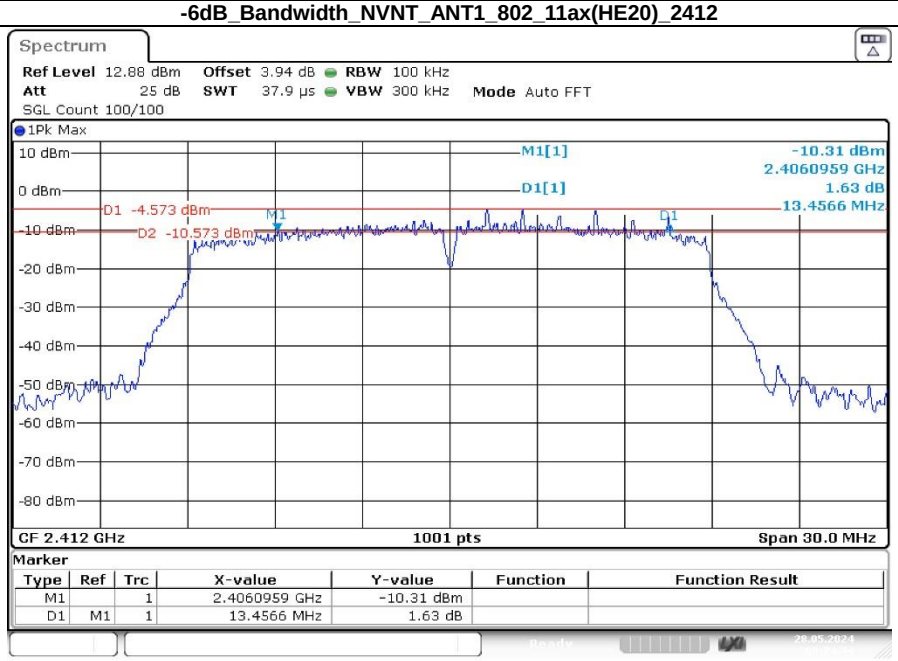
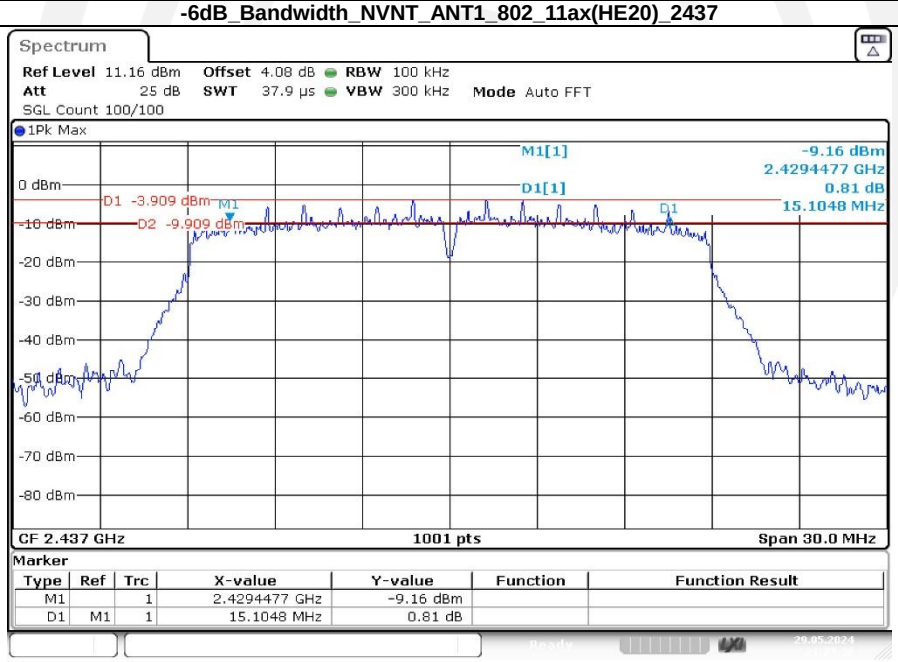
-6dB_Bandwidth_NVNT_ANT1_802_11ax(HE20)_2412



Date: 28.MAY.2024 09:24:44

-6dB_Bandwidth_NVNT_ANT1_802_11ax(HE20)_2437



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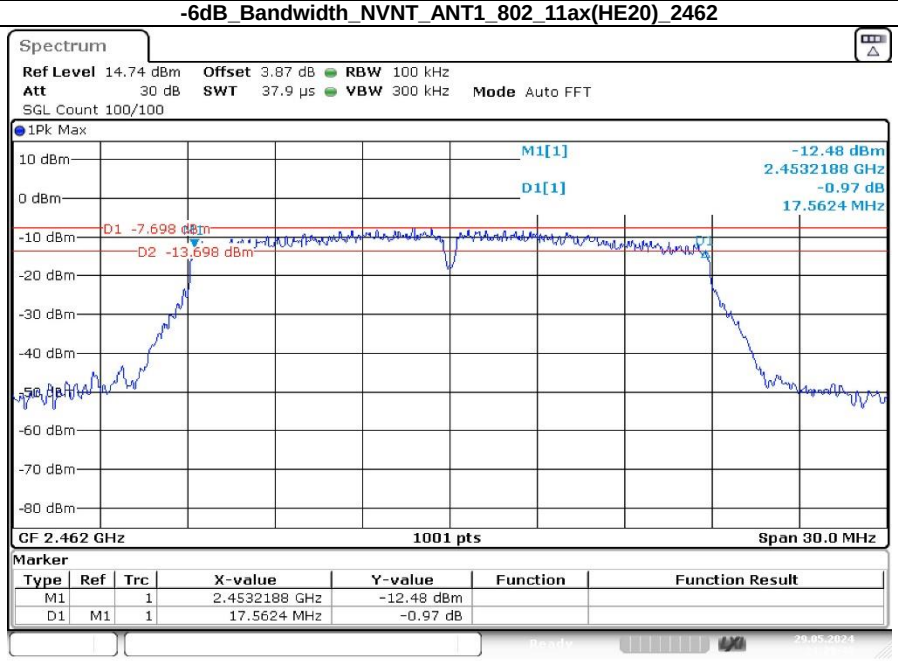
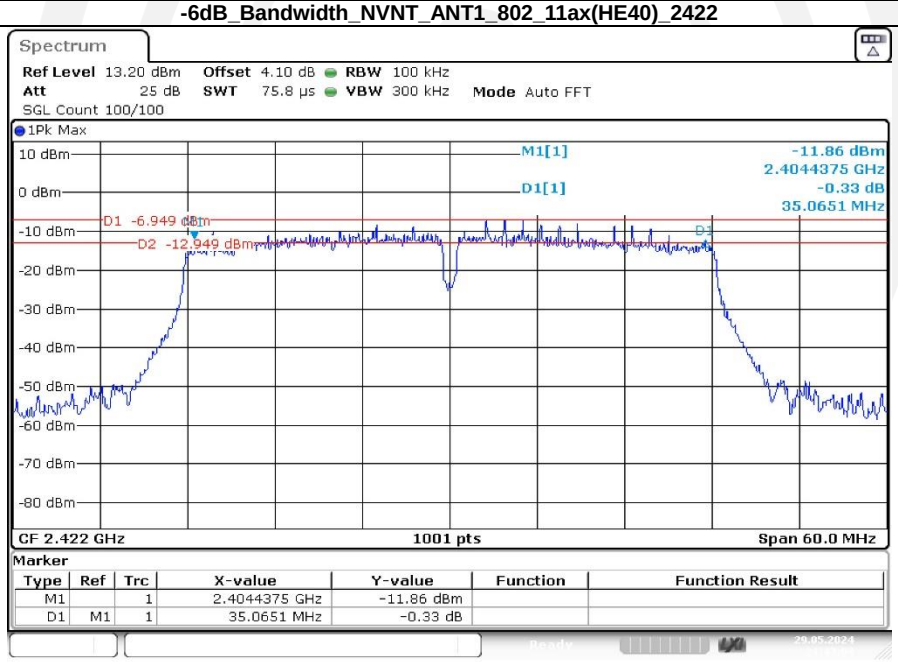
-6dB_Bandwidth_NVNT_ANT1_802_11ax(HE20)_2462



Date: 29.MAY.2024 21:29:48

-6dB_Bandwidth_NVNT_ANT1_802_11ax(HE40)_2422



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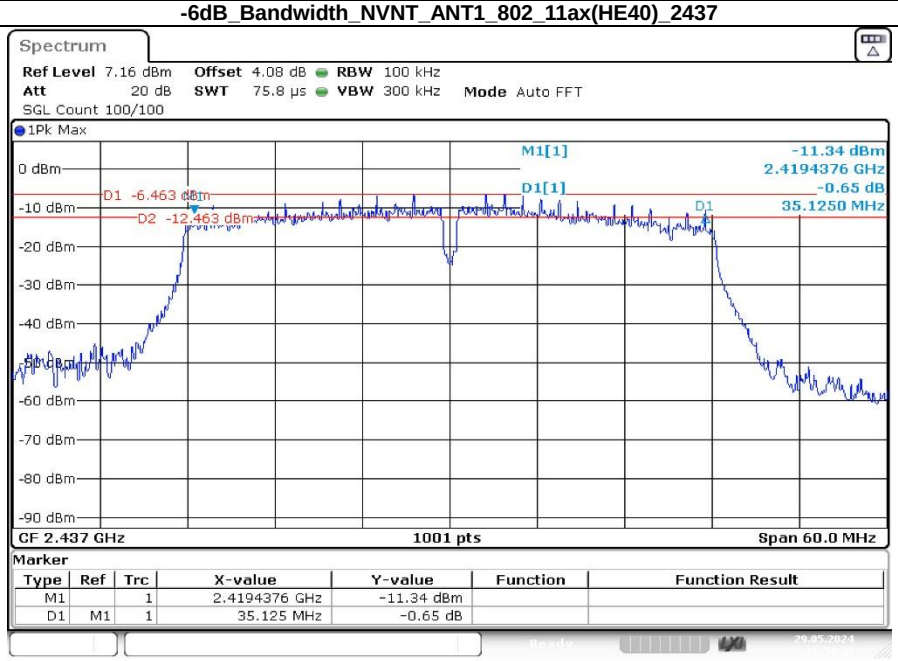

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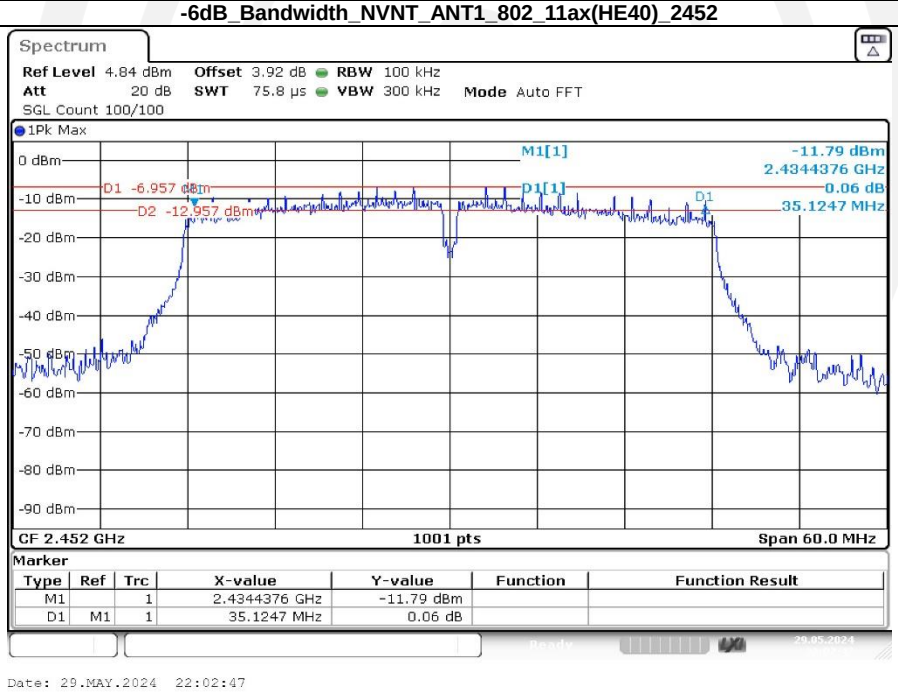
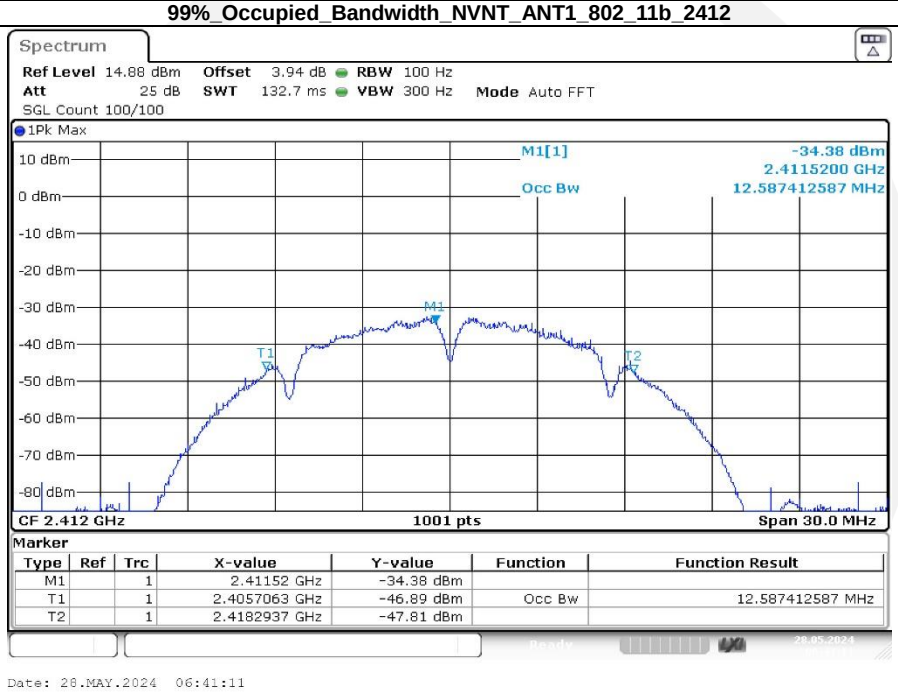
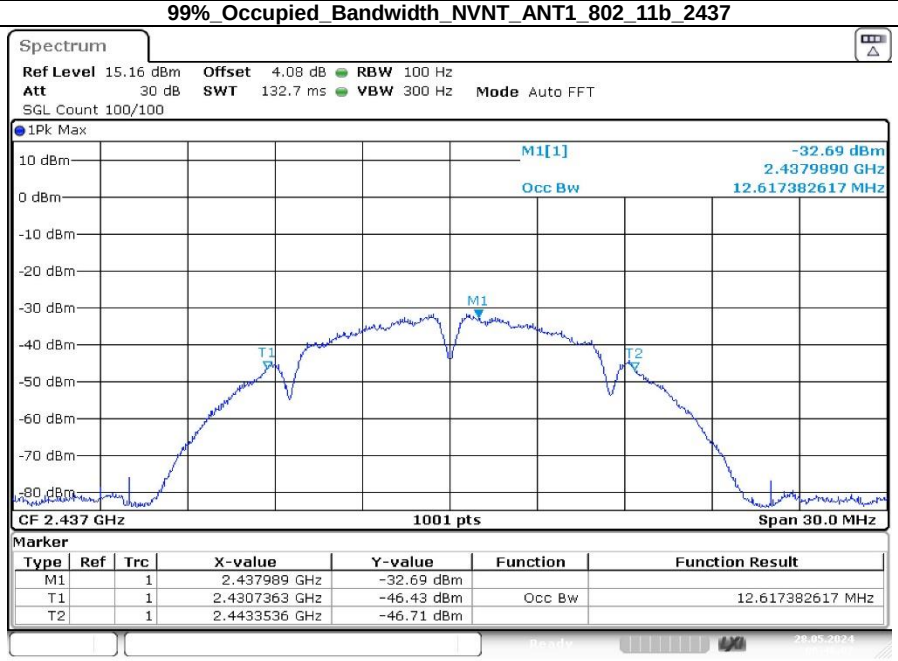


Condition	Antenna	Modulation	Frequency (MHz)	99%%BW(MHz)
NVNT	ANT1	802.11b	2412.00	12.587
NVNT	ANT1	802.11b	2437.00	12.617
NVNT	ANT1	802.11b	2462.00	12.647
NVNT	ANT1	802.11g	2412.00	16.274
NVNT	ANT1	802.11g	2437.00	16.304
NVNT	ANT1	802.11g	2462.00	16.304
NVNT	ANT1	802.11n(HT20)	2412.00	17.502
NVNT	ANT1	802.11n(HT20)	2437.00	17.502
NVNT	ANT1	802.11n(HT20)	2462.00	17.532
NVNT	ANT1	802.11n(HT40)	2422.00	35.844
NVNT	ANT1	802.11n(HT40)	2437.00	35.724
NVNT	ANT1	802.11n(HT40)	2452.00	35.724
NVNT	ANT1	802.11ax(HE20)	2412.00	17.502
NVNT	ANT1	802.11ax(HE20)	2437.00	17.502
NVNT	ANT1	802.11ax(HE20)	2462.00	17.502
NVNT	ANT1	802.11ax(HE40)	2422.00	35.784
NVNT	ANT1	802.11ax(HE40)	2437.00	35.724
NVNT	ANT1	802.11ax(HE40)	2452.00	35.784

99%_Occupied_Bandwidth_NVNT_ANT1_802_11b_2412



99%_Occupied_Bandwidth_NVNT_ANT1_802_11b_2437



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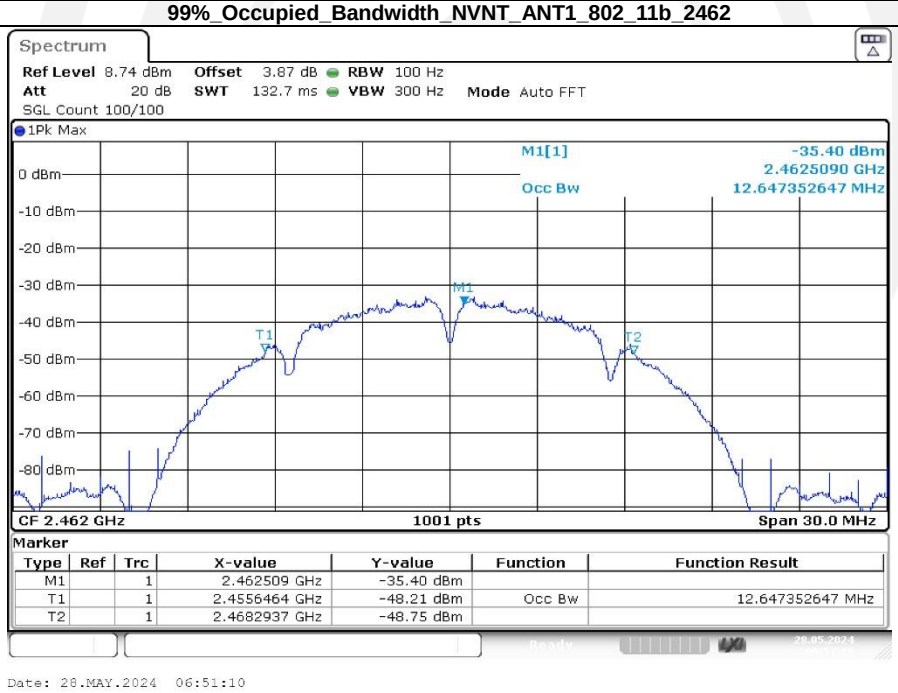

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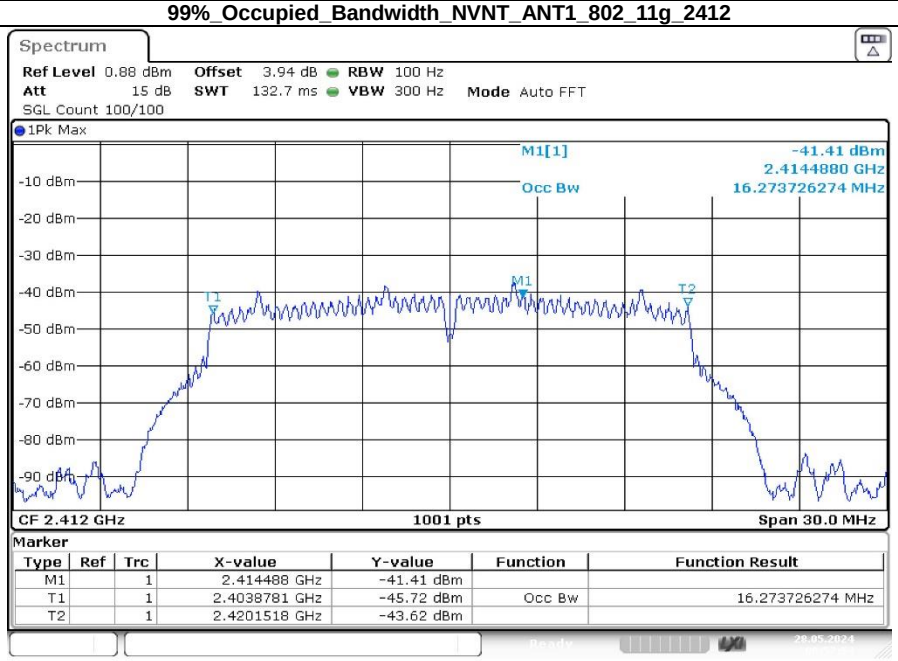
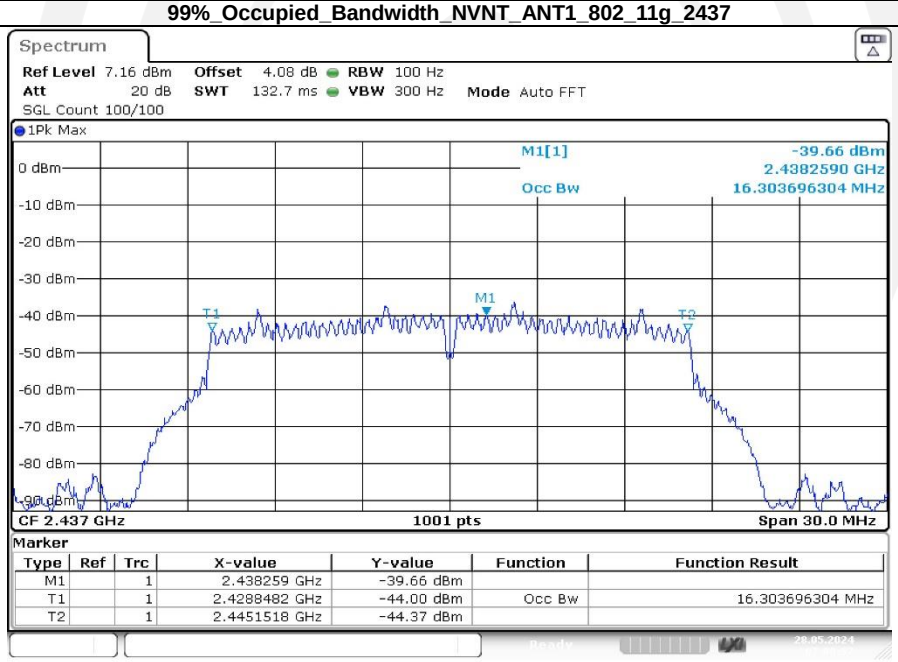


Date: 28.MAY.2024 06:57:54

99%_Occupied_Bandwidth_NVNT_ANT1_802_11g_2437



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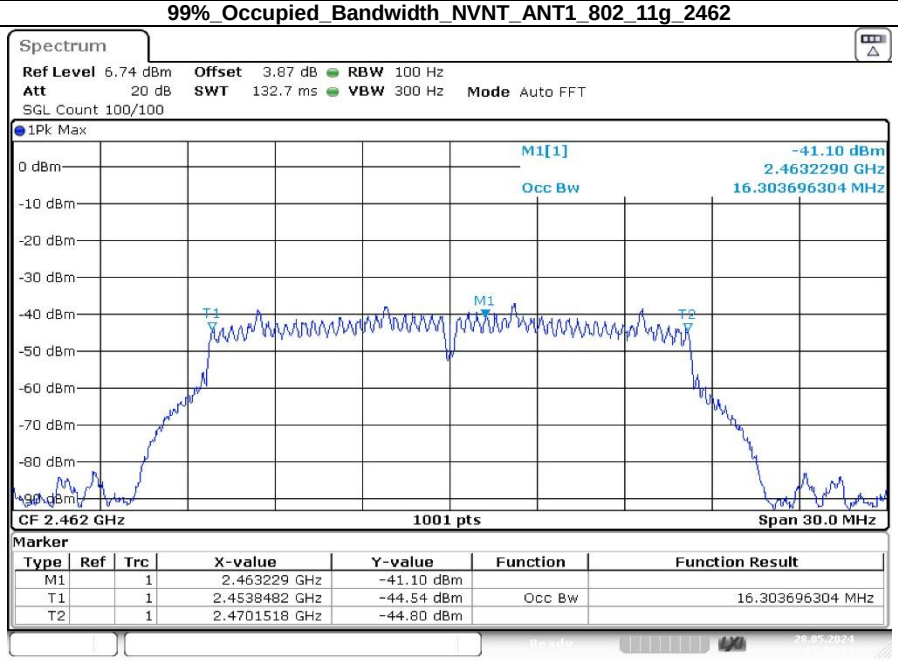
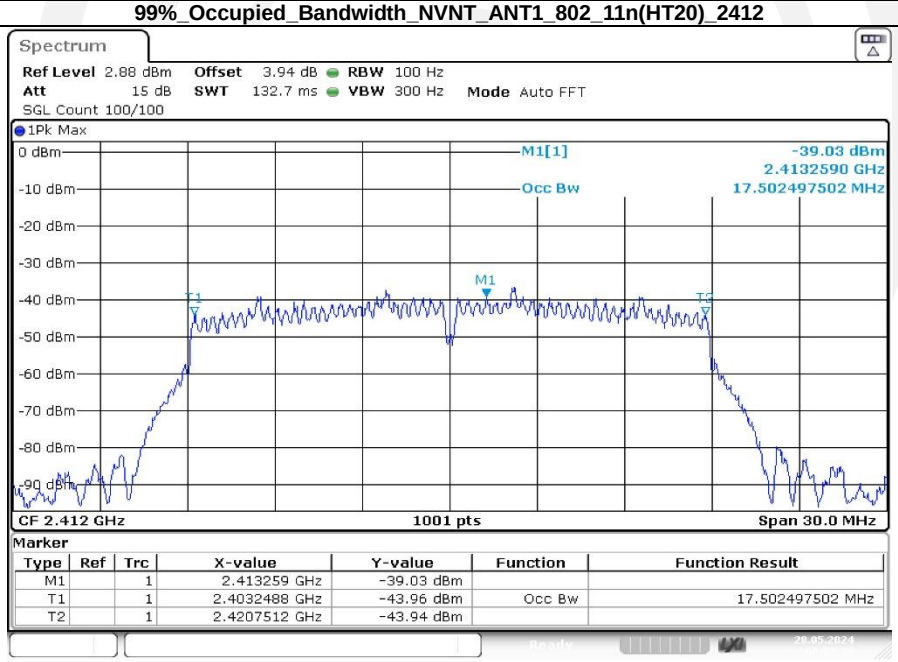


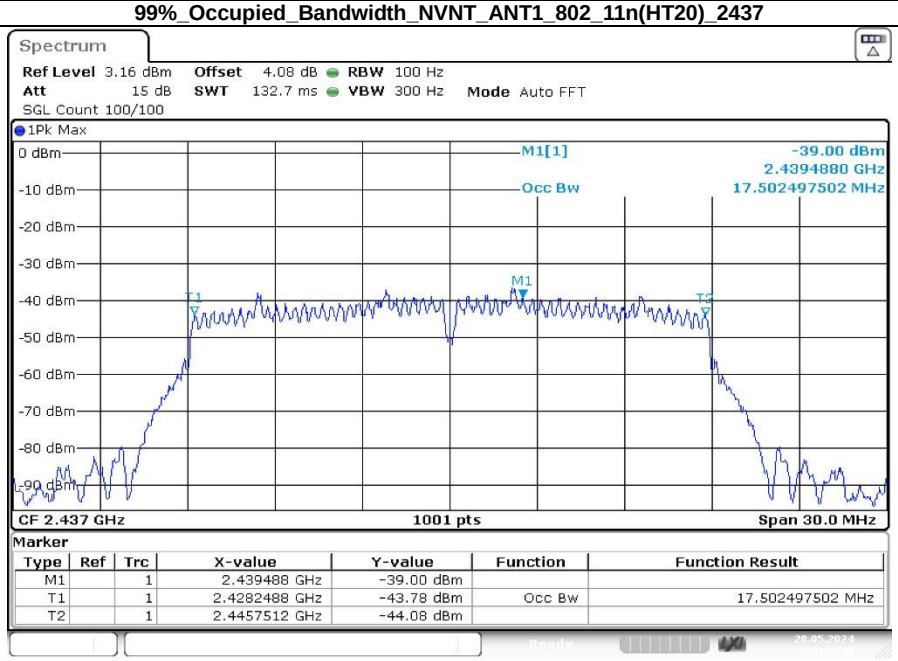
Date: 28.MAY.2024 07:28:12

99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT20)_2412



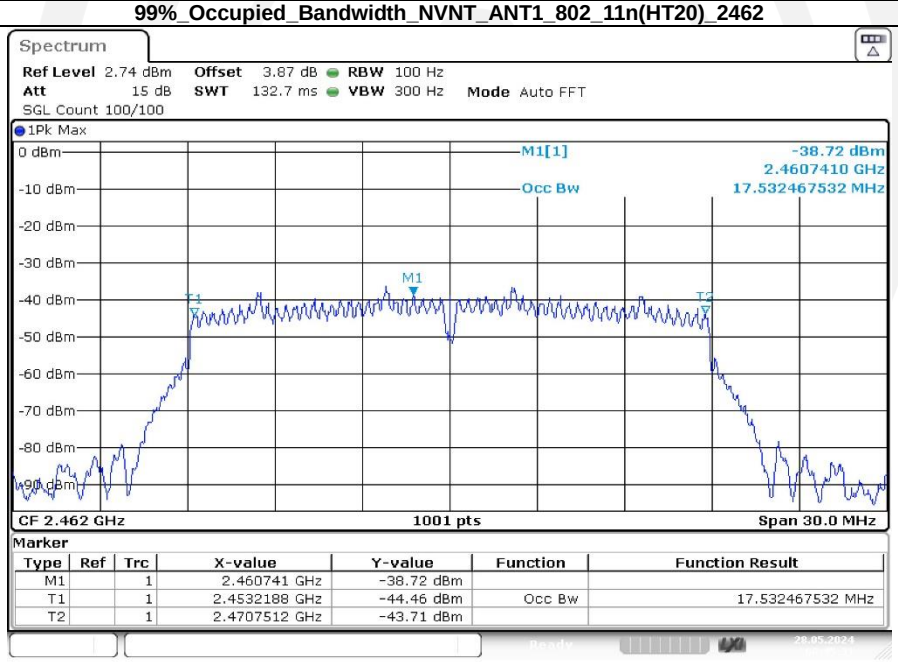
Date: 28.MAY.2024 08:02:37

99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT20)_2437



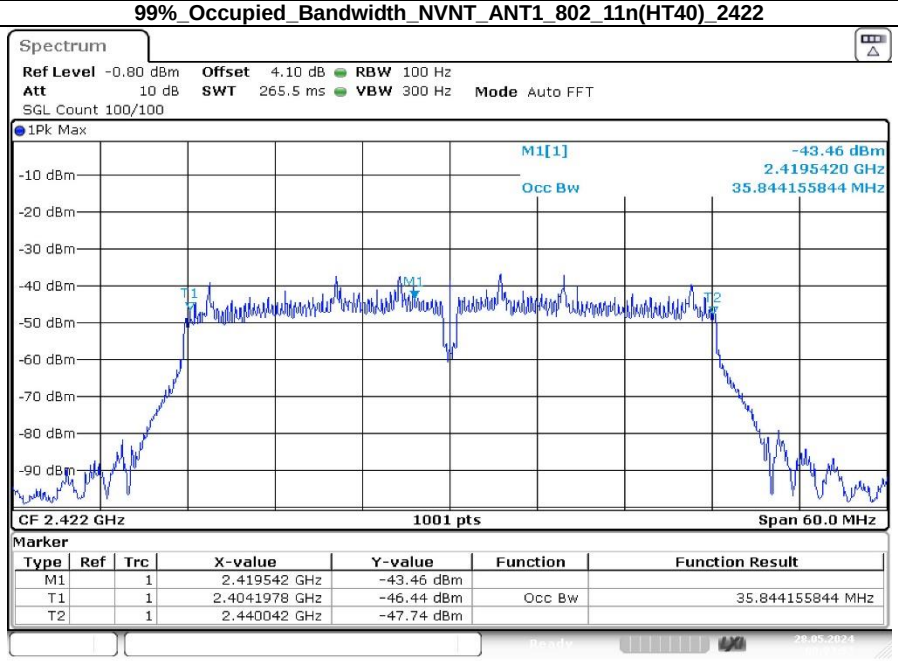
Date: 28.MAY.2024 08:41:40

99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT20)_2462



Date: 28.MAY.2024 08:45:30

99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT40)_2422



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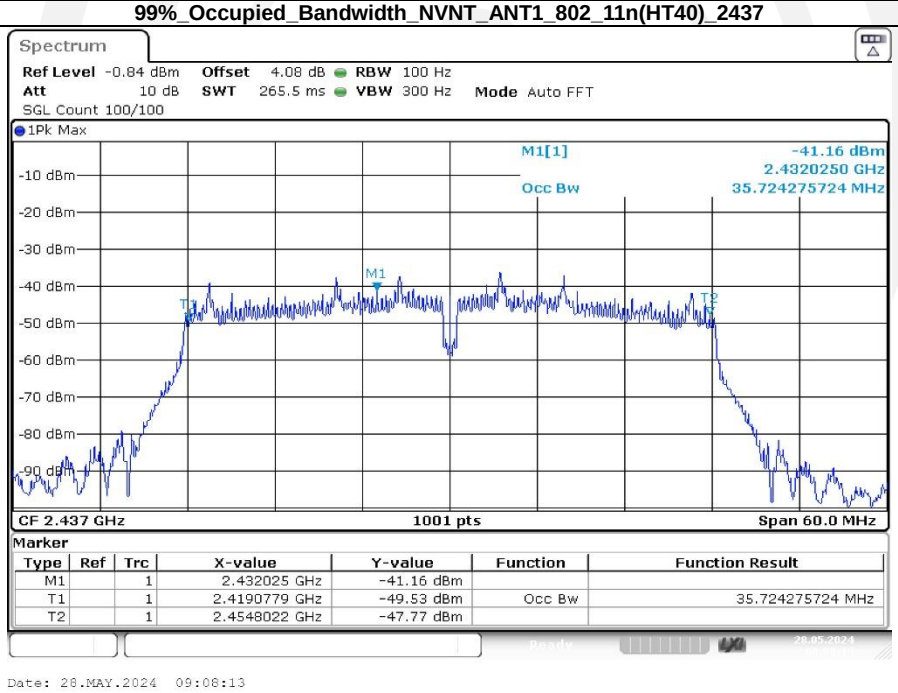
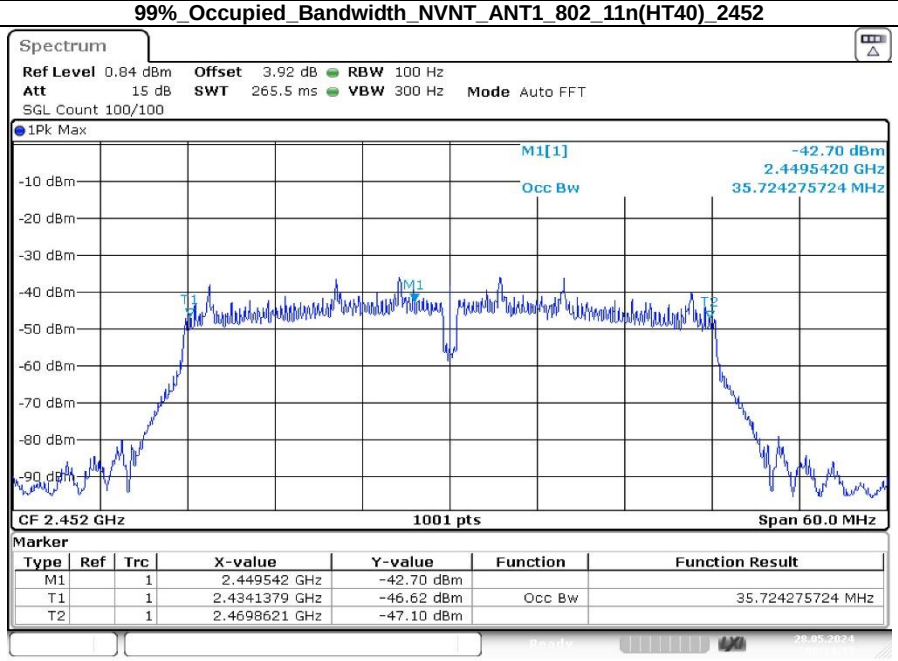
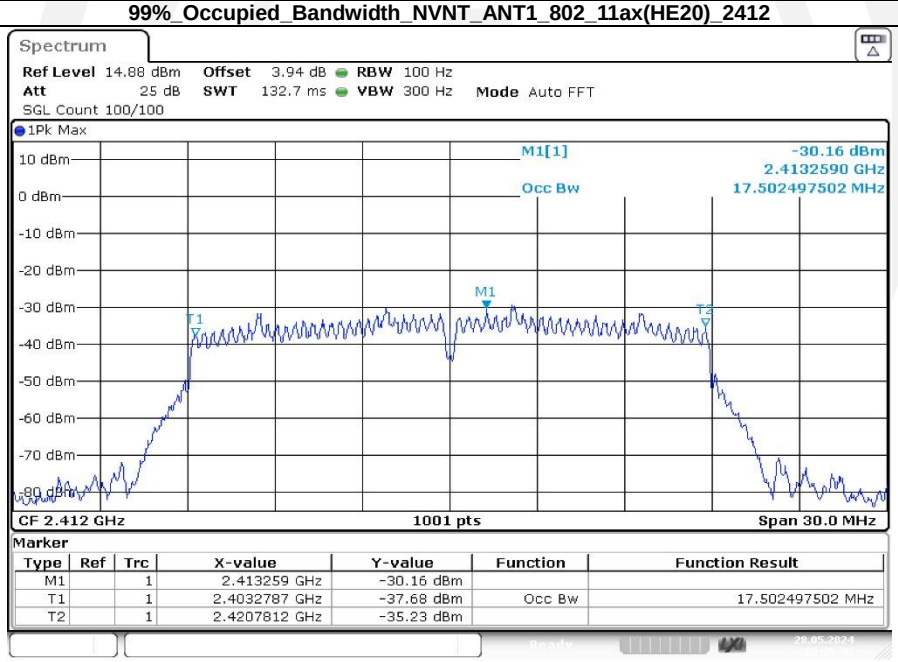


99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT40)_2452



Date: 28.MAY.2024 09:14:43

99%_Occupied_Bandwidth_NVNT_ANT1_802_11ax(HE20)_2412



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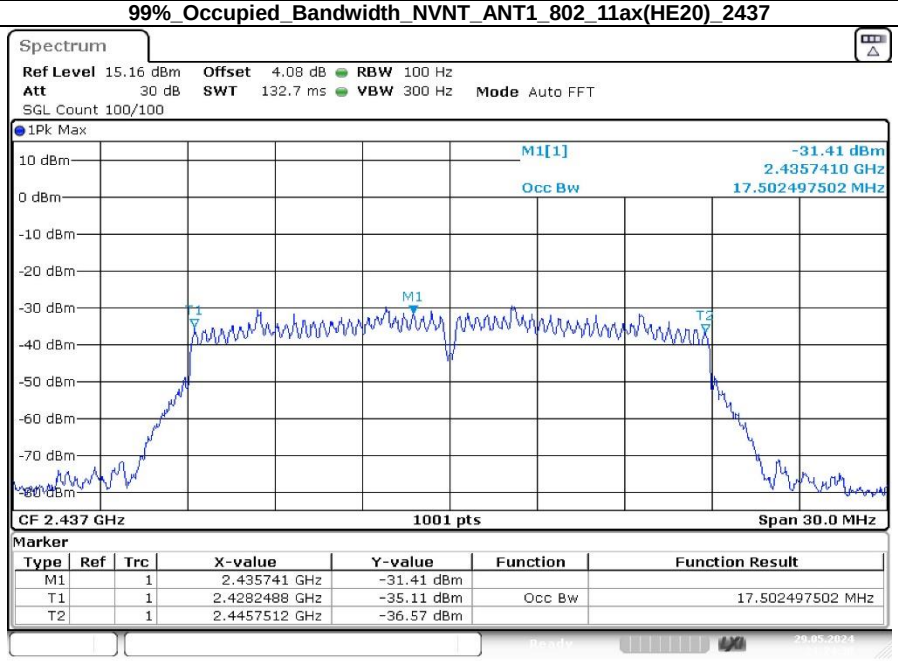

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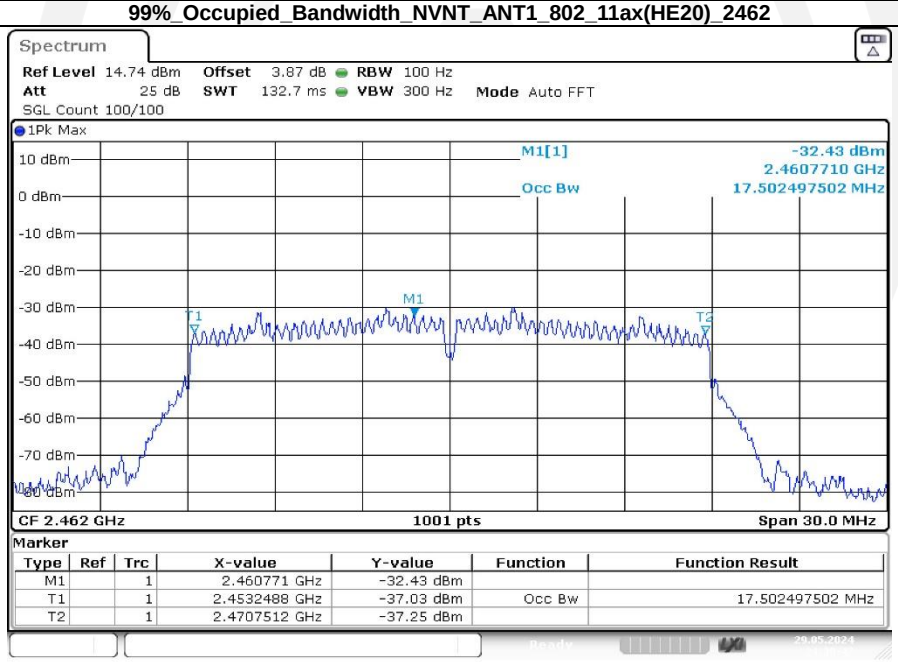
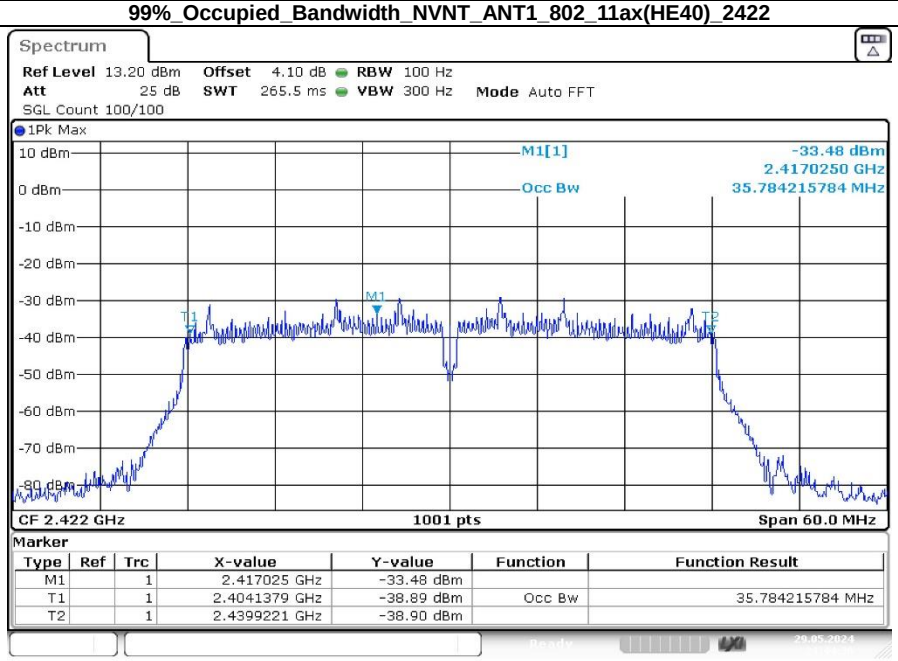


Date: 29.MAY.2024 21:30:48

99%_Occupied_Bandwidth_NVNT_ANT1_802_11ax(HE40)_2422



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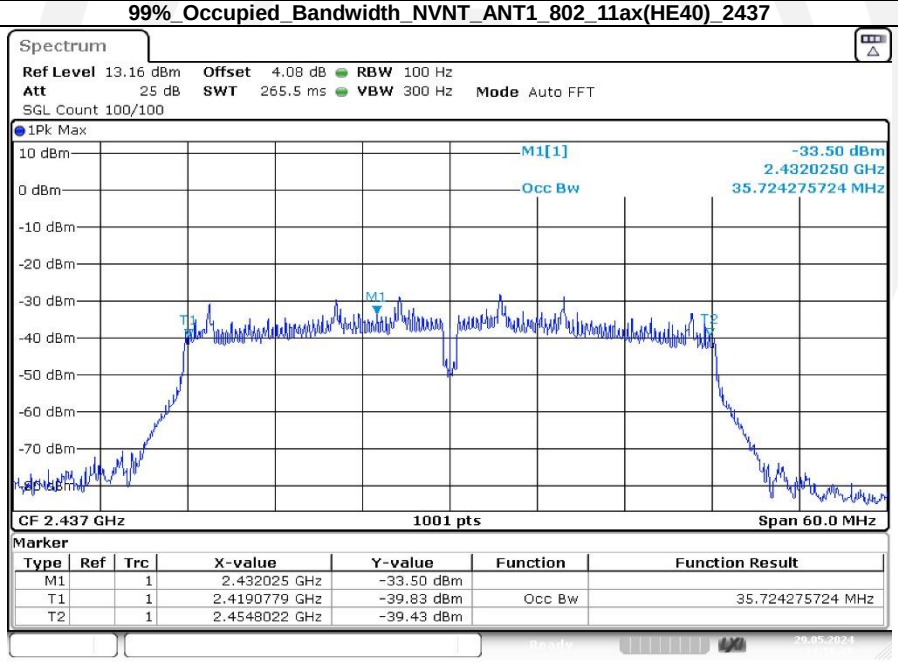

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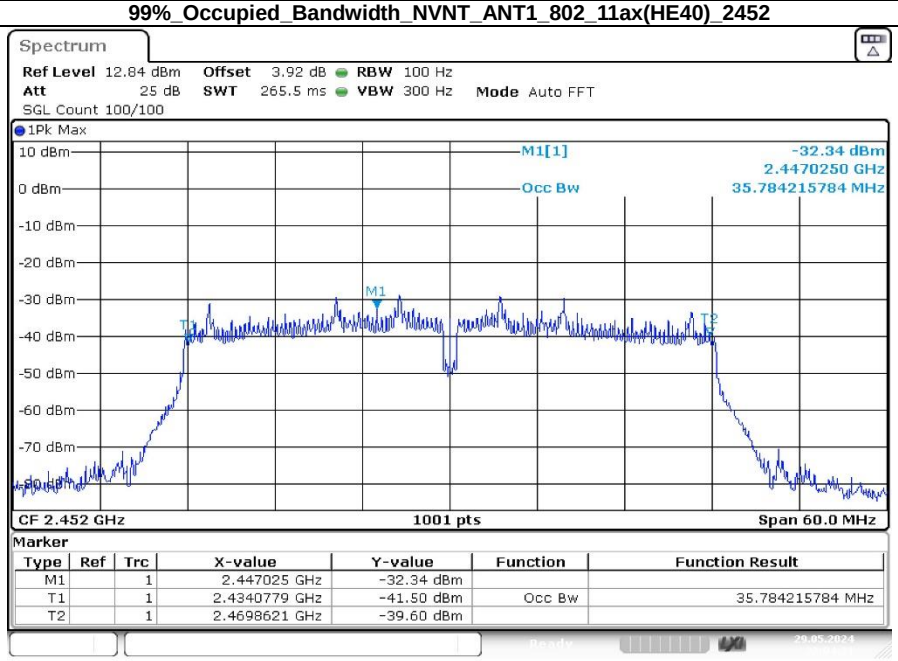
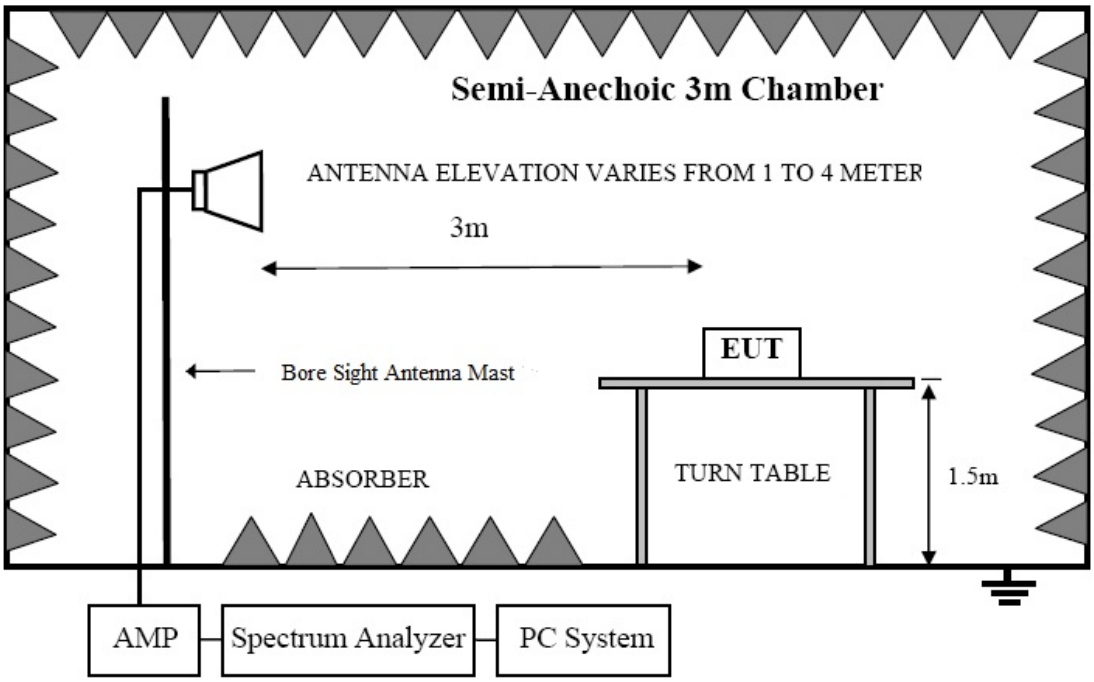


9. Band Edge Test

9.1. Block Diagram of Test Setup



9.2. Test Limit

Radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

9.3. Test Procedure

Refer to ANSI C 63.10, Clause 6.10.
All restriction band and non- restriction band have been tested, only worse case is reported.
Details see the KDB558074 D01 Meas Guidance v05r02

9.2.1 Put the EUT on a 1.5m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission
9.2.2 Check the spurious emissions out of band.
9.2.3 RBW 1MHz, VBW 3MHz, peak detector for peak value, RBW 1MHz, VBW 10Hz, RMS detector for AV value.

9.4. Test Results

Test Date	:	2024.05.30			Temperature	:	26℃	
Test Engineer	:	Felix Pang			Humidity	:	54%	
Test Results	:	**PASS**						
Frequency Range	:	**2310MHz~2410MHz**						
Test Mode	:	IEEE 802.11b TX 2412MHz						
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	70.18	-21.62	48.56	74.00	-25.44	Peak
2	2390	H	--	-21.62	--	54.00	--	Avg
3	2400	H	77.03	-26.08	50.95	74.00	-23.05	Peak
4	2400	H	--	-26.08	--	54.00	--	Avg
1	2390	V	70.16	-21.62	48.54	74.00	-25.46	Peak
2	2390	V	--	-21.62	--	54.00	--	Avg
3	2400	V	77.67	-26.08	51.59	74.00	-22.41	Peak
4	2400	V	--	-26.08	--	54.00	--	Avg
Frequency Range	:	**2450MHz~2550MHz**						
Test Mode	:	IEEE 802.11b TX 2462MHz						
1	2483.5	H	73.39	-25.84	47.55	74.00	-26.45	Peak
2	2483.5	H	--	-25.84	--	54.00	--	Avg
1	2483.5	V	71.55	-25.84	45.71	74.00	-28.29	Peak
2	2483.5	V	--	-25.84	--	54.00	--	Avg
Note:	1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.							

Frequency Range : **2310MHz~2410MHz**								
Test Mode : IEEE 802.11g TX 2412MHz								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	70.96	-21.62	49.34	74.00	-24.66	Peak
2	2390	H	--	-21.62	--	54.00	--	Avg
3	2400	H	76.41	-26.08	50.33	74.00	-23.67	Peak
4	2400	H	--	-26.08	--	54.00	--	Avg
1	2390	V	68.52	-21.62	46.90	74.00	-27.10	Peak
2	2390	V	--	-21.62	--	54.00	--	Avg
3	2400	V	79.43	-26.08	53.35	74.00	-20.65	Peak
4	2400	V	--	-26.08	--	54.00	--	Avg
Frequency Range : **2450MHz~2550MHz**								
Test Mode : IEEE 802.11g TX 2462MHz								
1	2483.5	H	76.15	-25.84	50.31	74.00	-23.69	Peak
2	2483.5	H	--	-25.84	--	54.00	--	Avg
1	2483.5	V	74.83	-25.84	48.99	74.00	-25.01	Peak
2	2483.5	V	--	-25.84	--	54.00	--	Avg

Note:
1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.
2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.
Result=Reading + Correct Factor. Margin= Result-Limit.
3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

Frequency Range : **2310MHz~2410MHz**								
Test Mode : IEEE 802.11n/HT20 TX 2412MHz								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	71.14	-21.62	49.52	74.00	-24.48	Peak
2	2390	H	--	-21.62	--	54.00	--	Avg
3	2400	H	78.05	-26.08	51.97	74.00	-22.03	Peak
4	2400	H	--	-26.08	--	54.00	--	Avg
1	2390	V	67.73	-21.62	46.11	74.00	-27.89	Peak
2	2390	V	--	-21.62	--	54.00	--	Avg
3	2400	V	79.47	-26.08	53.39	74.00	-20.61	Peak
4	2400	V	--	-26.08	--	54.00	--	Avg
Frequency Range : **2450MHz~2550MHz**								
Test Mode : IEEE 802.11n/HT20 TX 2462MHz								
1	2483.5	H	75.46	-25.84	49.62	74.00	-24.38	Peak
2	2483.5	H	--	-25.84	--	54.00	--	Avg
1	2483.5	V	72.89	-25.84	47.05	74.00	-26.95	Peak
2	2483.5	V	--	-25.84	--	54.00	--	Avg

Note:
1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.
2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.
Result=Reading + Correct Factor. Margin= Result-Limit.
3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

Frequency Range : **2310MHz~2410MHz**								
Test Mode : IEEE 802.11n/HT40 TX 2422MHz								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	73.19	-21.62	51.57	74.00	-22.43	Peak
2	2390	H	--	-21.62	--	54.00	--	Avg
3	2400	H	78.87	-26.08	52.79	74.00	-21.21	Peak
4	2400	H	--	-26.08	--	54.00	--	Avg
1	2390	V	68.02	-21.62	46.40	74.00	-27.60	Peak
2	2390	V	--	-21.62	--	54.00	--	Avg
3	2400	V	76.20	-26.08	50.12	74.00	-23.88	Peak
4	2400	V	--	-26.08	--	54.00	--	Avg
Frequency Range : **2450MHz~2550MHz**								
Test Mode : IEEE 802.11n/HT40 TX 2452MHz								
1	2483.5	H	73.53	-25.84	47.69	74.00	-26.31	Peak
2	2483.5	H	--	-25.84	--	54.00	--	Avg
1	2483.5	V	75.40	-25.84	49.56	74.00	-24.44	Peak
2	2483.5	V	--	-25.84	--	54.00	--	Avg
Note:	1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.							

Frequency Range : **2310MHz~2410MHz**								
Test Mode : IEEE 802.11ax20 TX 2412MHz								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	71.88	-21.62	50.26	74.00	-23.74	Peak
2	2390	H	--	-21.62	--	54.00	--	Avg
3	2400	H	77.75	-26.08	51.67	74.00	-22.33	Peak
4	2400	H	--	-26.08	--	54.00	--	Avg
1	2390	V	66.78	-21.62	45.16	74.00	-28.84	Peak
2	2390	V	--	-21.62	--	54.00	--	Avg
3	2400	V	77.21	-26.08	51.13	74.00	-22.87	Peak
4	2400	V	--	-26.08	--	54.00	--	Avg
Frequency Range : **2450MHz~2550MHz**								
Test Mode : IEEE 802.11ax20 TX 2462MHz								
1	2483.5	H	76.11	-25.84	50.27	74.00	-23.73	Peak
2	2483.5	H	--	-25.84	--	54.00	--	Avg
1	2483.5	V	72.98	-25.84	47.14	74.00	-26.86	Peak
2	2483.5	V	--	-25.84	--	54.00	--	Avg

Note:
1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.
2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.
Result=Reading + Correct Factor. Margin= Result-Limit.
3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

Frequency Range : **2310MHz~2410MHz**								
Test Mode : IEEE 802.11ax40 TX 2422MHz								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	70.36	-21.62	48.74	74.00	-25.26	Peak
2	2390	H	--	-21.62	--	54.00	--	Avg
3	2400	H	78.45	-26.08	52.37	74.00	-21.63	Peak
4	2400	H	--	-26.08	--	54.00	--	Avg
1	2390	V	68.46	-21.62	46.84	74.00	-27.16	Peak
2	2390	V	--	-21.62	--	54.00	--	Avg
3	2400	V	78.93	-26.08	52.85	74.00	-21.15	Peak
4	2400	V	--	-26.08	--	54.00	--	Avg
Frequency Range : **2450MHz~2550MHz**								
Test Mode : IEEE 802.11ax40 TX 2452MHz								
1	2483.5	H	76.07	-25.84	50.23	74.00	-23.77	Peak
2	2483.5	H	--	-25.84	--	54.00	--	Avg
1	2483.5	V	74.84	-25.84	49.00	74.00	-25.00	Peak
2	2483.5	V	--	-25.84	--	54.00	--	Avg

Note:
1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.
2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.
Result=Reading + Correct Factor. Margin= Result-Limit.
3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

10. Antenna Requirement

10.1.Standard Requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

10.2.Antenna Connected Construction

The antenna connector is unique antenna and no consideration of replacement. Please see EUT photo for details.

10.3.Results

The EUT antenna is internal antenna. It complies with the standard requirement.

11. Photos of test setup

Reference to the **appendix I Test Setup Photo** for details.

12. Photos of EUT

Reference to the **appendix II external photos** and **appendix III internal photos** for details.

------ END OF REPORT------