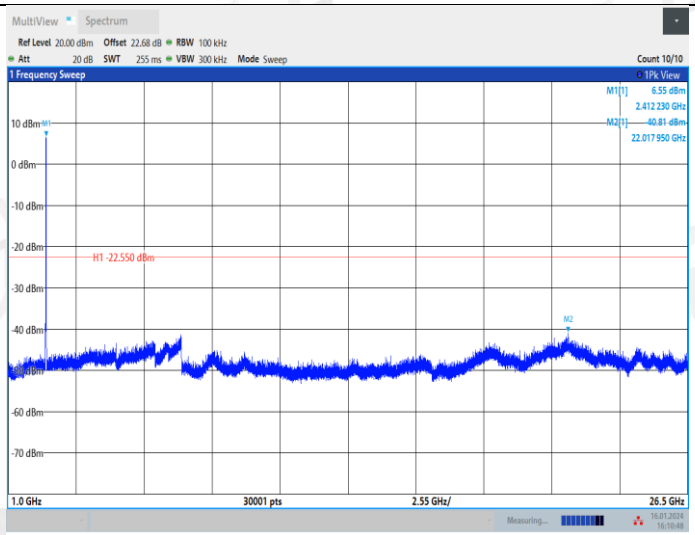

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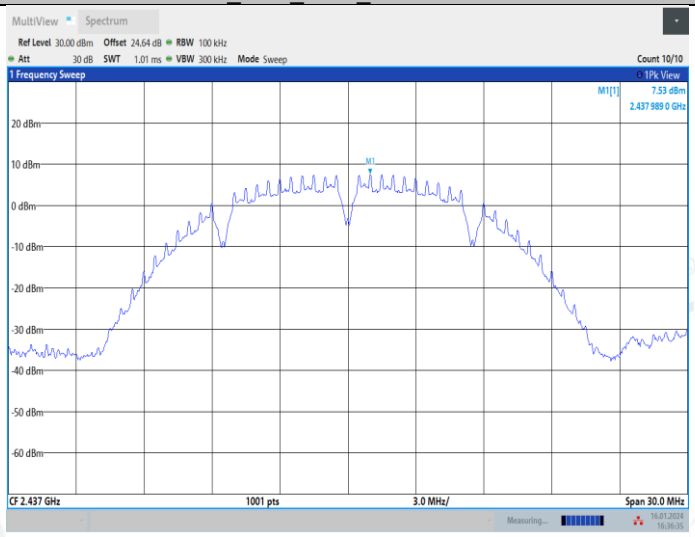

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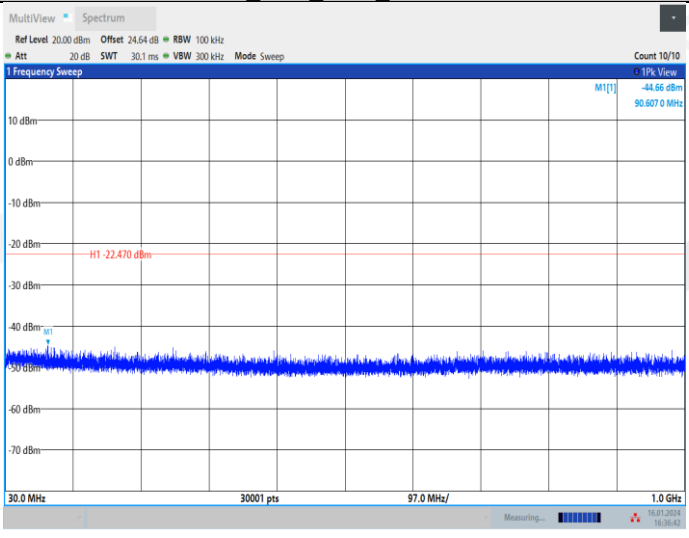
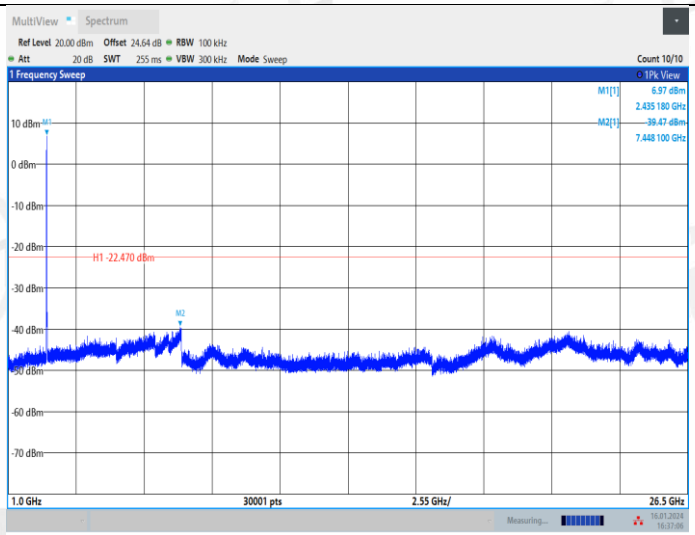


11B_Ant1_2437_1000~26500



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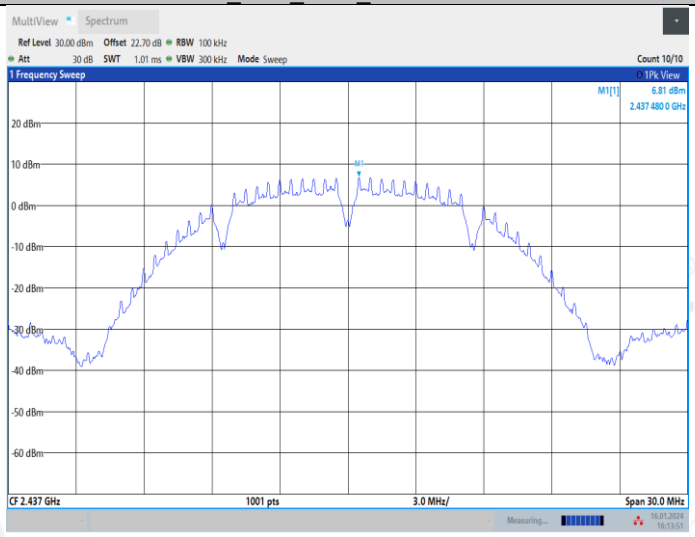

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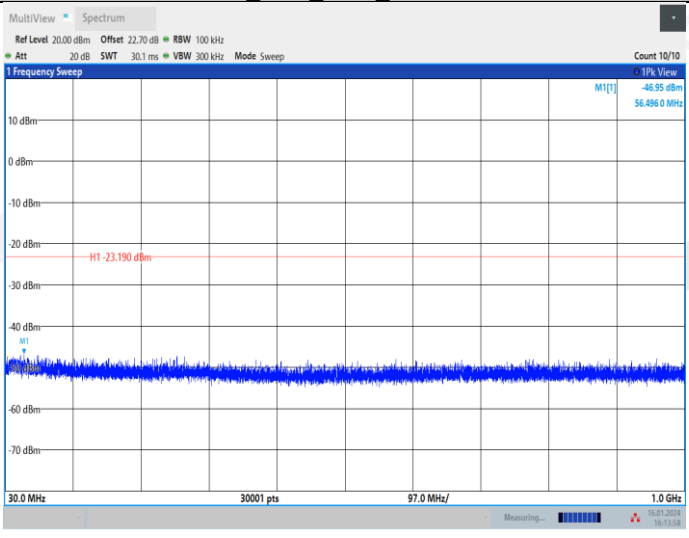

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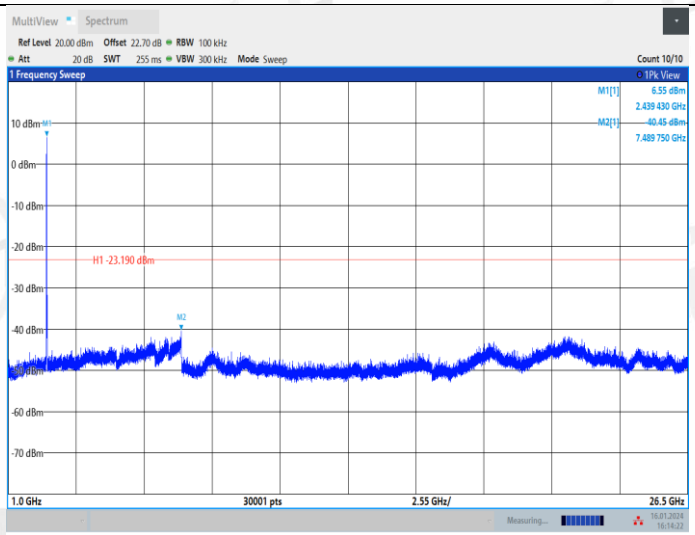

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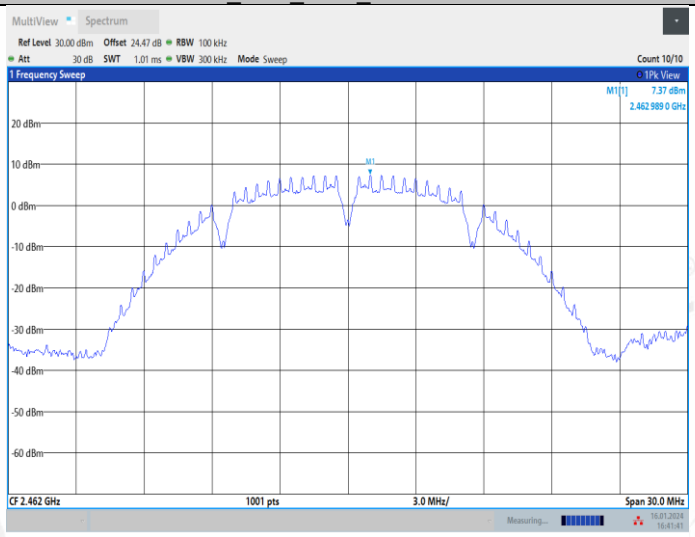

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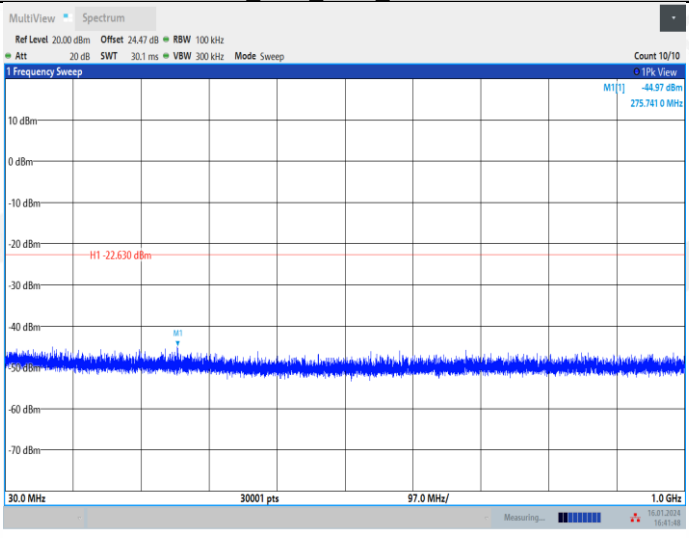

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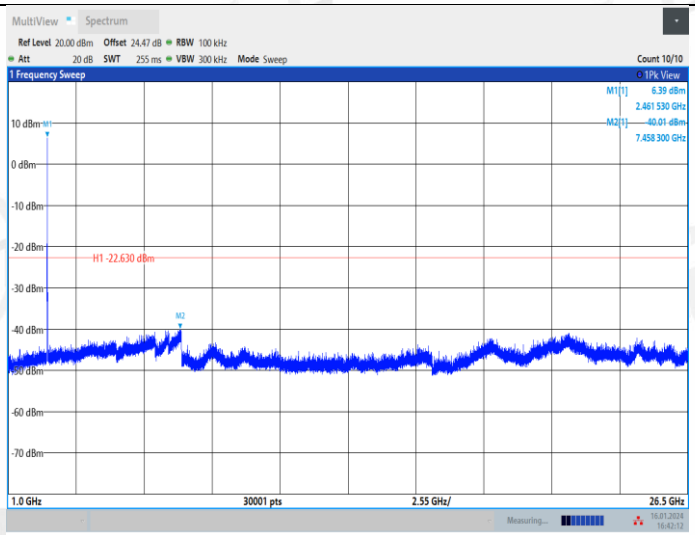

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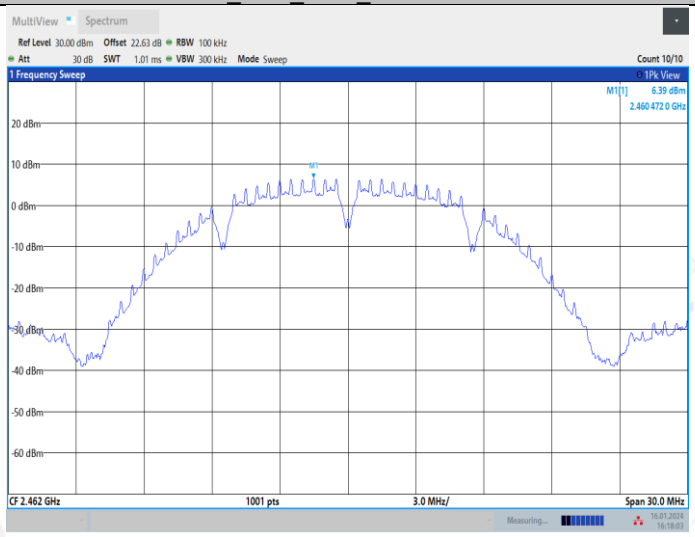

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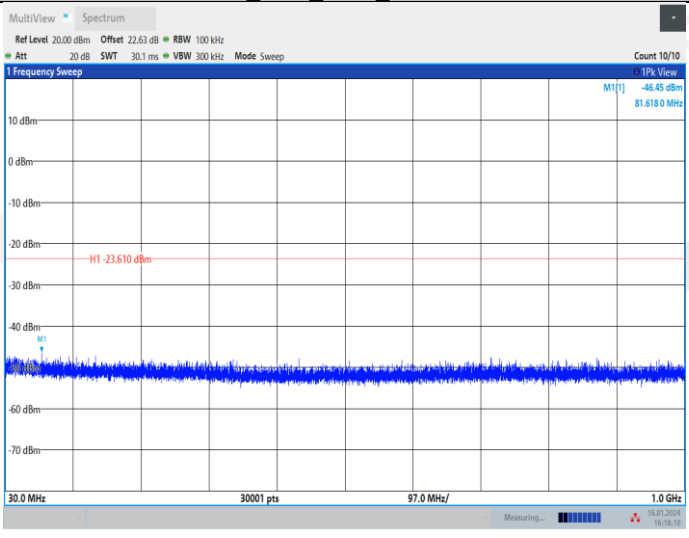

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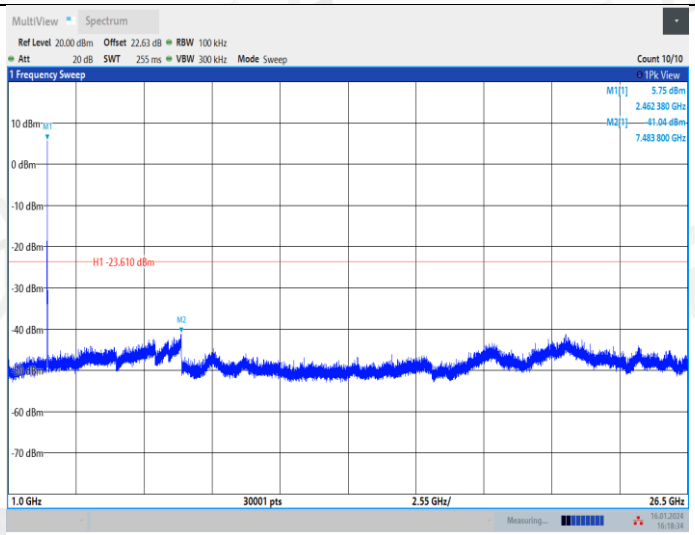

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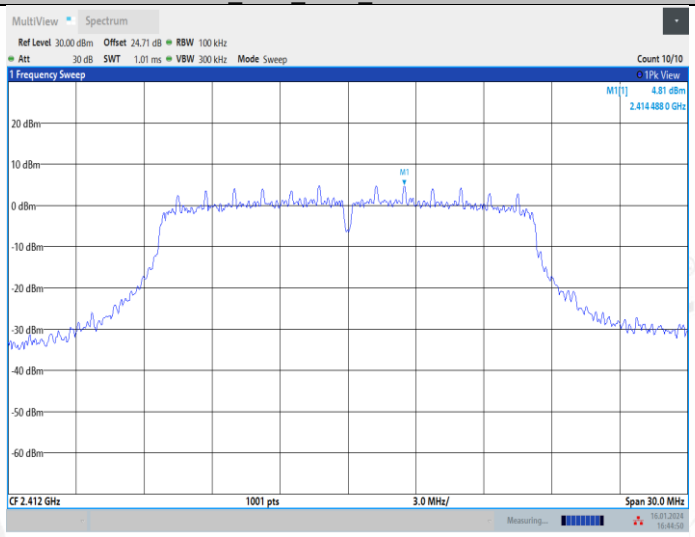

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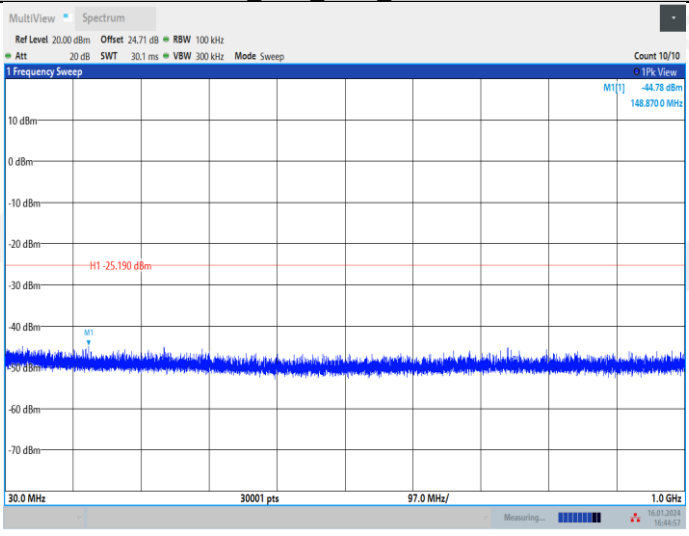

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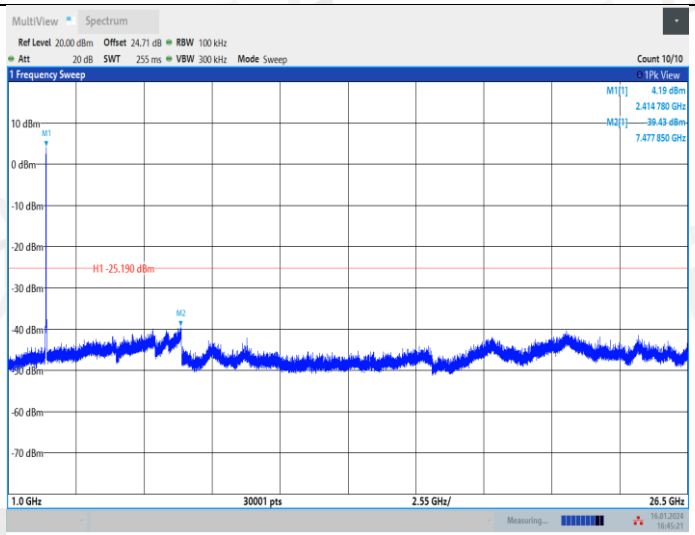

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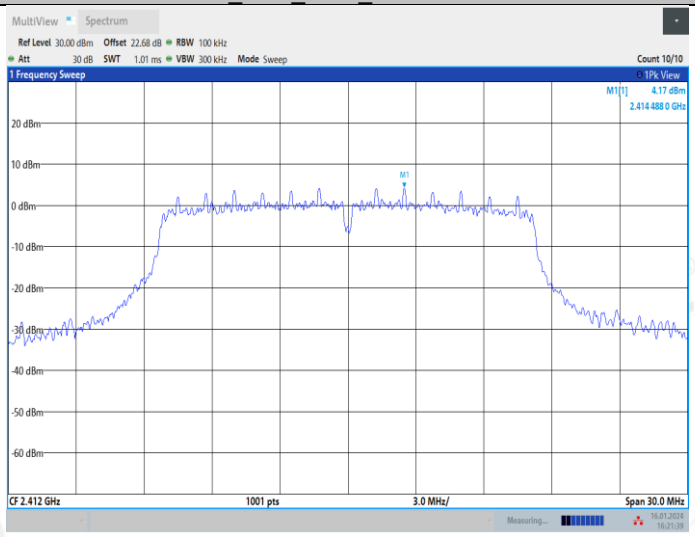

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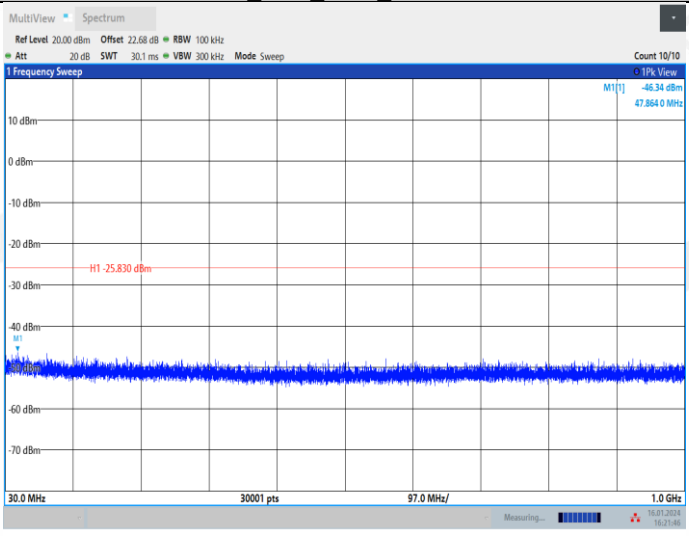

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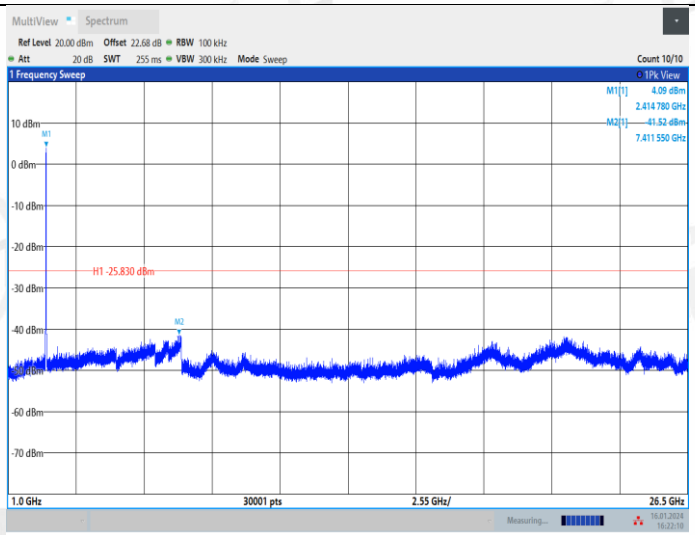

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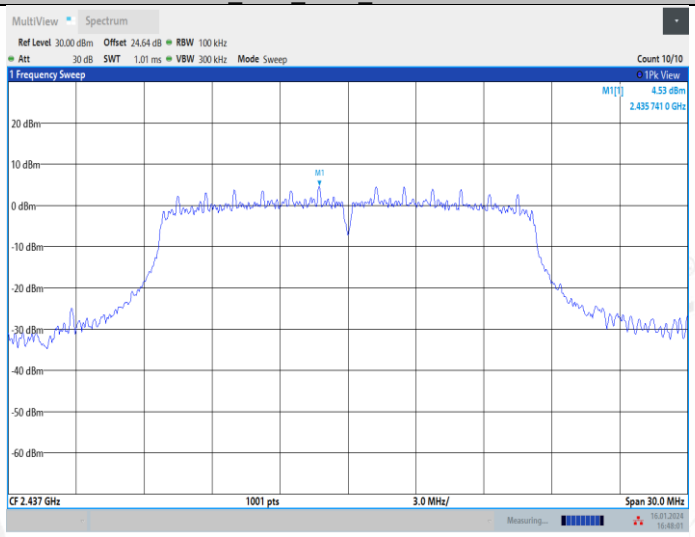

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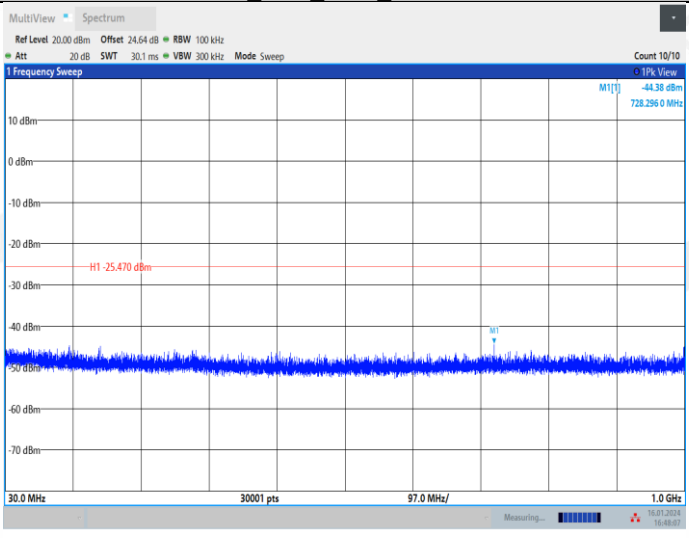

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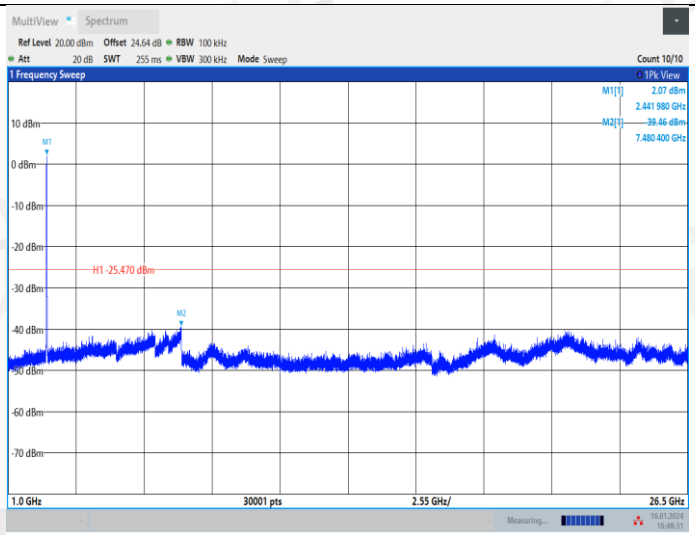

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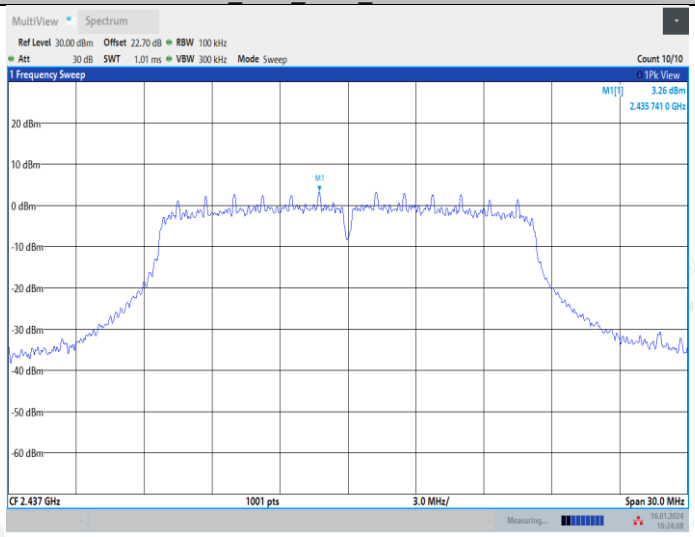
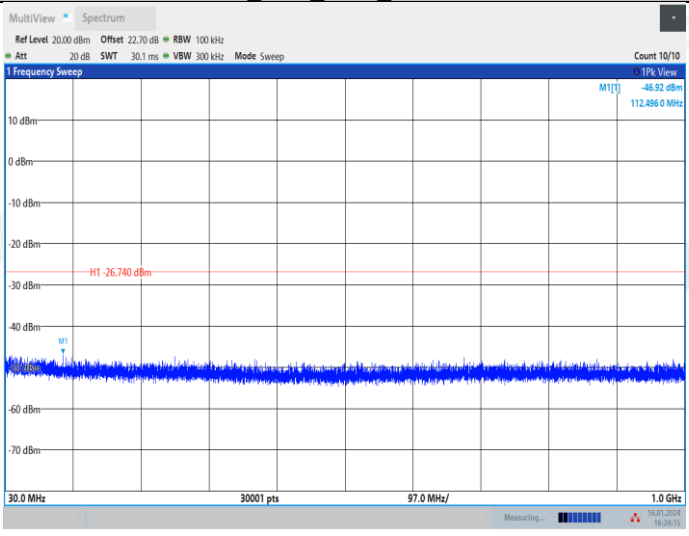


11G_Ant2_2437_30~1000



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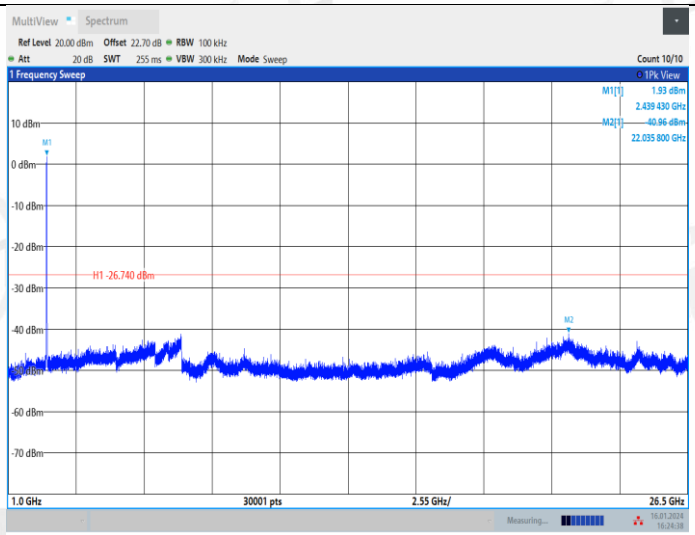
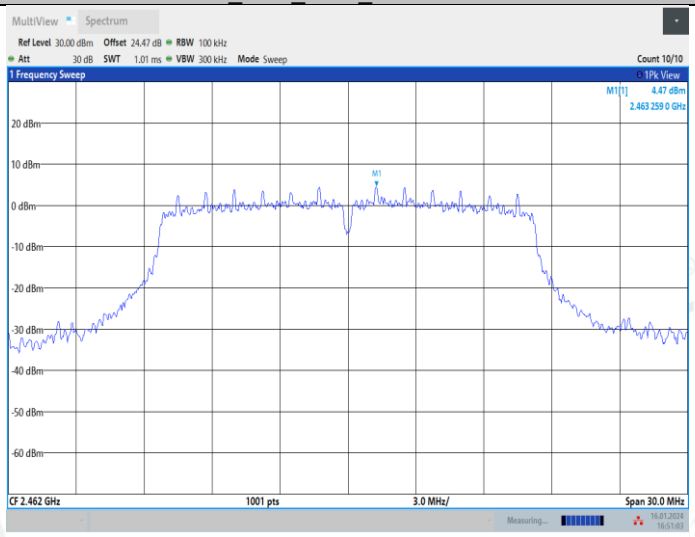


11G_Ant1_2462_0~Reference



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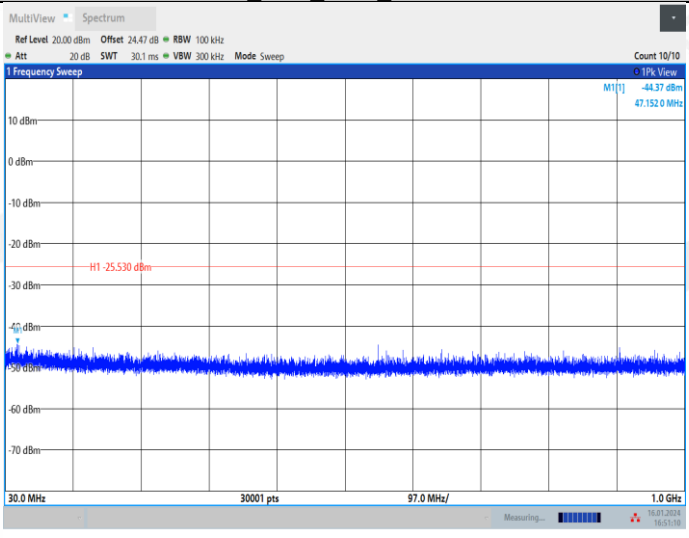

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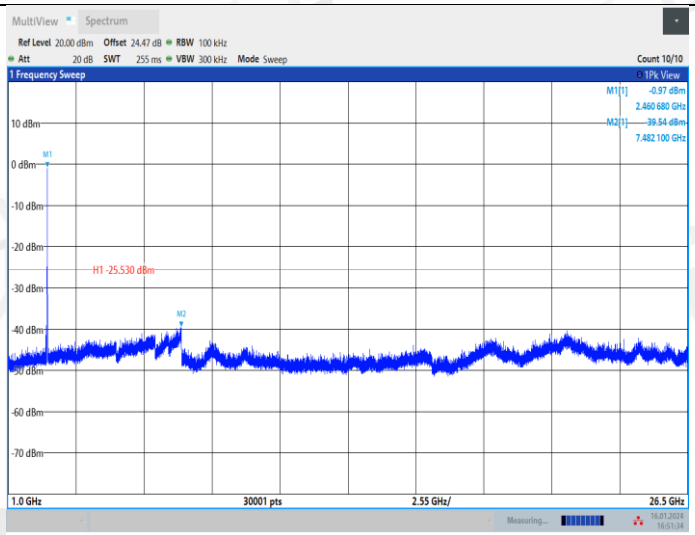

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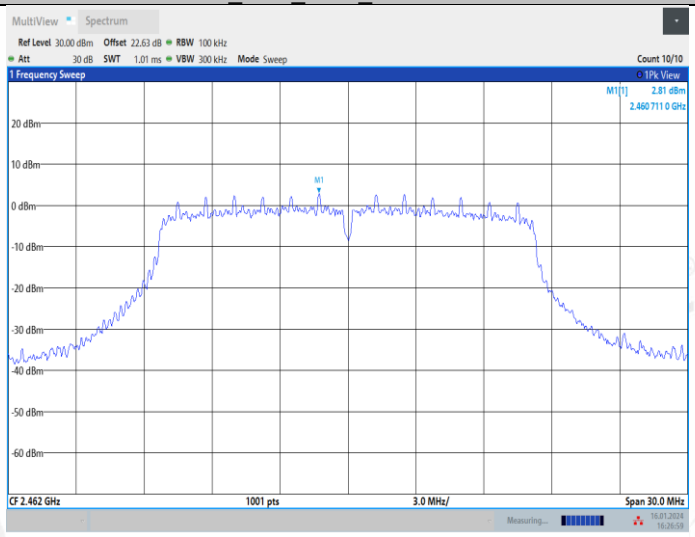

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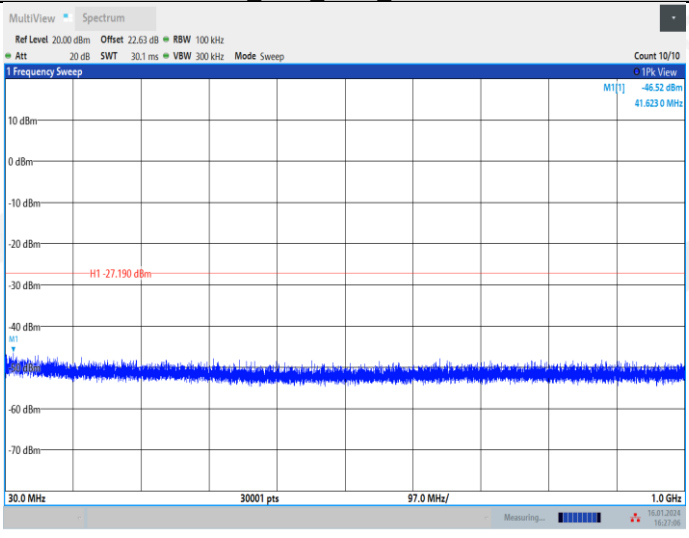

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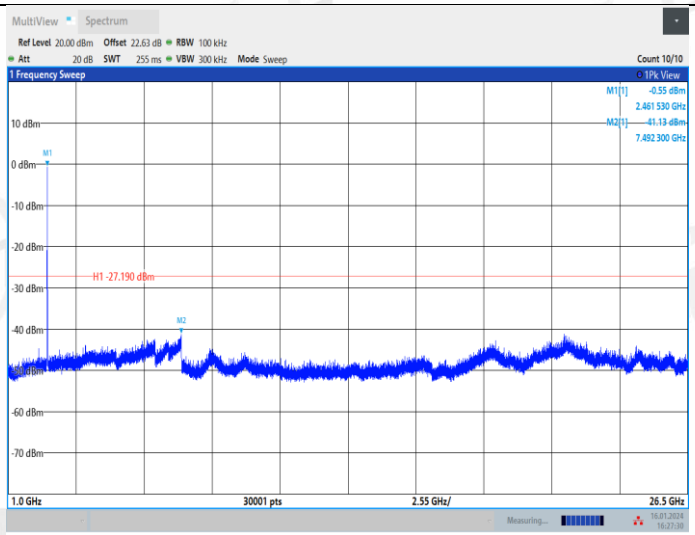
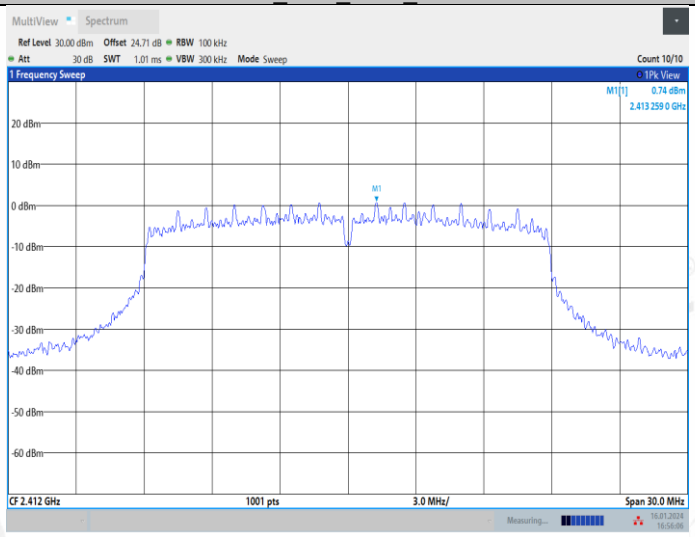


11N20MIMO_Ant1_2412_0~Reference



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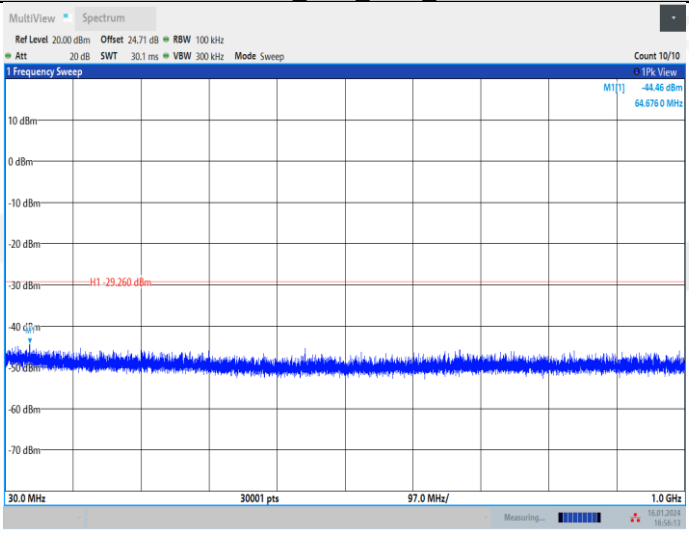

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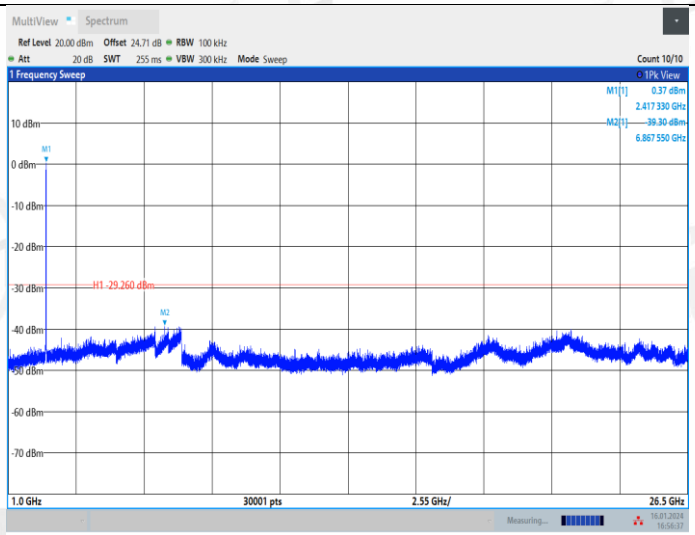

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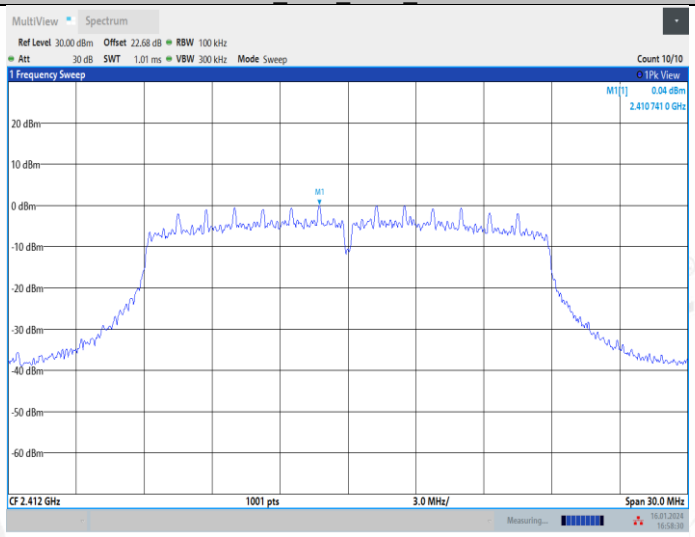

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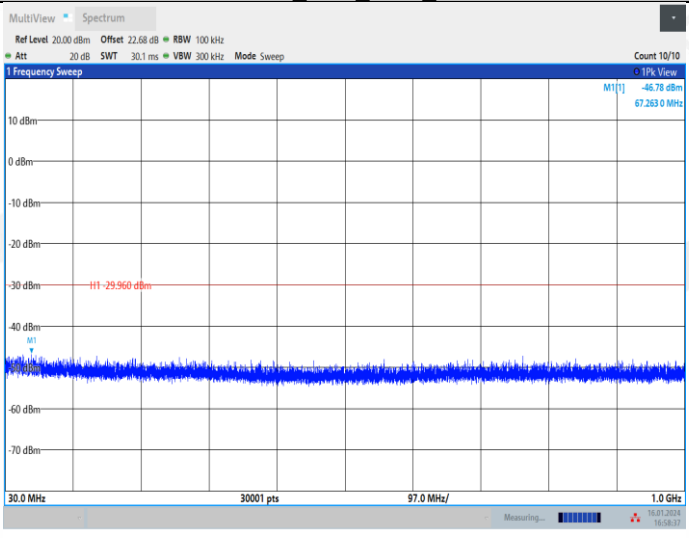

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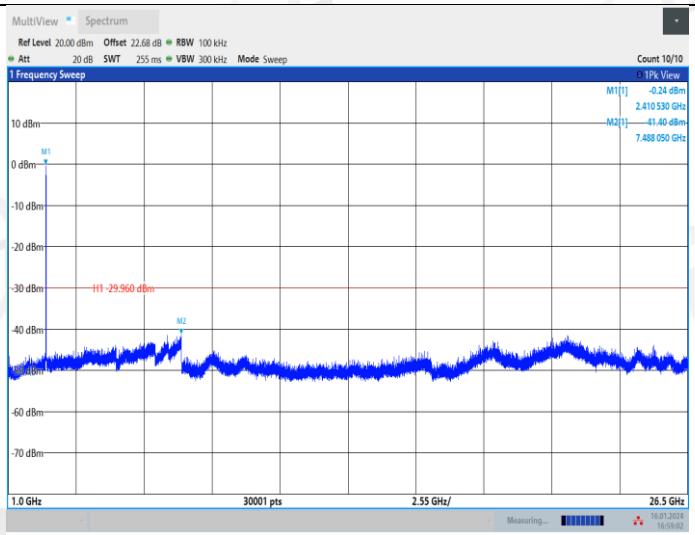
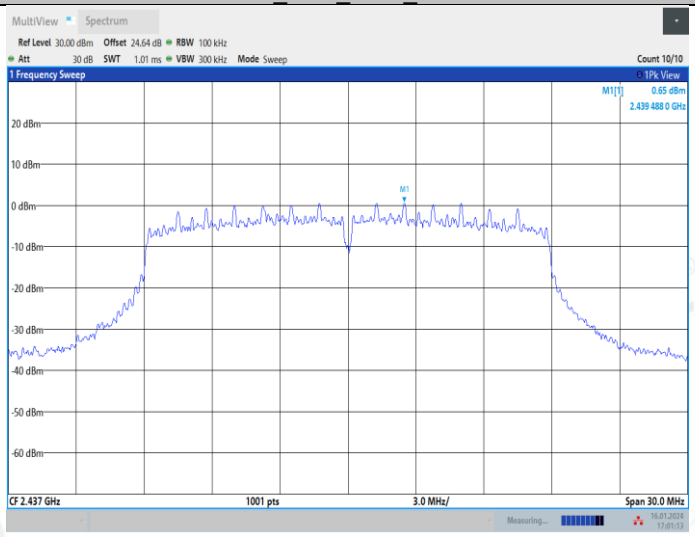


11N20MIMO_Ant1_2437_0~Reference



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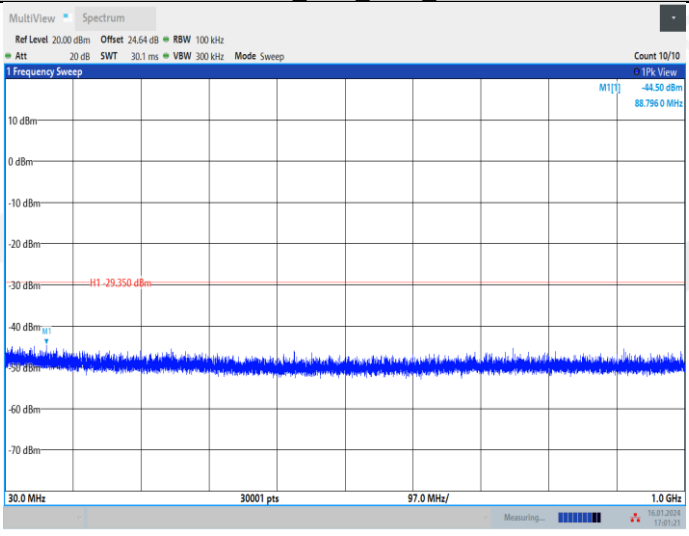

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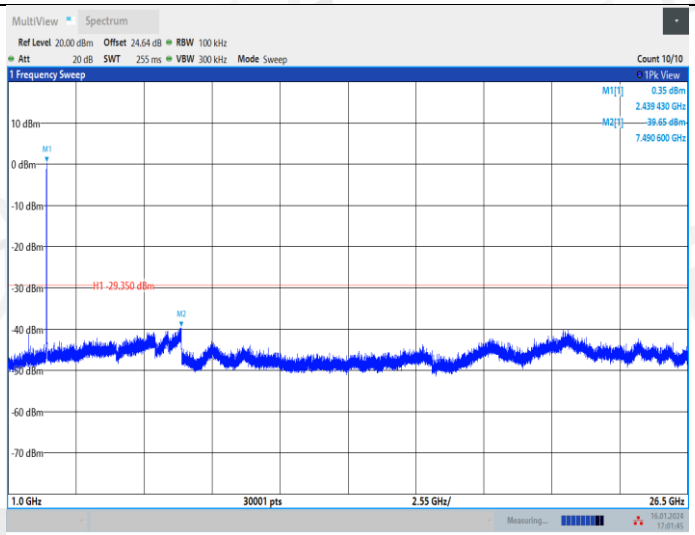

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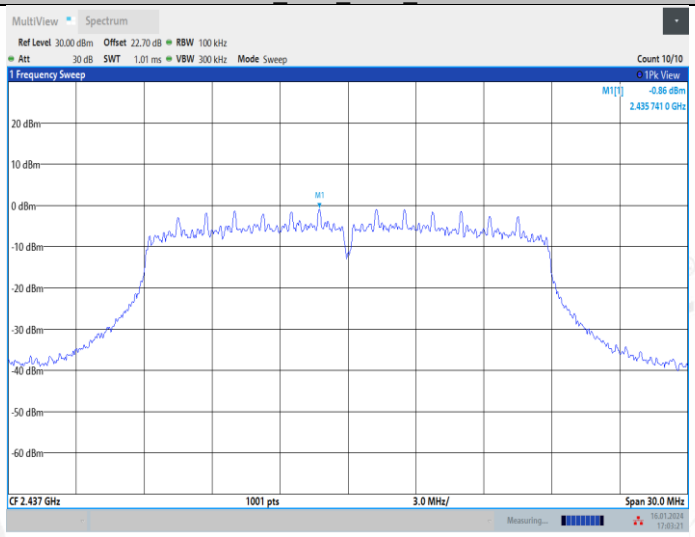
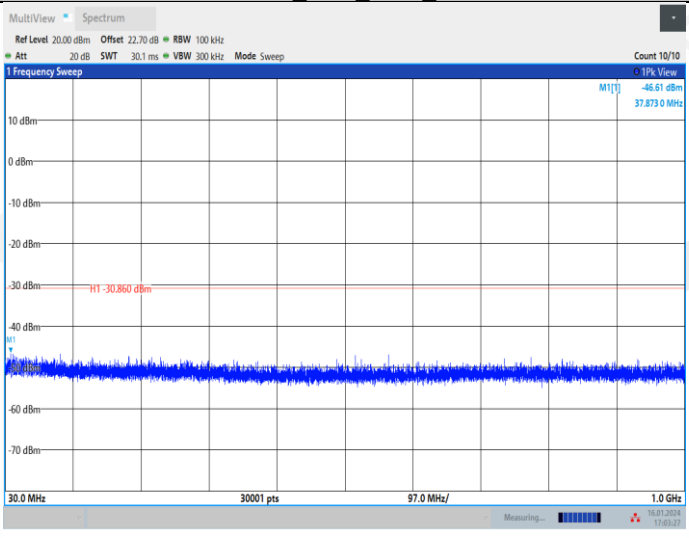


11N20MIMO_Ant2_2437_30~1000



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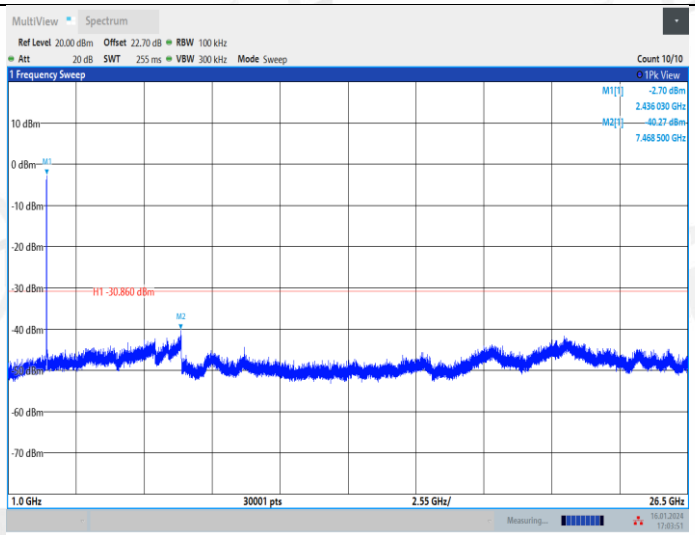

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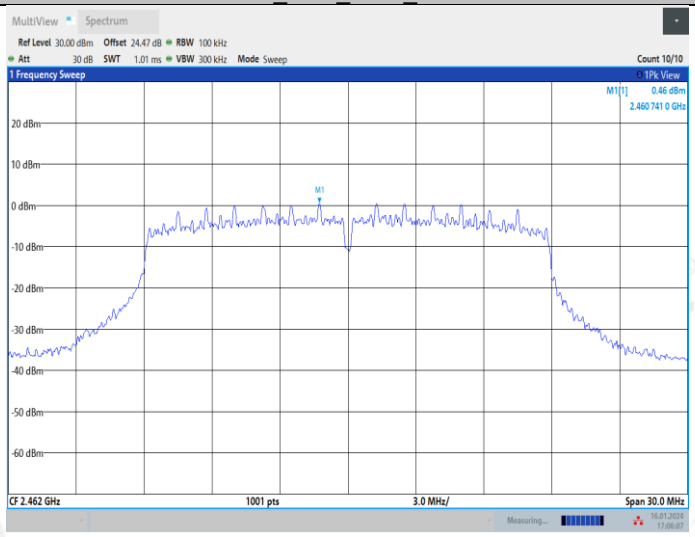

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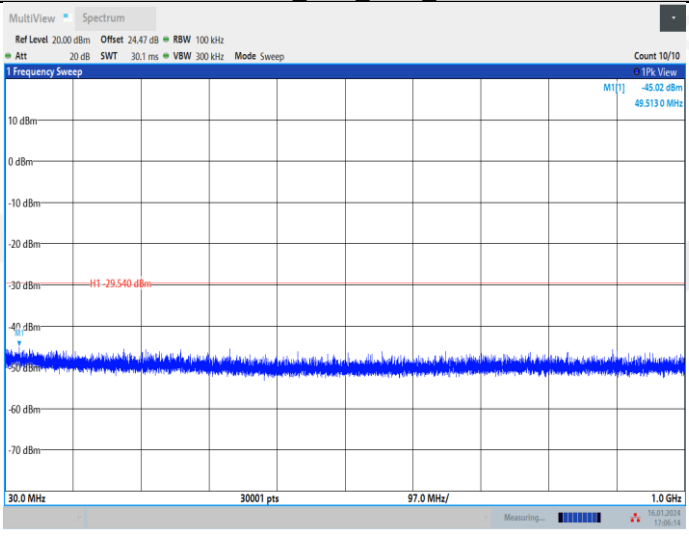

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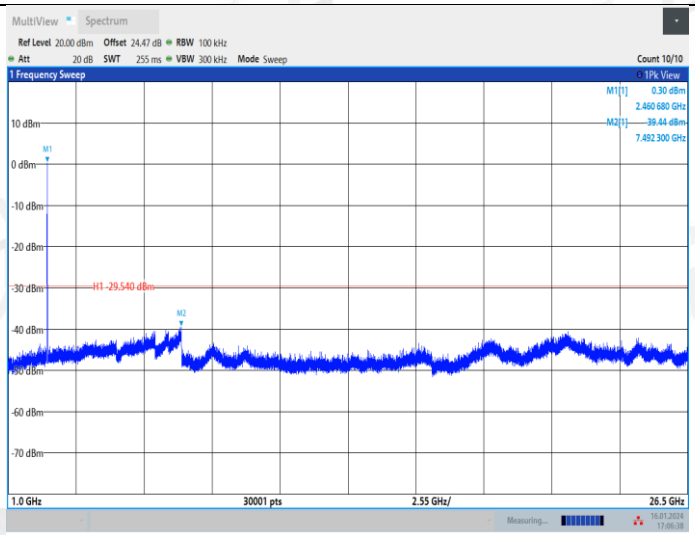

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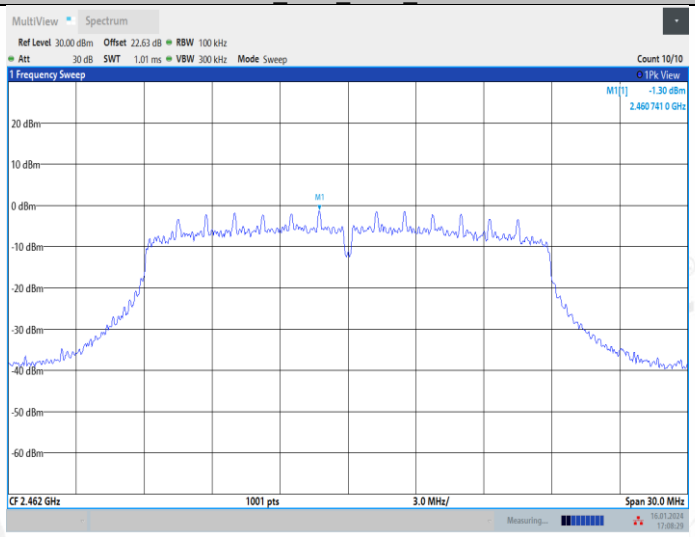

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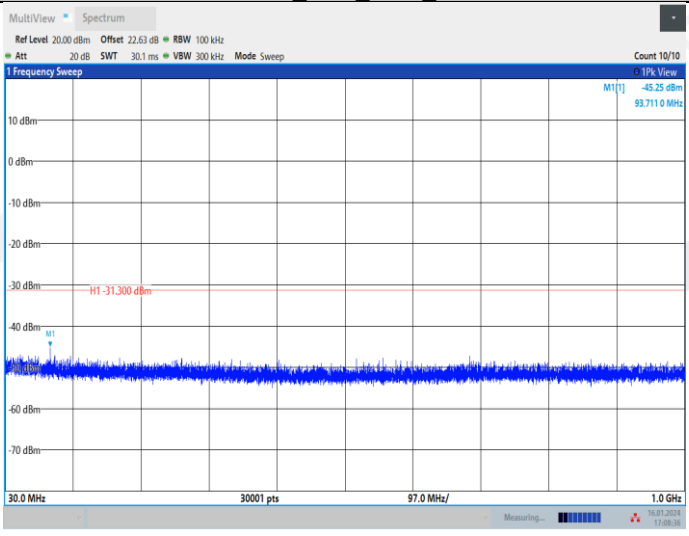

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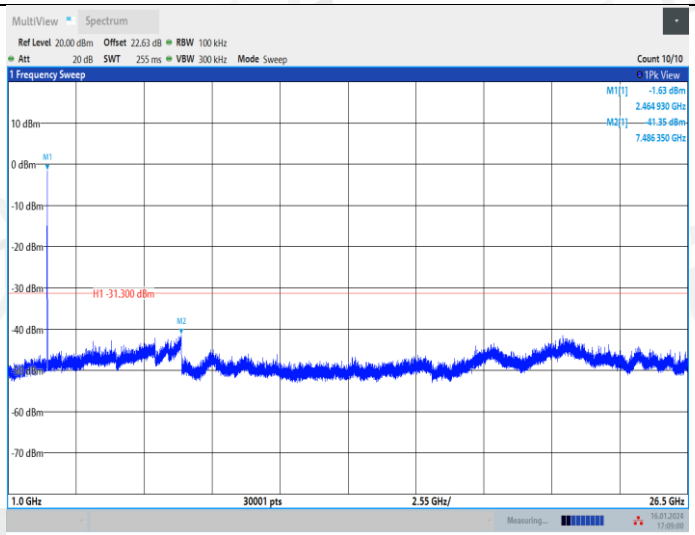

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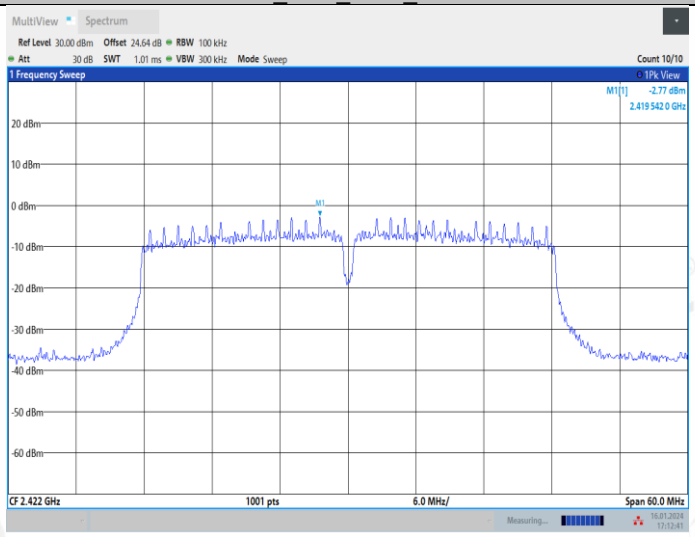

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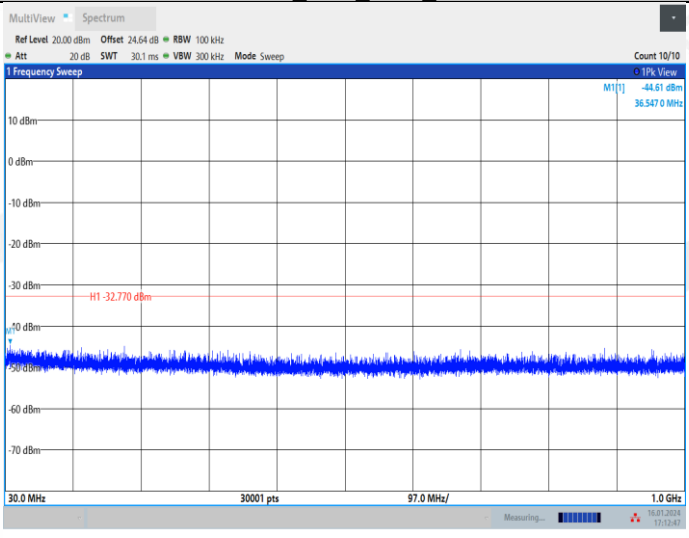

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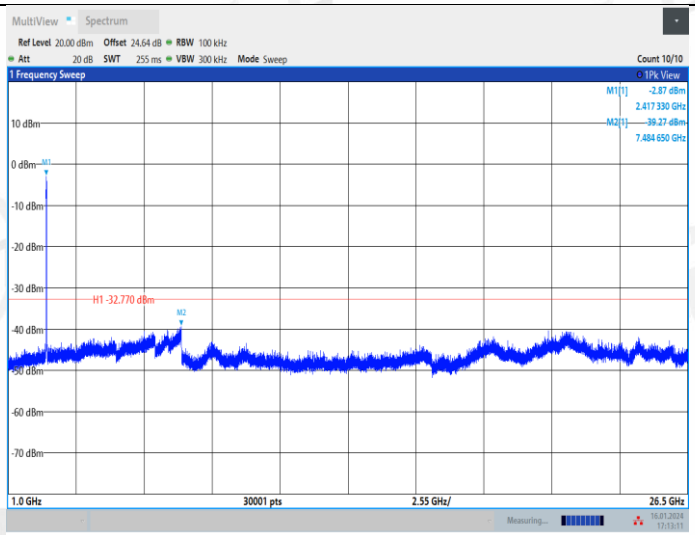

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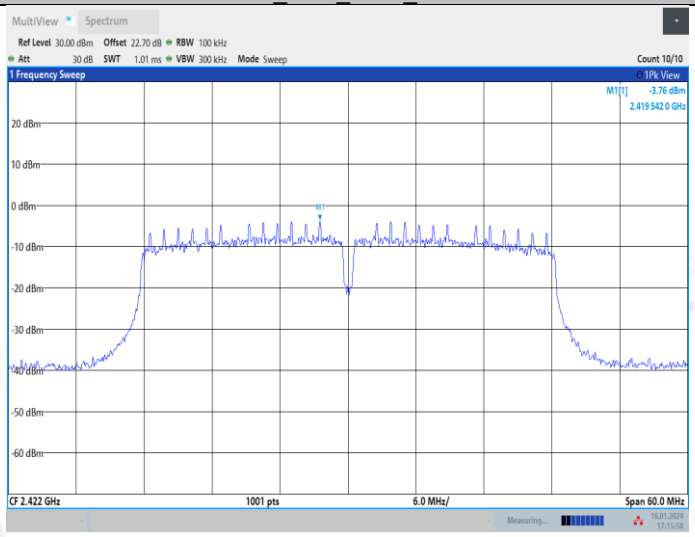

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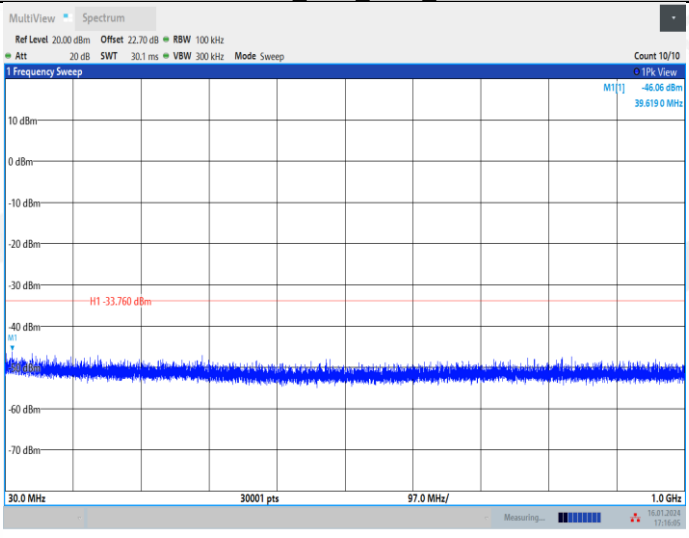

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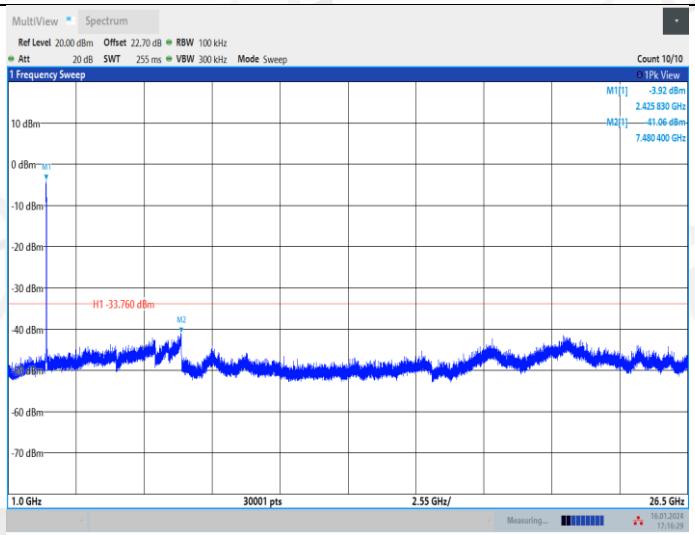

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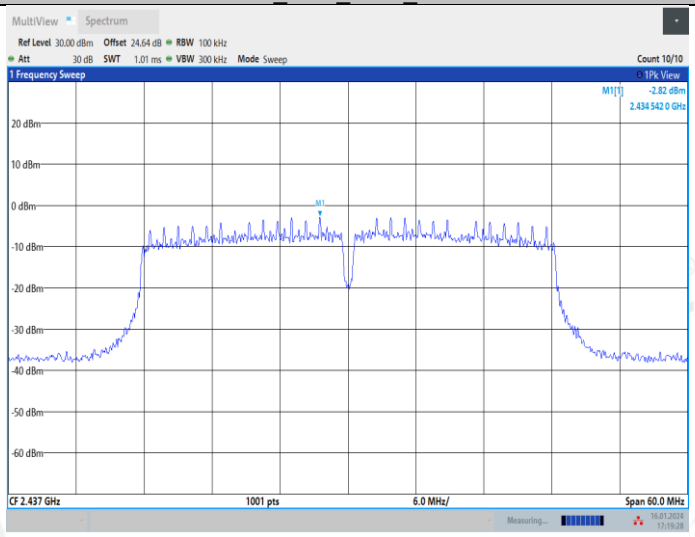

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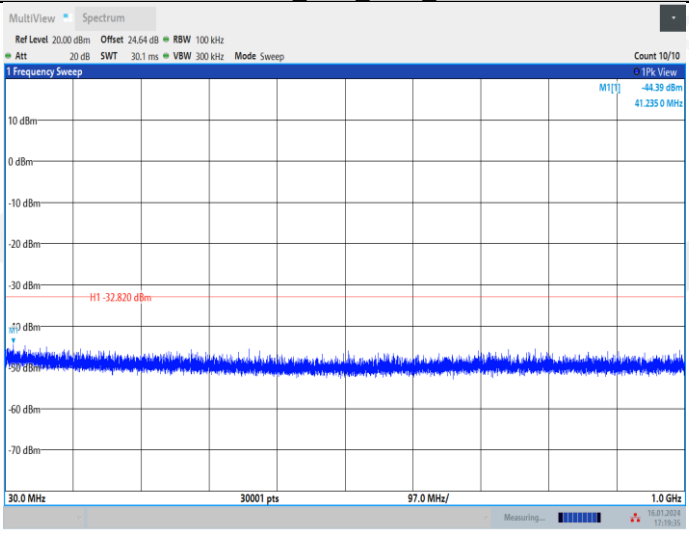

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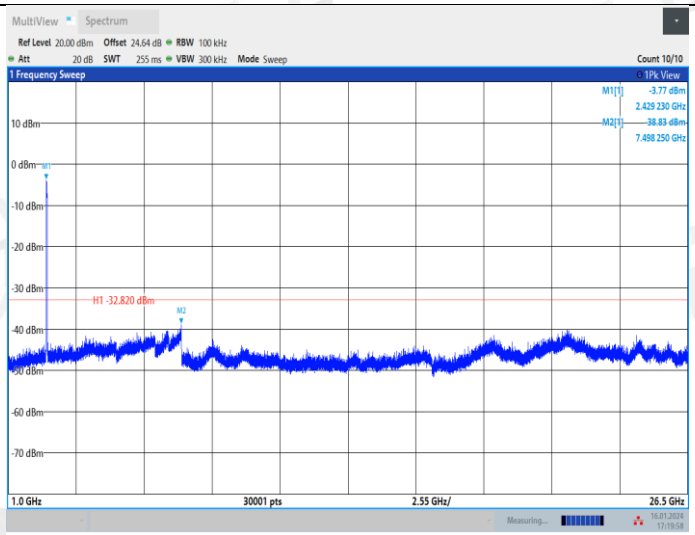

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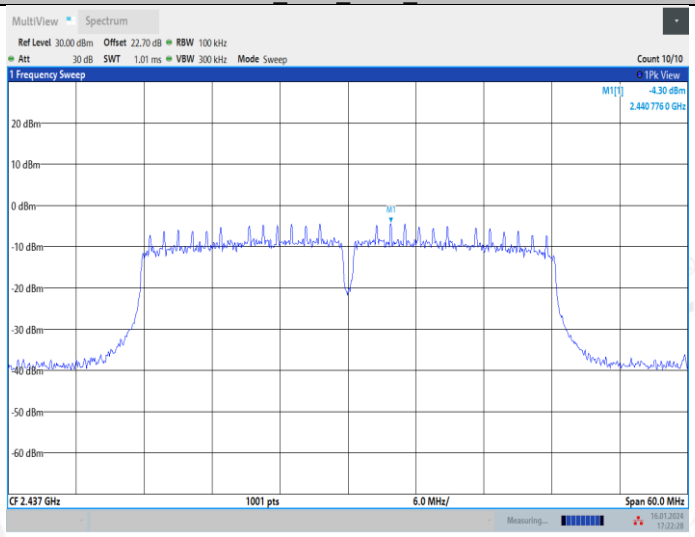
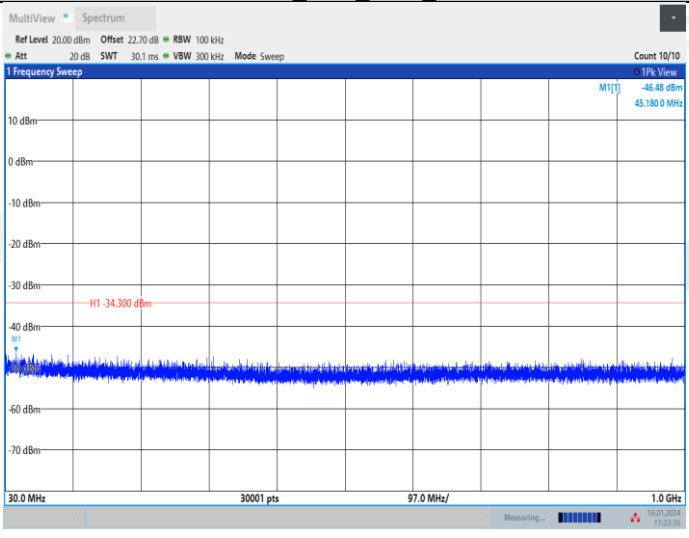


11N40MIMO_Ant2_2437_30~1000



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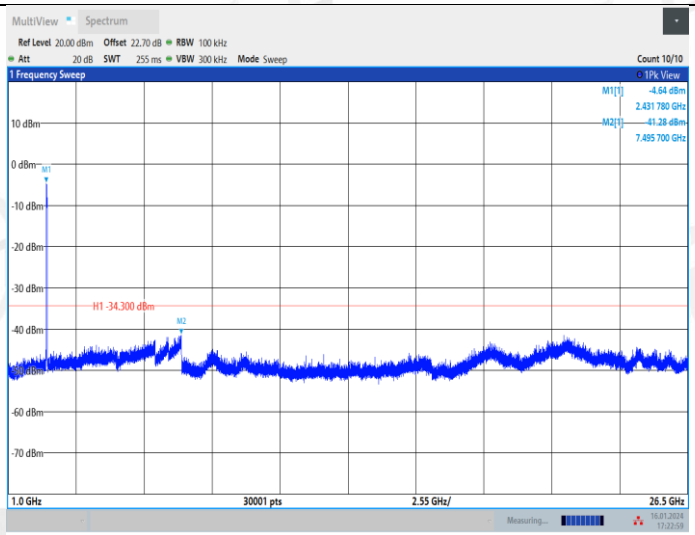

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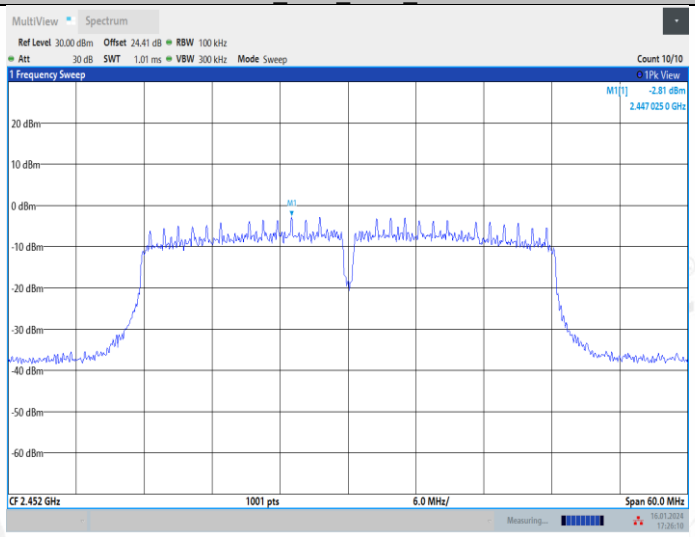

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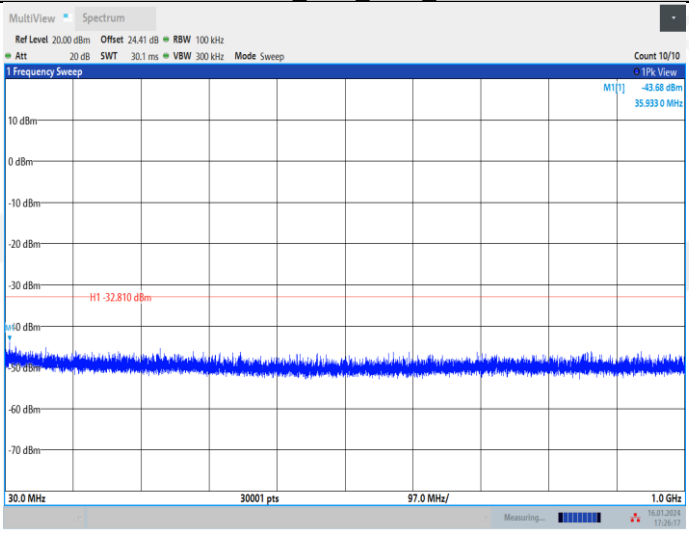

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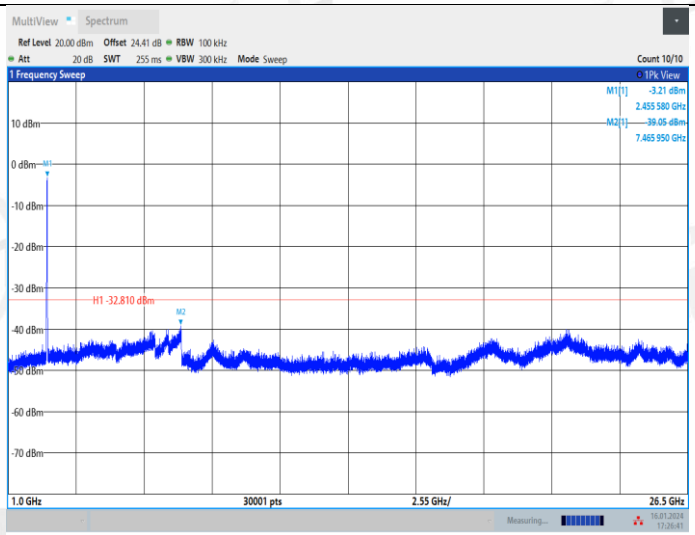

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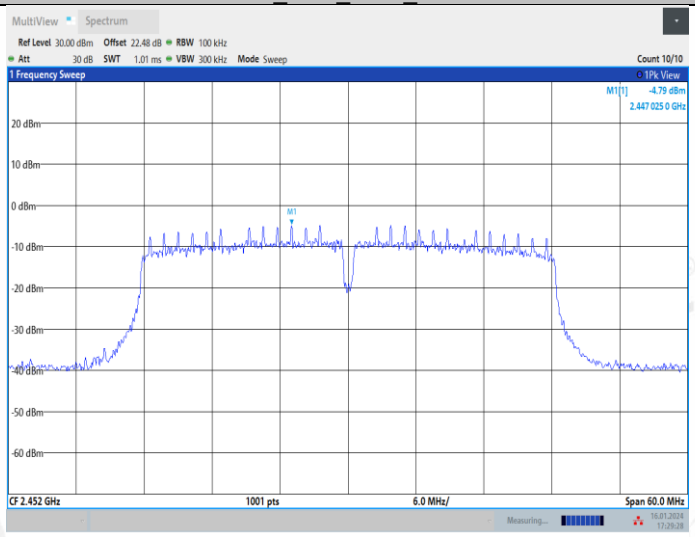

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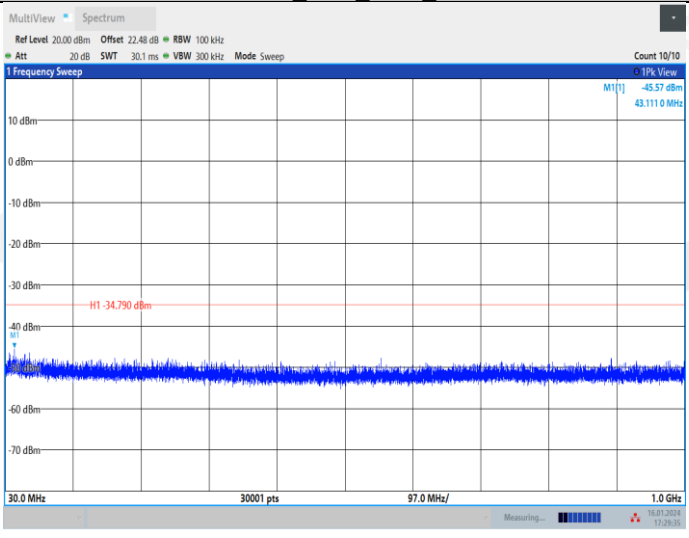
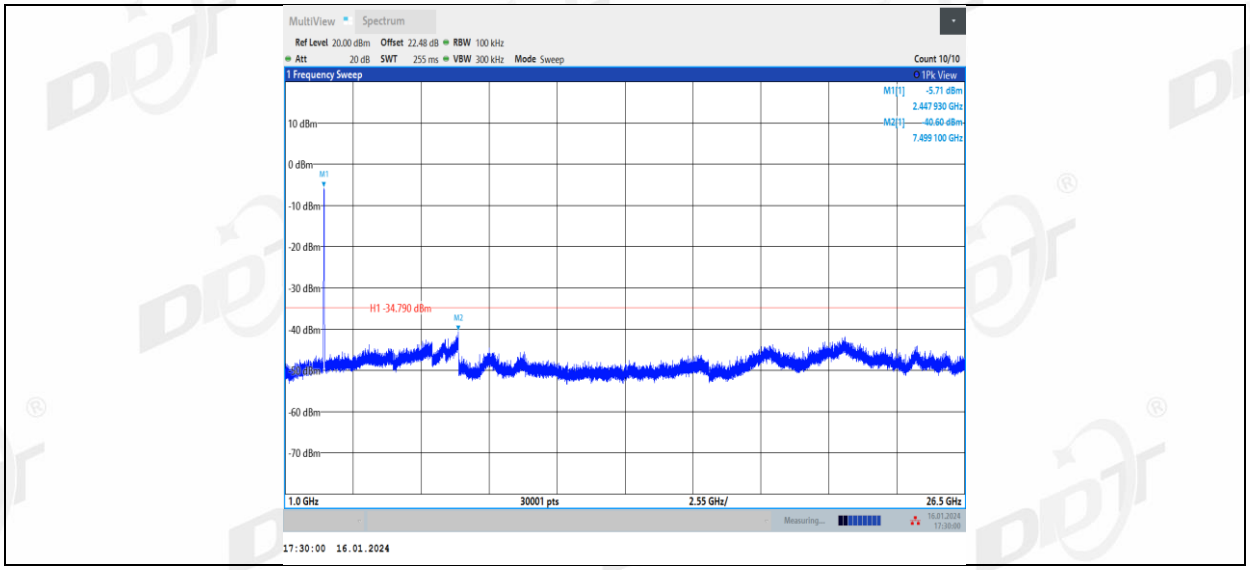


11N40MIMO_Ant2_2452_1000~26500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1 Frequency Sweep
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M1[1] -5.71 dBm
2.447 930 GHz
M2[1] 40.60 dBm
7.489 100 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
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H1 -34.790 dBm
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30001 pts
2.55 GHz/
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Measuring...
17:30:00 16.01.2024