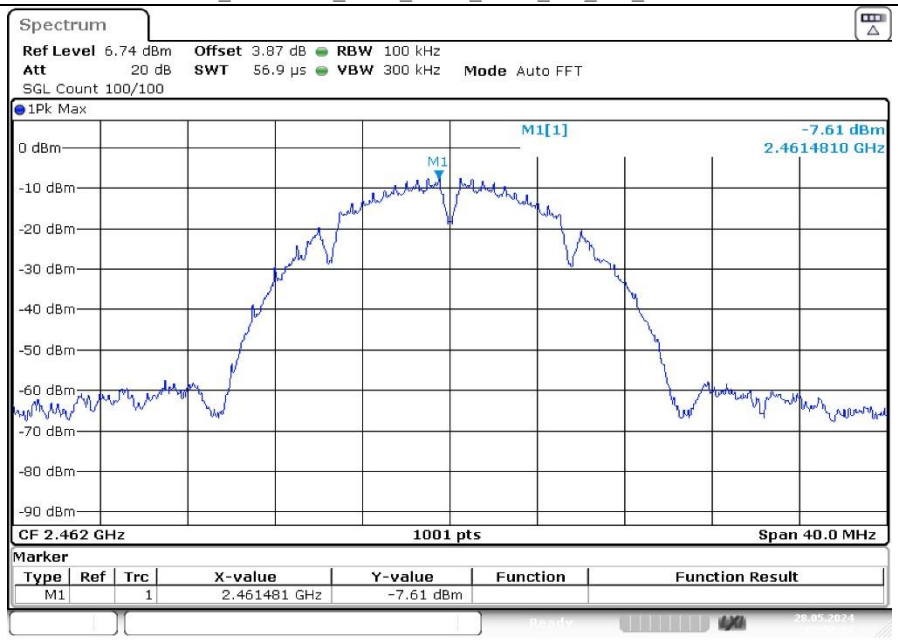
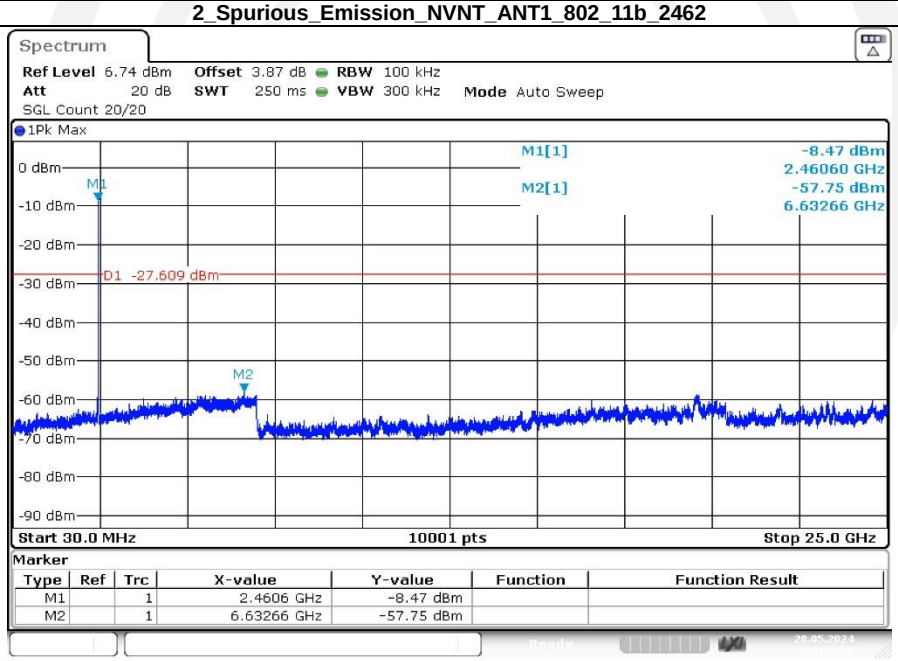
1_Reference_Level_NVNT_ANT1_802_11b_2462



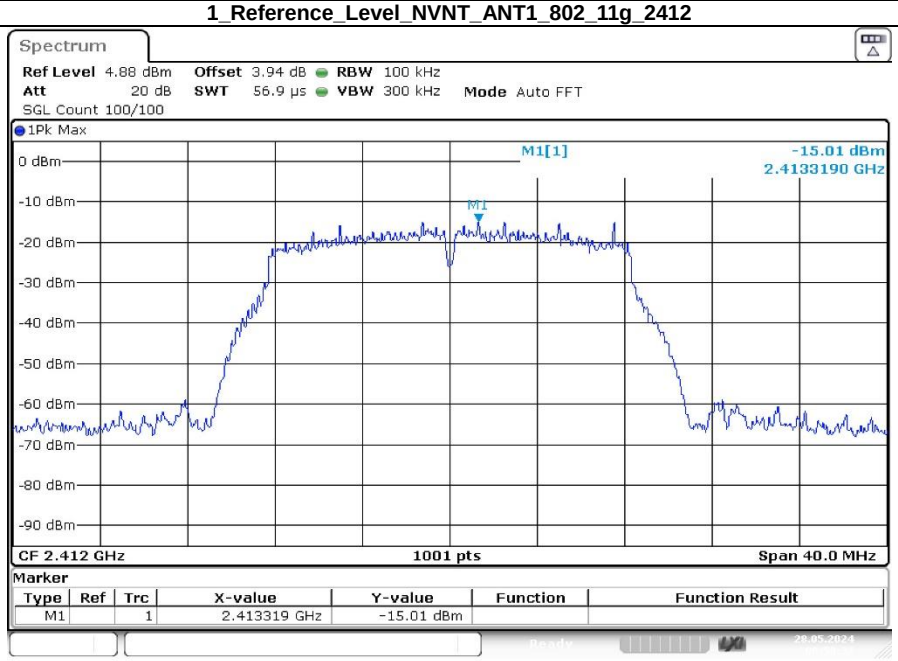
Date: 28.MAY.2024 06:52:20

2_Spurious_Emission_NVNT_ANT1_802_11b_2462



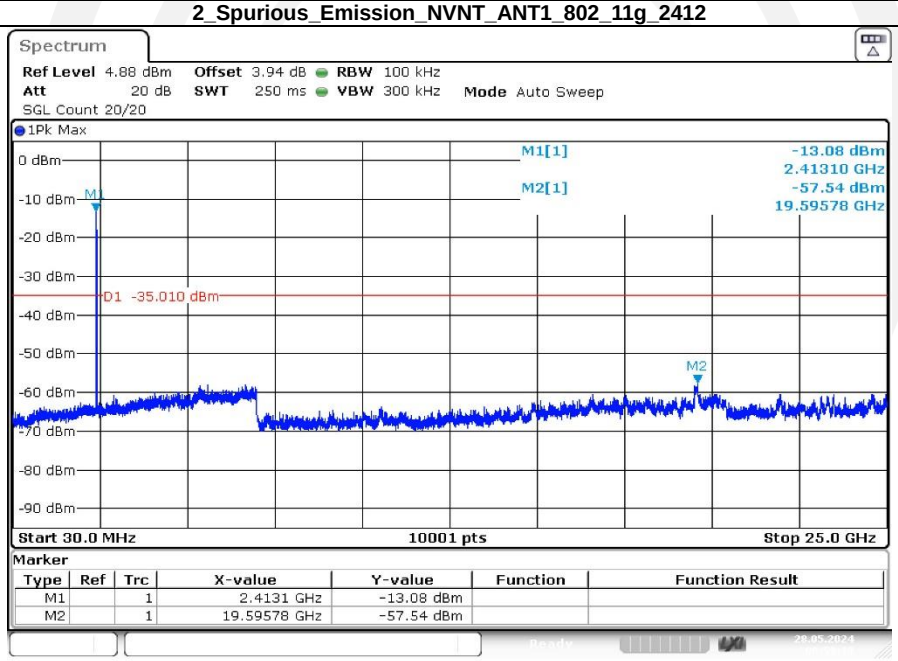
Date: 28.MAY.2024 06:53:05

1_Reference_Level_NVNT_ANT1_802_11g_2412



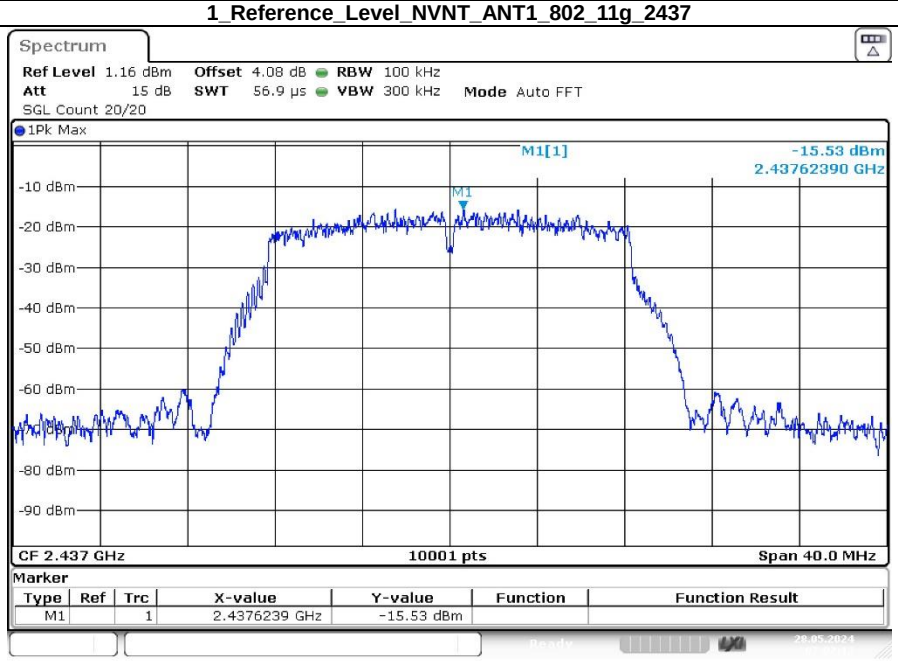
Date: 28.MAY.2024 06:58:31

2_Spurious_Emission_NVNT_ANT1_802_11g_2412



Date: 28.MAY.2024 06:59:18

1_Reference_Level_NVNT_ANT1_802_11g_2437



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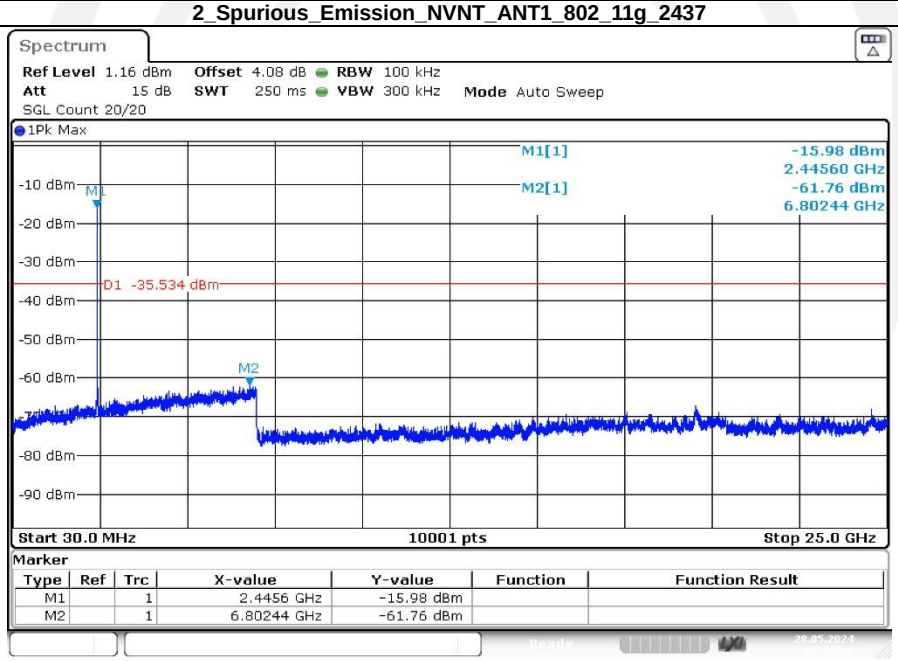
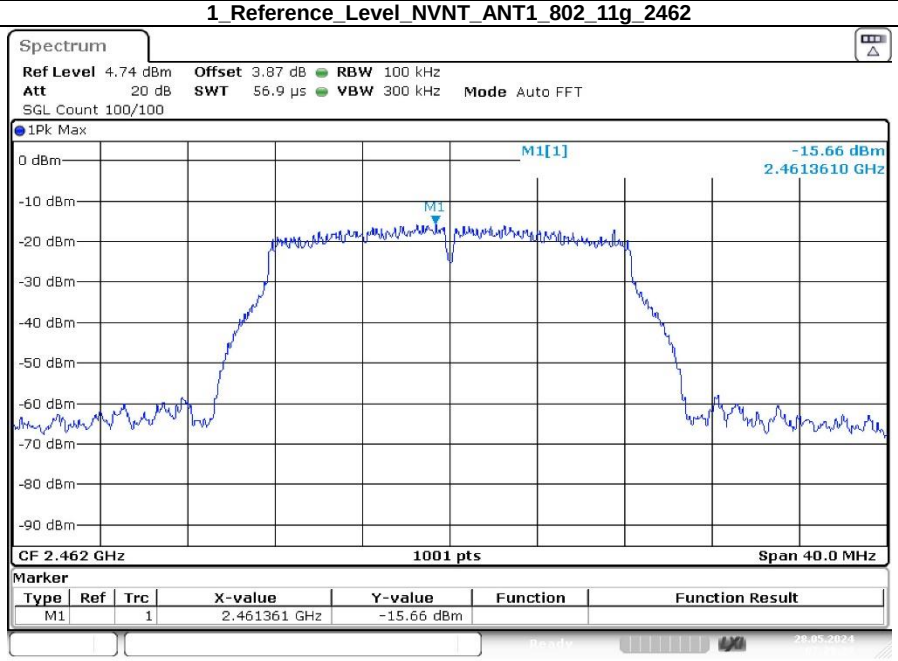


Date: 28.MAY.2024 07:02:46

1_Reference_Level_NVNT_ANT1_802_11g_2462



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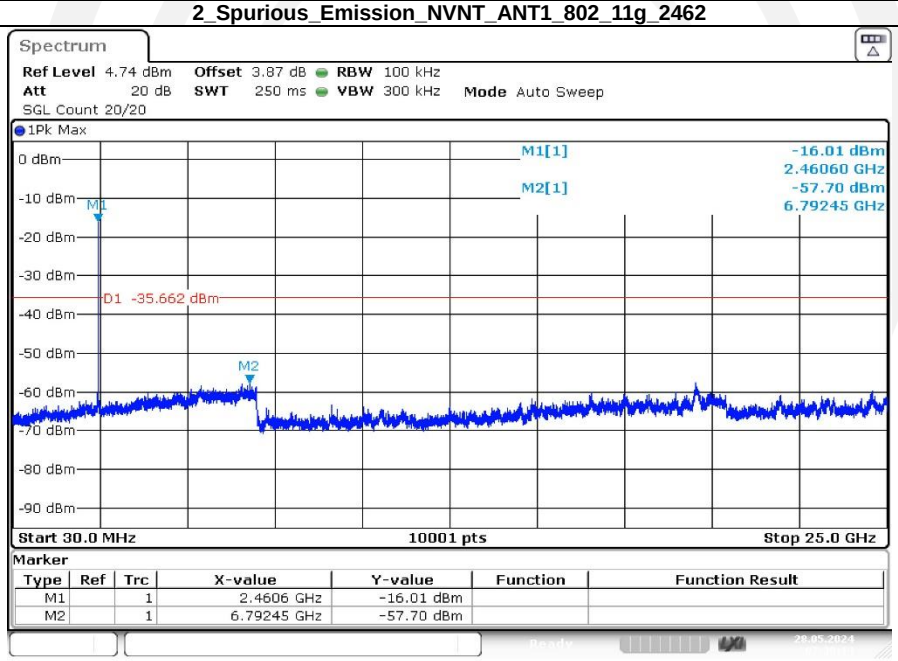
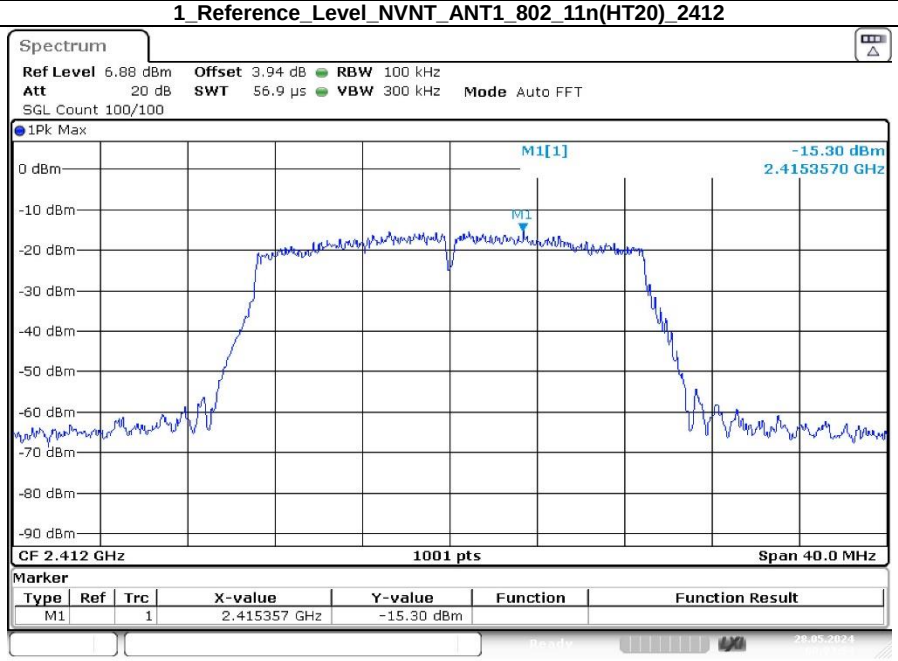
2_Spurious_Emission_NVNT_ANT1_802_11g_2462



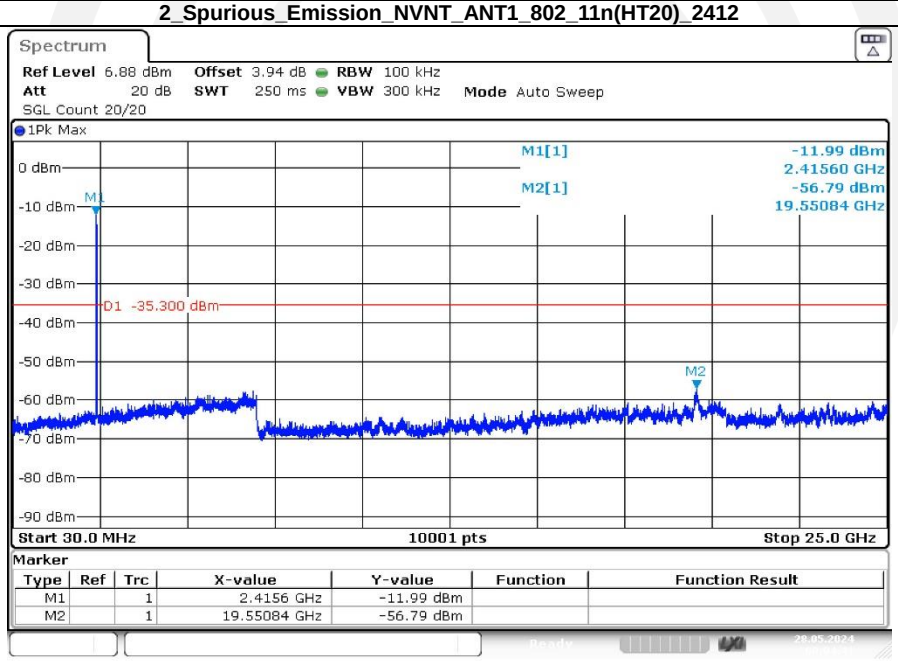
Date: 28.MAY.2024 07:30:14

1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2412



Date: 28.MAY.2024 08:03:54

2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2412



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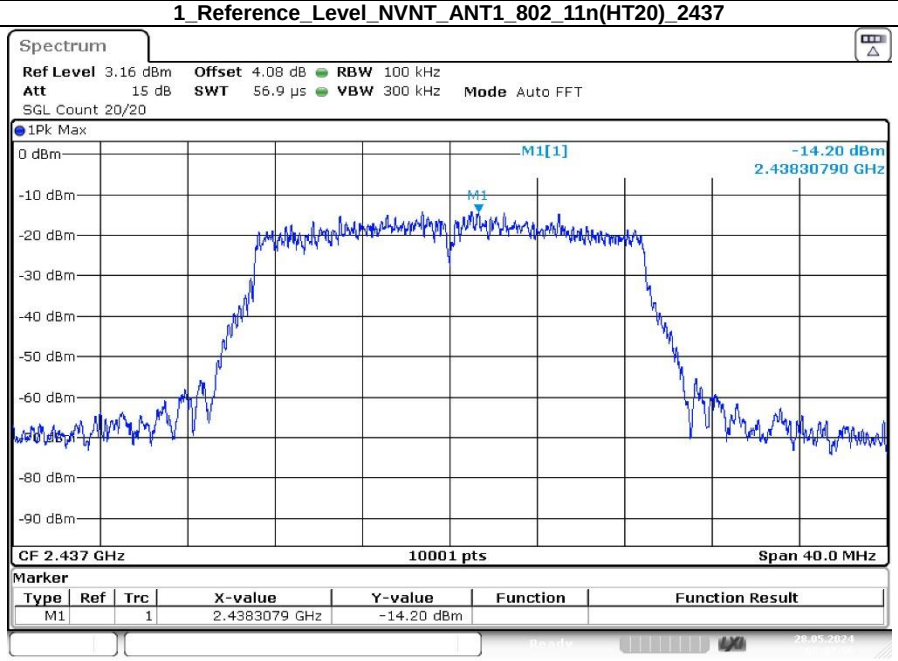
1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2437



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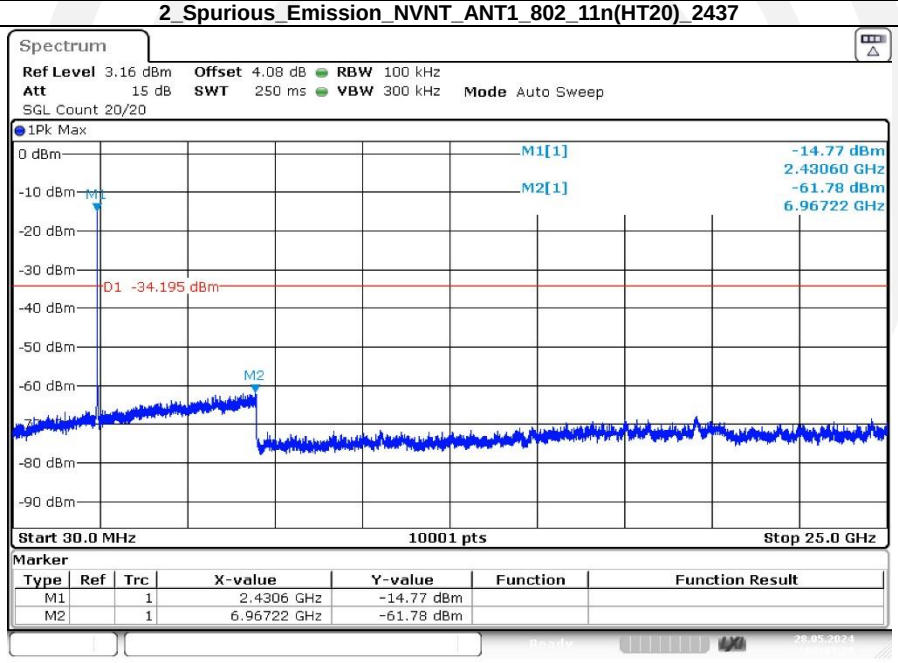
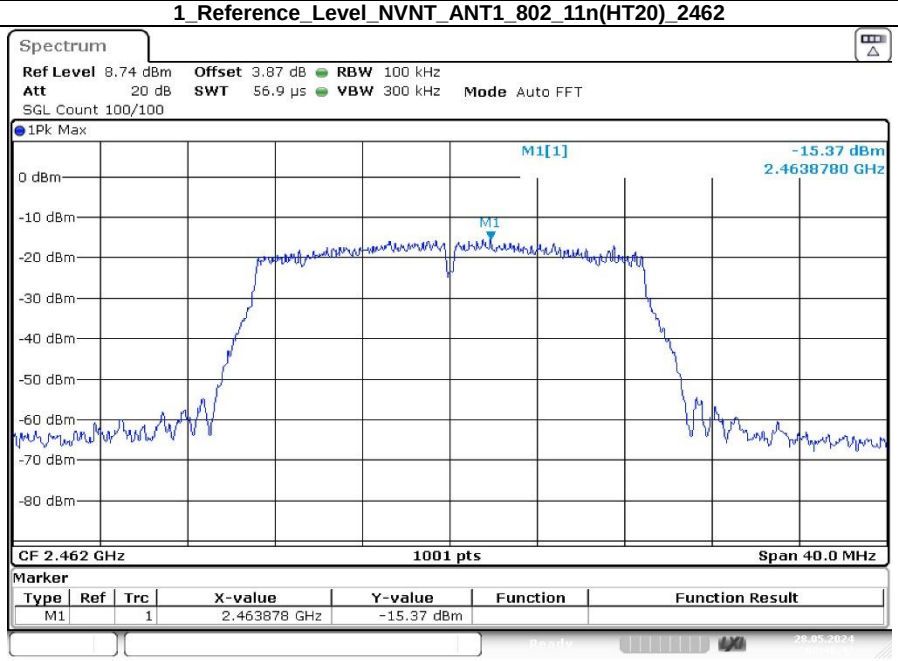
2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2437



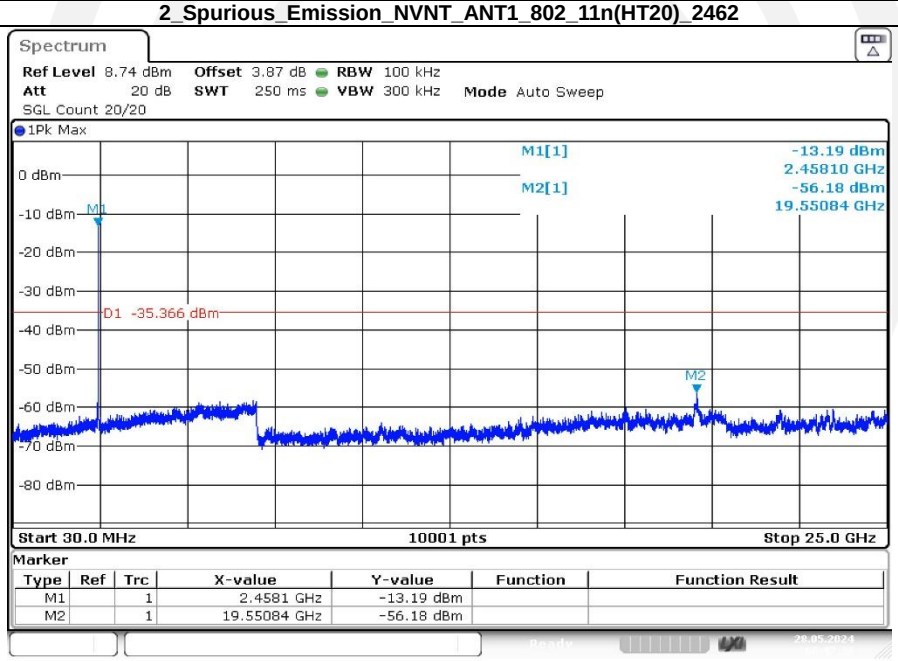
Date: 28.MAY.2024 08:43:29

1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2462



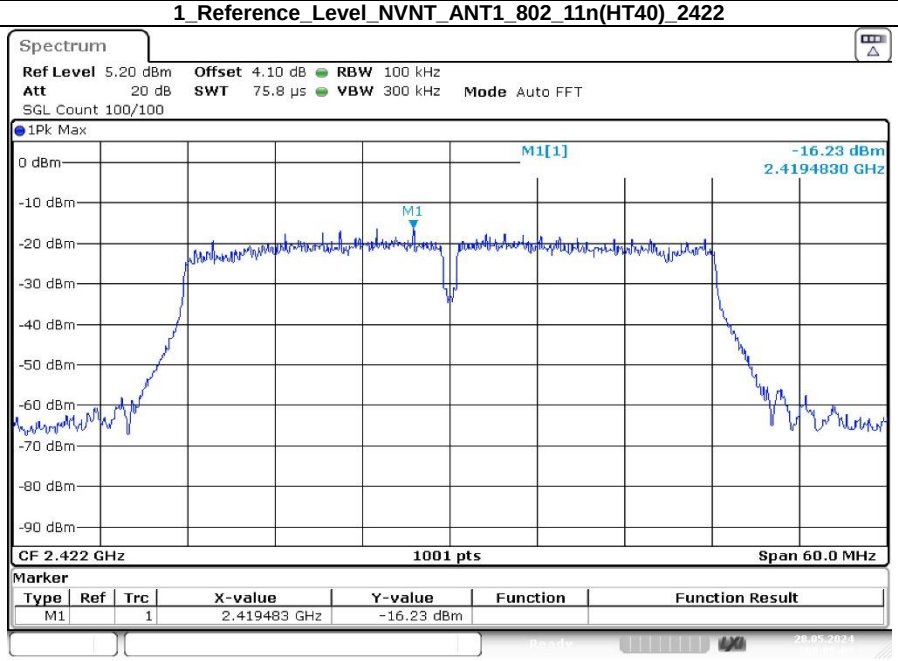
Date: 28.MAY.2024 08:46:46

2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2462



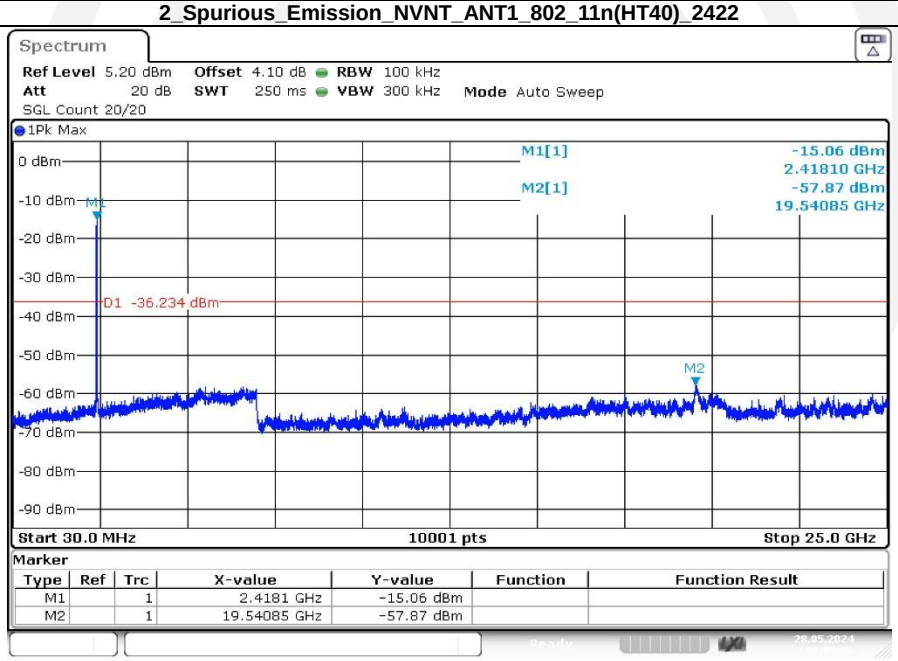
Date: 28.MAY.2024 08:47:32

1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2422



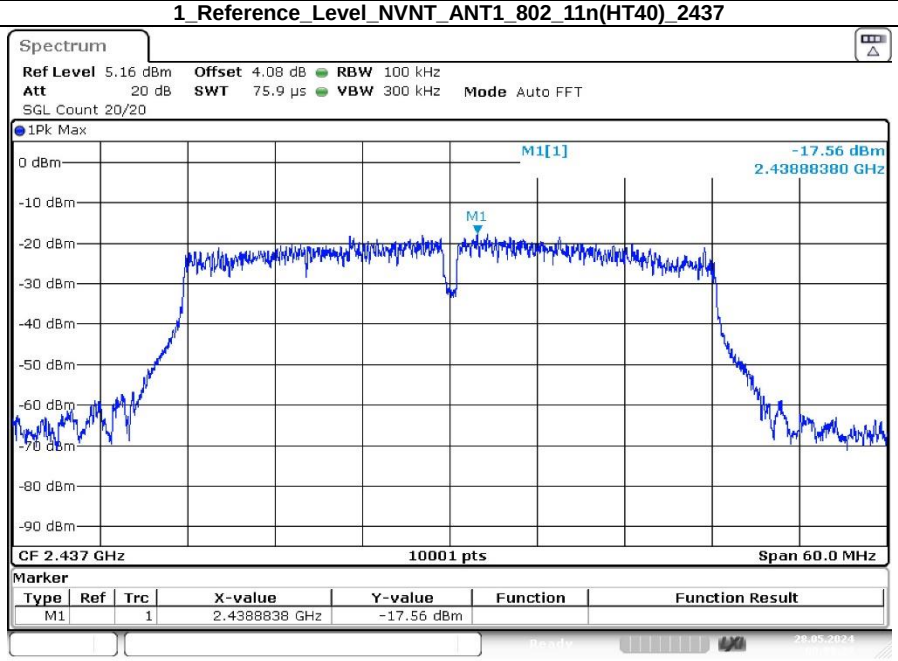
Date: 28.MAY.2024 09:05:09

2_Spurious_Emission_NVNT_ANT1_802_11n(HT40)_2422



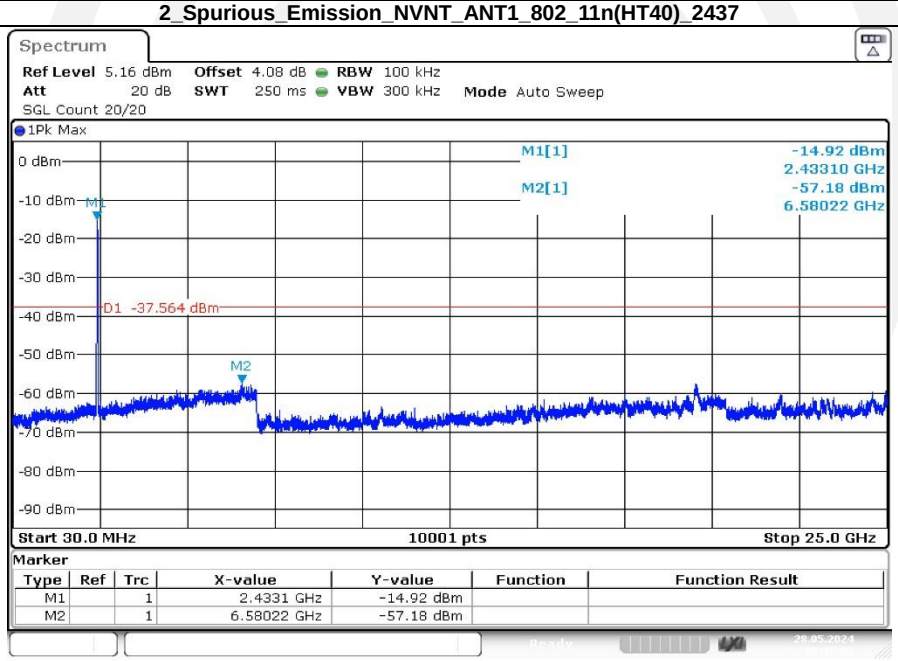
Date: 28.MAY.2024 09:05:56

1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2437



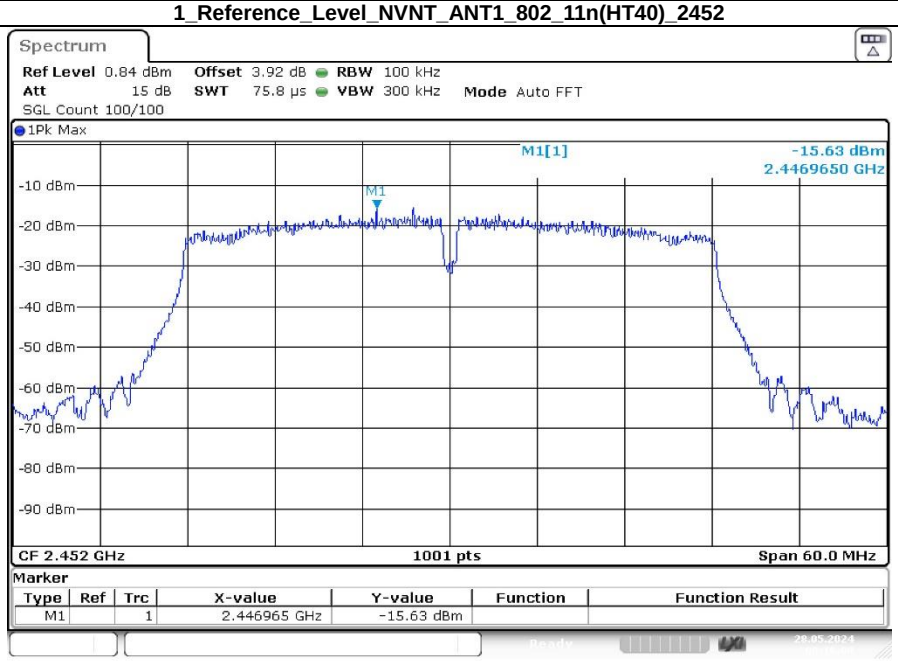
Date: 28.MAY.2024 09:09:29

2_Spurious_Emission_NVNT_ANT1_802_11n(HT40)_2437



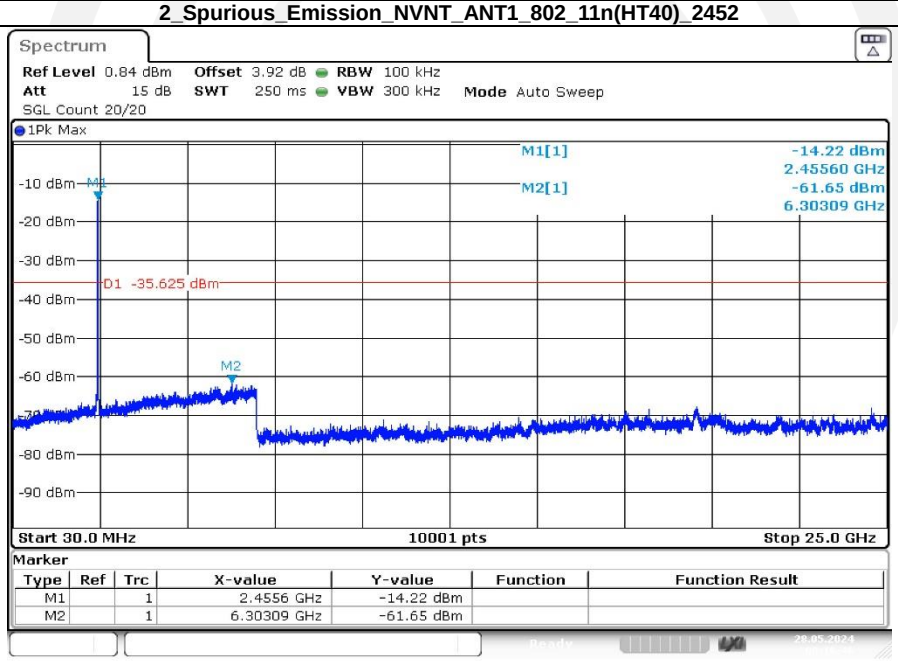
Date: 28.MAY.2024 09:10:02

1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2452



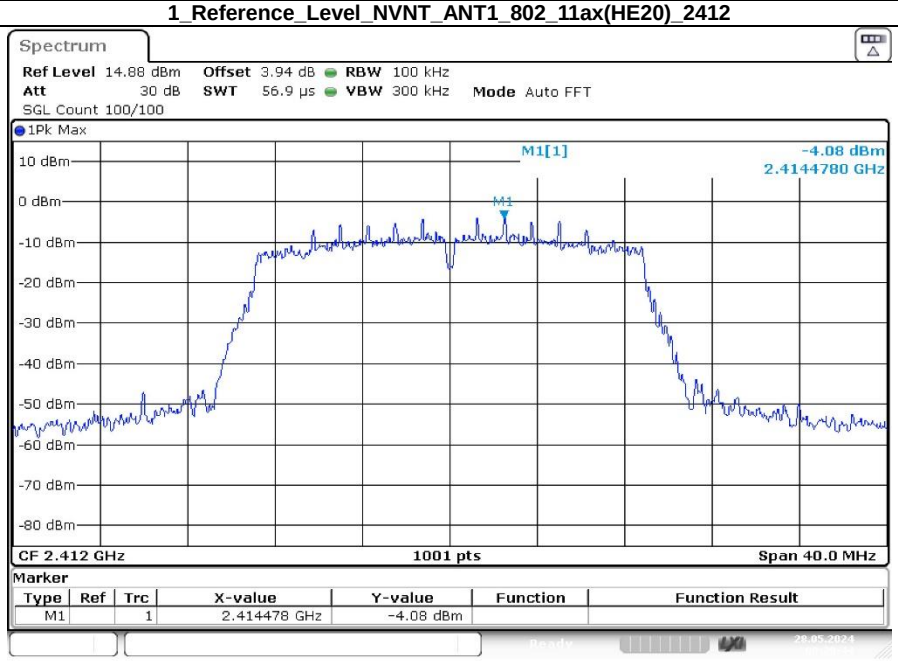
Date: 28.MAY.2024 09:16:00

2_Spurious_Emission_NVNT_ANT1_802_11n(HT40)_2452



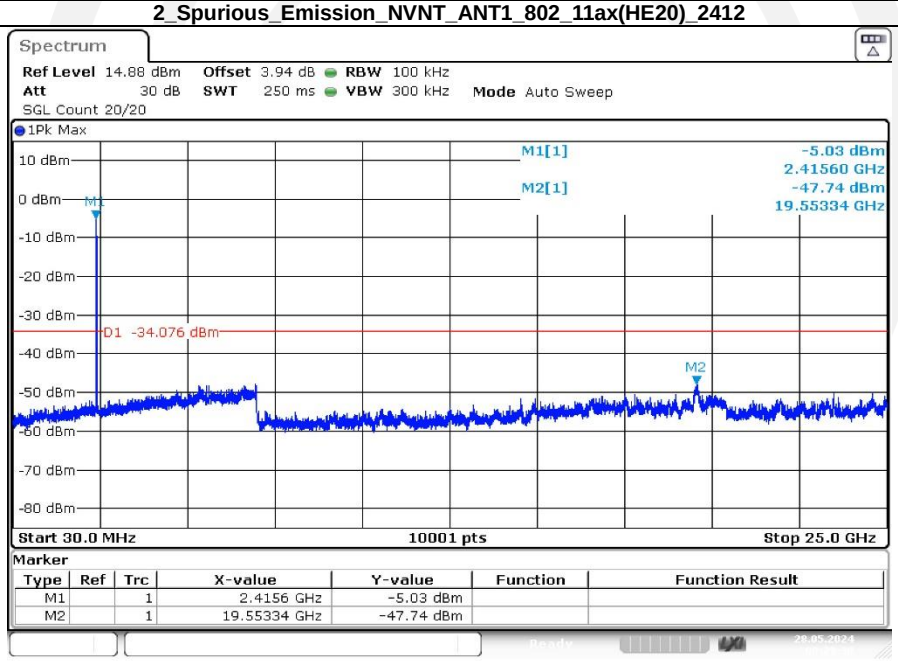
Date: 28.MAY.2024 09:16:46

1_Reference_Level_NVNT_ANT1_802_11ax(HE20)_2412



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

2_Spurious_Emission_NVNT_ANT1_802_11ax(HE20)_2412



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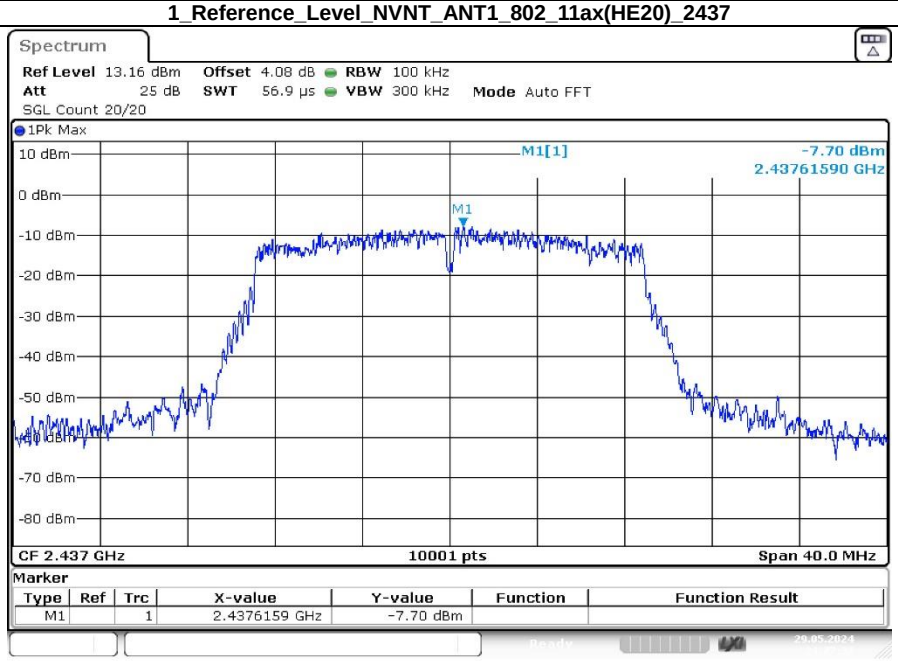
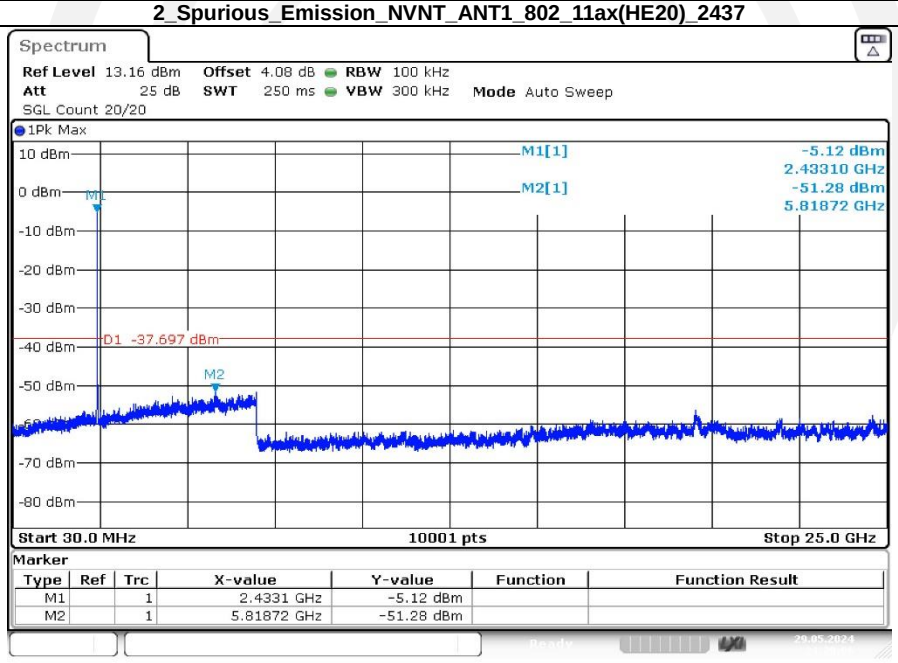
1_Reference_Level_NVNT_ANT1_802_11ax(HE20)_2437



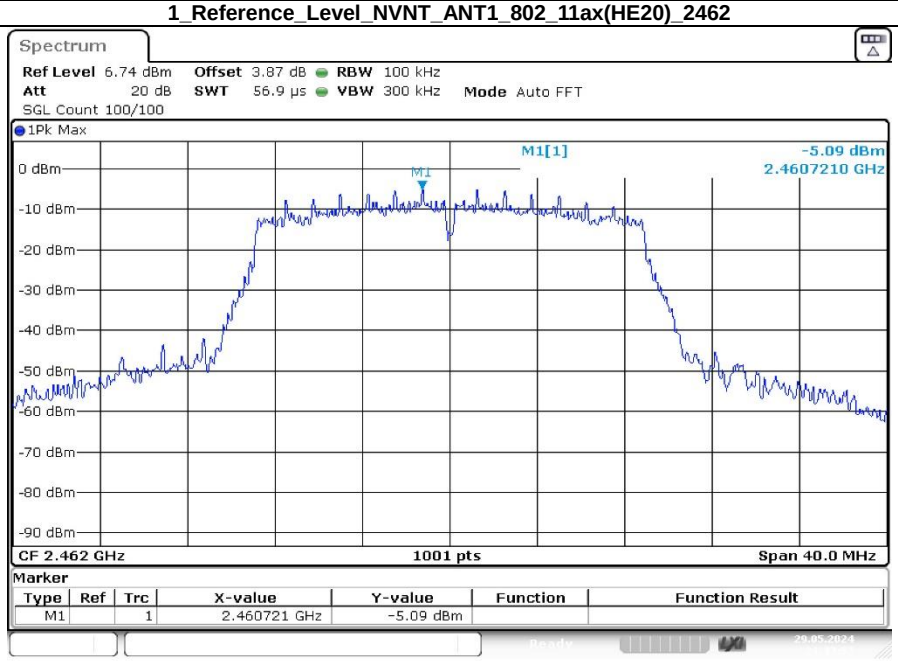
Date: 29.MAY.2024 21:27:32

2_Spurious_Emission_NVNT_ANT1_802_11ax(HE20)_2437



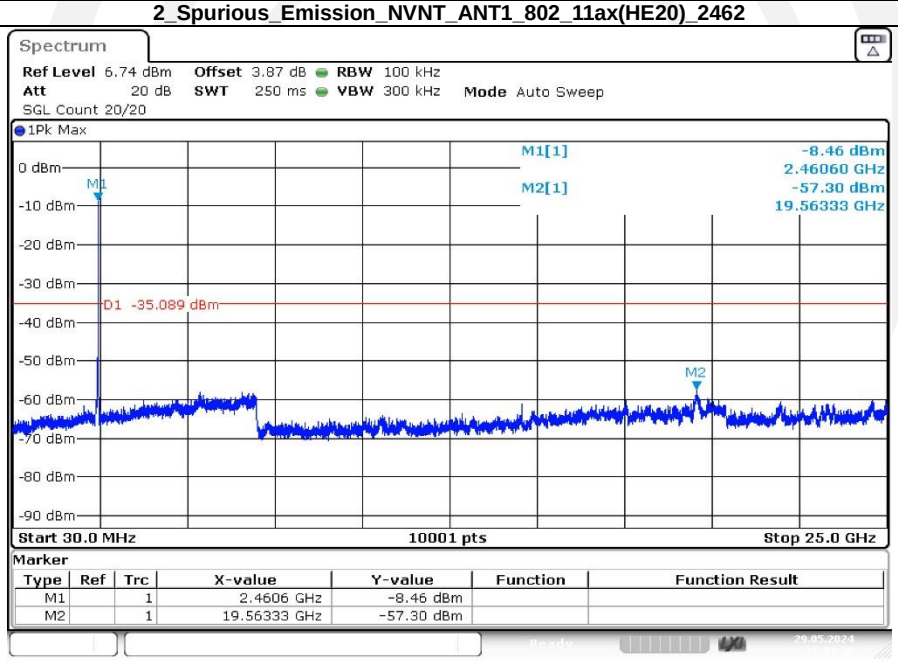
Date: 29.MAY.2024 21:28:05

1_Reference_Level_NVNT_ANT1_802_11ax(HE20)_2462



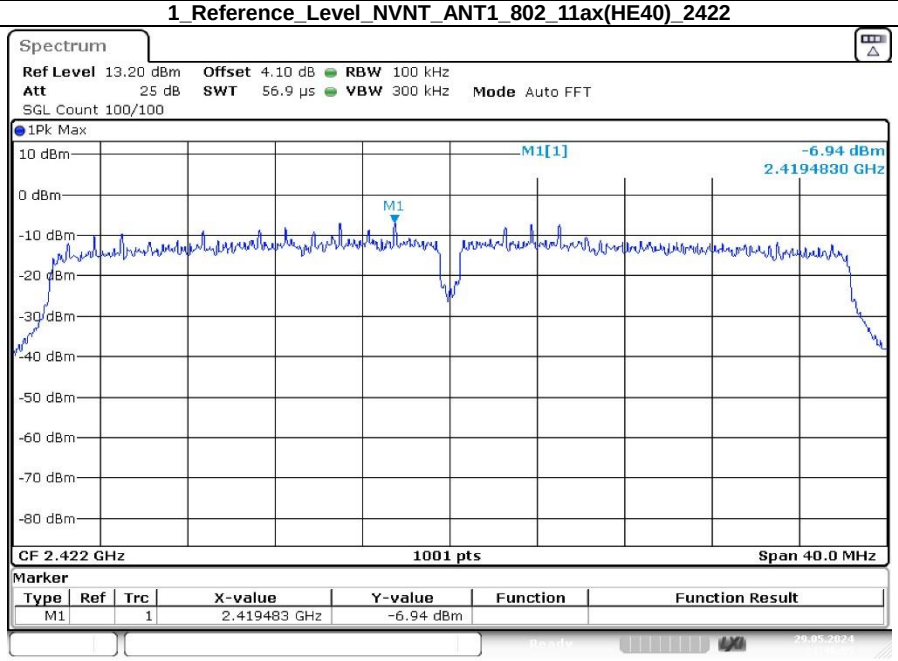
Date: 29.MAY.2024 21:33:52

2_Spurious_Emission_NVNT_ANT1_802_11ax(HE20)_2462



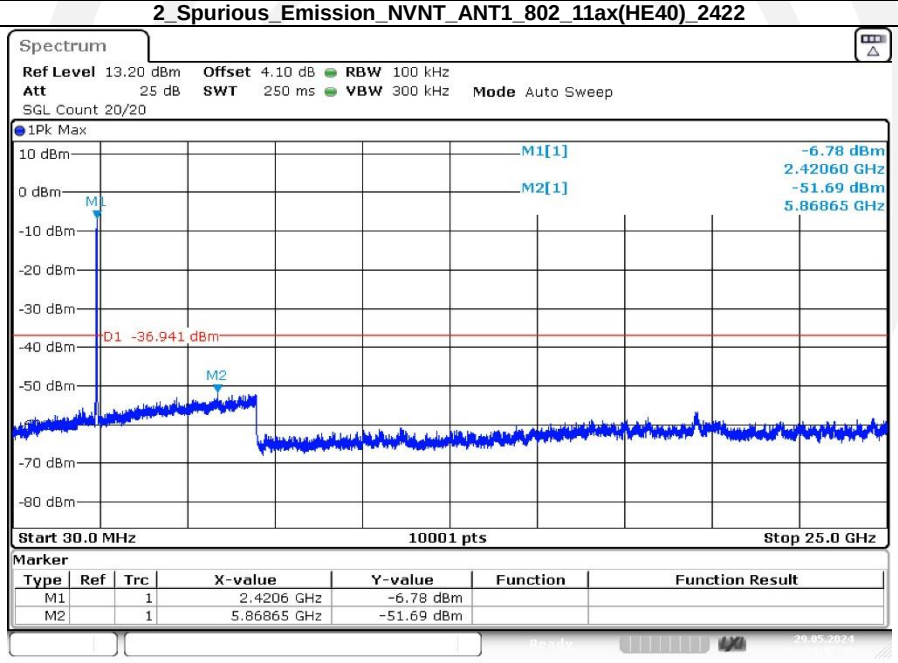
Date: 29.MAY.2024 21:34:38

1_Reference_Level_NVNT_ANT1_802_11ax(HE40)_2422



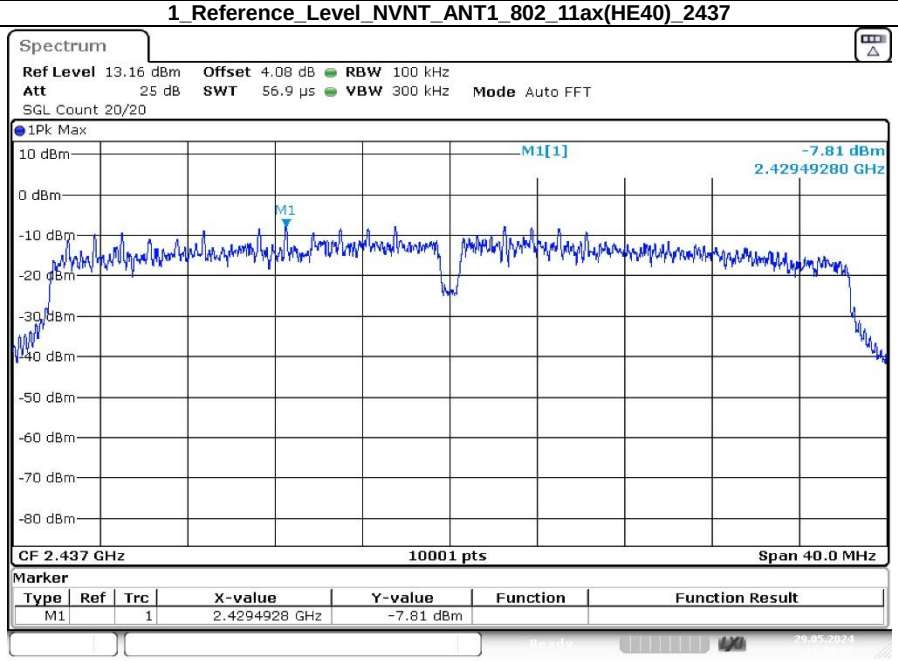
Date: 29.MAY.2024 21:46:59

2_Spurious_Emission_NVNT_ANT1_802_11ax(HE40)_2422



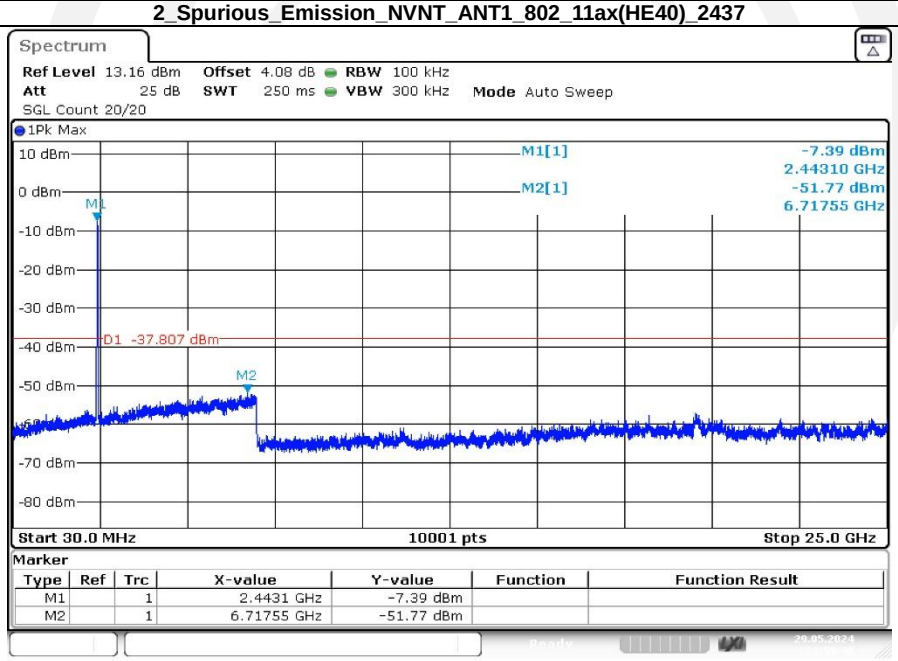
Date: 29.MAY.2024 21:47:48

1_Reference_Level_NVNT_ANT1_802_11ax(HE40)_2437



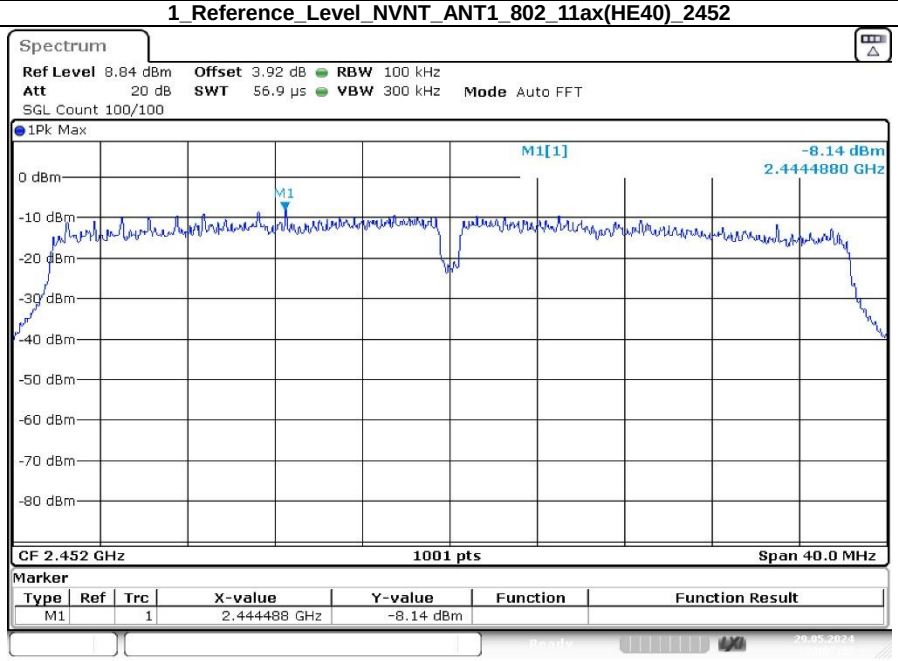
Date: 29.MAY.2024 21:59:05

2_Spurious_Emission_NVNT_ANT1_802_11ax(HE40)_2437



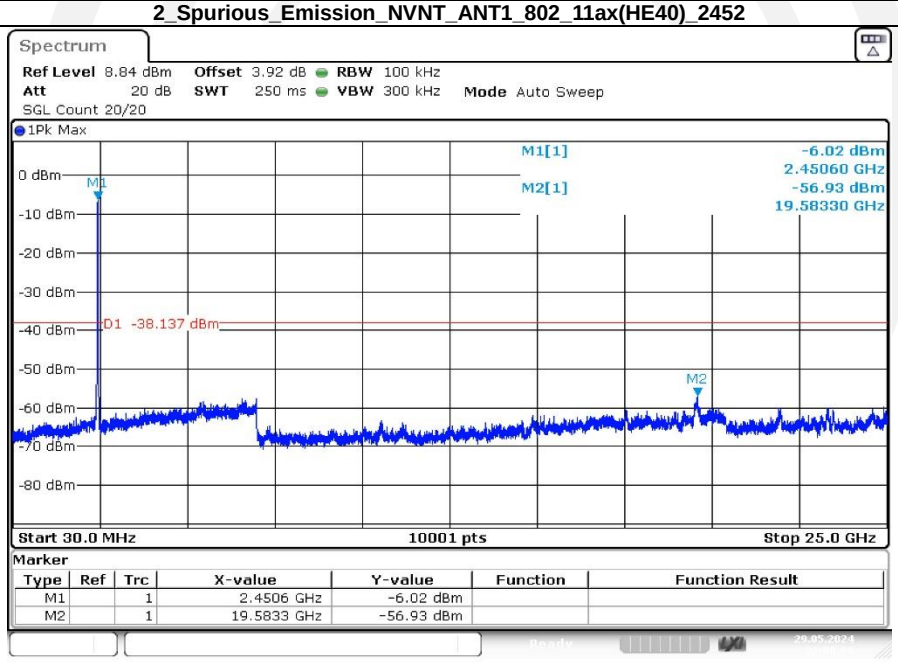
Date: 29.MAY.2024 21:59:39

1_Reference_Level_NVNT_ANT1_802_11ax(HE40)_2452



Date: 29.MAY.2024 22:07:21

2_Spurious_Emission_NVNT_ANT1_802_11ax(HE40)_2452



Date: 29.MAY.2024 22:08:08

6. Conducted Maximum Output Power

6.1. Test limits

Please refer RSS-247 & FCC PART 15: 15.247.

Regulation 15.247(b) The limit of Maximum Peak Output Power Measurement is 1 W(30dBm)

6.2. Test Procedure

Details see the KDB558074 D01 Meas Guidance v05r02

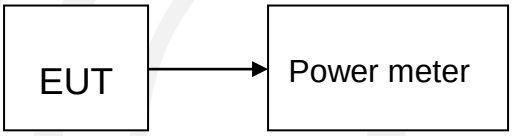
1 Place the EUT on the table and set it in transmitting mode.

2 Connected the EUT's antenna port to peak power meter by 20dB attenuator.

3 Measure out each mode and each bands peak output power of EUT.

Note: The cable loss and attenuator loss were offset into measure device as amplitude offset.

6.3. Test Setup



6.4. Test Results

SISO Mode:

Condition	Antenna	Modulation	Frequency (MHz)	Detector	Conducted Power(dBm)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	Peak	5.06	5.06	30	Pass
NVNT	ANT1	802.11b	2437.00	Peak	5.09	5.09	30	Pass
NVNT	ANT1	802.11b	2462.00	Peak	5.03	5.03	30	Pass
NVNT	ANT1	802.11g	2412.00	Peak	4.93	4.93	30	Pass
NVNT	ANT1	802.11g	2437.00	Peak	5.03	5.03	30	Pass
NVNT	ANT1	802.11g	2462.00	Peak	5.06	5.06	30	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	Peak	5.00	5.00	30	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	Peak	4.94	4.94	30	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	Peak	4.86	4.86	30	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	Peak	5.11	5.11	30	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	Peak	4.91	4.91	30	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	Peak	4.93	4.93	30	Pass
NVNT	ANT1	802.11ax(HE20)	2412.00	Peak	4.98	4.98	30	Pass
NVNT	ANT1	802.11ax(HE20)	2437.00	Peak	5.09	5.09	30	Pass
NVNT	ANT1	802.11ax(HE20)	2462.00	Peak	4.85	4.85	30	Pass
NVNT	ANT1	802.11ax(HE40)	2422.00	Peak	5.16	**5.16**	30	Pass
NVNT	ANT1	802.11ax(HE40)	2437.00	Peak	5.10	5.10	30	Pass
NVNT	ANT1	802.11ax(HE40)	2452.00	Peak	5.12	5.12	30	Pass

Condition	Antenna	Modulation	Frequency (MHz)	Detector	Conducted Power(dBm)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT2	802.11b	2412.00	Peak	5.15	5.15	30	Pass
NVNT	ANT2	802.11b	2437.00	Peak	4.92	4.92	30	Pass
NVNT	ANT2	802.11b	2462.00	Peak	4.87	4.87	30	Pass
NVNT	ANT2	802.11g	2412.00	Peak	4.97	4.97	30	Pass
NVNT	ANT2	802.11g	2437.00	Peak	5.16	**5.16**	30	Pass
NVNT	ANT2	802.11g	2462.00	Peak	4.84	4.84	30	Pass
NVNT	ANT2	802.11n(HT20)	2412.00	Peak	4.86	4.86	30	Pass
NVNT	ANT2	802.11n(HT20)	2437.00	Peak	5.03	5.03	30	Pass
NVNT	ANT2	802.11n(HT20)	2462.00	Peak	5.03	5.03	30	Pass
NVNT	ANT2	802.11ax(HE20)	2412.00	Peak	4.88	4.88	30	Pass
NVNT	ANT2	802.11ax(HE20)	2437.00	Peak	4.89	4.89	30	Pass
NVNT	ANT2	802.11ax(HE20)	2462.00	Peak	5.15	5.15	30	Pass
NVNT	ANT2	802.11n(HT40)	2422.00	Peak	5.08	5.08	30	Pass
NVNT	ANT2	802.11n(HT40)	2437.00	Peak	5.06	5.06	30	Pass
NVNT	ANT2	802.11n(HT40)	2452.00	Peak	4.99	4.99	30	Pass
NVNT	ANT2	802.11ax(HE40)	2422.00	Peak	4.86	4.86	30	Pass
NVNT	ANT2	802.11ax(HE40)	2437.00	Peak	5.06	5.06	30	Pass
NVNT	ANT2	802.11ax(HE40)	2452.00	Peak	4.94	4.94	30	Pass

MIMO Mode:

Condition	Antenna	Modulation	Frequency (MHz)	Detector	ANT 1 Power(dBm	ANT2 Power(dBm)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1+2	802.11n(HT20)	2412.00	Peak	5.00	4.86	7.94	30	Pass
NVNT	ANT1+2	802.11n(HT20)	2437.00	Peak	4.94	5.03	8.00	30	Pass
NVNT	ANT1+2	802.11n(HT20)	2462.00	Peak	4.86	5.03	7.96	30	Pass
NVNT	ANT1+2	802.11ax(HE20)	2412.00	Peak	5.11	4.88	8.01	30	Pass
NVNT	ANT1+2	802.11ax(HE20)	2437.00	Peak	4.91	4.89	7.91	30	Pass
NVNT	ANT1+2	802.11ax(HE20)	2462.00	Peak	4.93	5.15	8.05	30	Pass
NVNT	ANT1+2	802.11n(HT40)	2422.00	Peak	4.98	5.08	8.04	30	Pass
NVNT	ANT1+2	802.11n(HT40)	2437.00	Peak	5.09	5.06	8.09	30	Pass
NVNT	ANT1+2	802.11n(HT40)	2452.00	Peak	4.85	4.99	7.93	30	Pass
NVNT	ANT1+2	802.11ax(HE40)	2422.00	Peak	5.16	4.86	8.02	30	Pass
NVNT	ANT1+2	802.11ax(HE40)	2437.00	Peak	5.10	5.06	**8.09**	30	Pass
NVNT	ANT1+2	802.11ax(HE40)	2452.00	Peak	5.12	4.94	8.04	30	Pass

Note: The measure-and-sum technique shall be used for measuring in-band transmit power of a device. Total power is the sum of the conducted power levels measured at the various output ports.

(First measure the power (mW) of each antenna separately, and the total power is equal to Ant1mW + Ant2mW+….)

7. Peak Power Spectral Density

7.1. Test limits

6.1.1 Please refer RSS-247 & FCC PART 15: 15.247.

6.1.2 For direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

6.1.3 The direct sequence operating of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements of paragraph (d) of this section.

7.2. Test Procedure

Details see the KDB558074 D01 Meas Guidance v05r02

6.2.1 Place the EUT on the table and set it in transmitting mode.

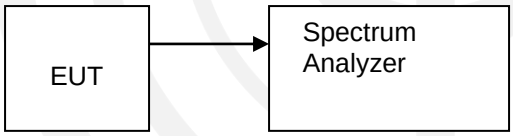
6.2.2 Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

6.2.3 Set the spectrum analyzer as RBW = 100kHz(Set the RBW to: 3 kHz≤RBW≤100 kHz.), VBW = 300kHz(Set the VBW≥3×RBW), span≥1.5×DTS bandwidth., detail see the test plot.

6.2.4 Record the max reading.

6.2.5 Repeat the above procedure until the measurements for all frequencies are completed.

7.3. Test Setup



7.4. Test Results

SISO Mode:

Condition	Antenna	Modulation	Frequency (MHz)	PSD(dBm/30kHz)	RB factor(dB)	PSD(dBm/3kHz)	limit(dBm/3kHz)	Result
NVNT	ANT1	802.11b	2412.00	-10.42	-10.00	-20.42	8	Pass
NVNT	ANT1	802.11b	2437.00	-10.98	-10.00	-20.98	8	Pass
NVNT	ANT1	802.11b	2462.00	-13.30	-10.00	-23.30	8	Pass
NVNT	ANT1	802.11g	2412.00	-19.56	-10.00	-29.56	8	Pass
NVNT	ANT1	802.11g	2437.00	-17.43	-10.00	-27.43	8	Pass
NVNT	ANT1	802.11g	2462.00	-18.06	-10.00	-28.06	8	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	-19.01	-10.00	-29.01	8	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	-16.50	-10.00	-26.50	8	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	-18.84	-10.00	-28.84	8	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	-21.18	-10.00	-31.18	8	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	-20.67	-10.00	-30.67	8	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	-20.42	-10.00	-30.42	8	Pass
NVNT	ANT1	802.11ax(HE20)	2412.00	-17.52	-10.00	-27.52	8	Pass
NVNT	ANT1	802.11ax(HE20)	2437.00	-17.57	-10.00	-27.57	8	Pass
NVNT	ANT1	802.11ax(HE20)	2462.00	-18.34	-10.00	-28.34	8	Pass
NVNT	ANT1	802.11ax(HE40)	2422.00	-20.58	-10.00	-30.58	8	Pass
NVNT	ANT1	802.11ax(HE40)	2437.00	-19.82	-10.00	-29.82	8	Pass
NVNT	ANT1	802.11ax(HE40)	2452.00	-19.78	-10.00	-29.78	8	Pass

Condition	Antenna	Modulation	Frequency (MHz)	PSD(dBm/30kHz)	RB factor(dB)	PSD(dBm/3kHz)	limit(dBm/3kHz)	Result
NVNT	ANT2	802.11b	2412.00	-15.53	-10.00	-25.53	8	Pass
NVNT	ANT2	802.11b	2437.00	-14.82	-10.00	-24.82	8	Pass
NVNT	ANT2	802.11b	2462.00	-15.50	-10.00	-25.50	8	Pass
NVNT	ANT2	802.11g	2412.00	-17.58	-10.00	-27.58	8	Pass
NVNT	ANT2	802.11g	2437.00	-16.80	-10.00	-26.80	8	Pass
NVNT	ANT2	802.11g	2462.00	-17.42	-10.00	-27.42	8	Pass
NVNT	ANT2	802.11n(HT20)	2412.00	-17.49	-10.00	-27.49	8	Pass
NVNT	ANT2	802.11n(HT20)	2437.00	-18.86	-10.00	-28.86	8	Pass
NVNT	ANT2	802.11n(HT20)	2462.00	-17.50	-10.00	-27.50	8	Pass
NVNT	ANT2	802.11n(HT40)	2422.00	-17.54	-10.00	-27.54	8	Pass
NVNT	ANT2	802.11n(HT40)	2437.00	-16.61	-10.00	-26.61	8	Pass
NVNT	ANT2	802.11n(HT40)	2452.00	-17.29	-10.00	-27.29	8	Pass
NVNT	ANT2	802.11ax(HE20)	2412.00	-20.02	-10.00	-30.02	8	Pass
NVNT	ANT2	802.11ax(HE20)	2437.00	-19.68	-10.00	-29.68	8	Pass
NVNT	ANT2	802.11ax(HE20)	2462.00	-20.06	-10.00	-30.06	8	Pass
NVNT	ANT2	802.11ax(HE40)	2422.00	-15.53	-10.00	-25.53	8	Pass
NVNT	ANT2	802.11ax(HE40)	2437.00	-14.82	-10.00	-24.82	8	Pass
NVNT	ANT2	802.11ax(HE40)	2452.00	-15.50	-10.00	-25.50	8	Pass

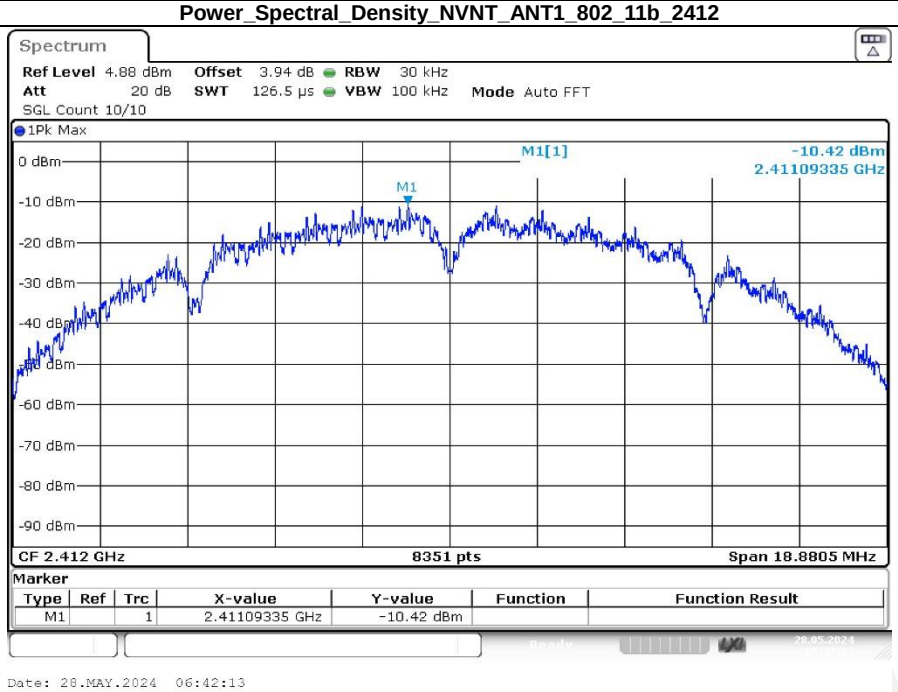
MIMO Mode:

Antenna	Modulation	Frequency (MHz)	ANT1 (dBm/3kHz)	ANT2 (dBm/3kHz)	PSD(dBm/3kHz)	limit(dBm/3kHz)	Result
ANT1+2	802.11n(HT20)	2412.00	-29.01	-27.49	-25.17	8	Pass
ANT1+2	802.11n(HT20)	2437.00	-26.50	-28.86	-24.51	8	Pass
ANT1+2	802.11n(HT20)	2462.00	-28.84	-27.50	-25.11	8	Pass
ANT1+2	802.11ax(HE20)	2412.00	-31.18	-27.54	-25.98	8	Pass
ANT1+2	802.11ax(HE20)	2437.00	-30.67	-26.61	-25.17	8	Pass
ANT1+2	802.11ax(HE20)	2462.00	-30.42	-27.29	-25.57	8	Pass
ANT1+2	802.11n(HT40)	2422.00	-27.52	-30.02	-25.58	8	Pass
ANT1+2	802.11n(HT40)	2437.00	-27.57	-29.68	-25.49	8	Pass
ANT1+2	802.11n(HT40)	2452.00	-28.34	-30.06	-26.11	8	Pass
ANT1+2	802.11ax(HE40)	2422.00	-30.58	-25.53	-24.35	8	Pass
ANT1+2	802.11ax(HE40)	2437.00	-29.82	-24.82	-23.63	8	Pass
ANT1+2	802.11ax(HE40)	2452.00	-29.78	-25.50	-24.12	8	Pass

Note: The measure-and-sum technique shall be used for measuring in-band transmit power of a device. Total power is the sum of the conducted power levels measured at the various output ports.

(First measure the power (mW) of each antenna separately, and the total power is equal to Ant1mW + Ant2mW+….)

Power_Spectral_Density_NVNT_ANT1_802_11b_2412



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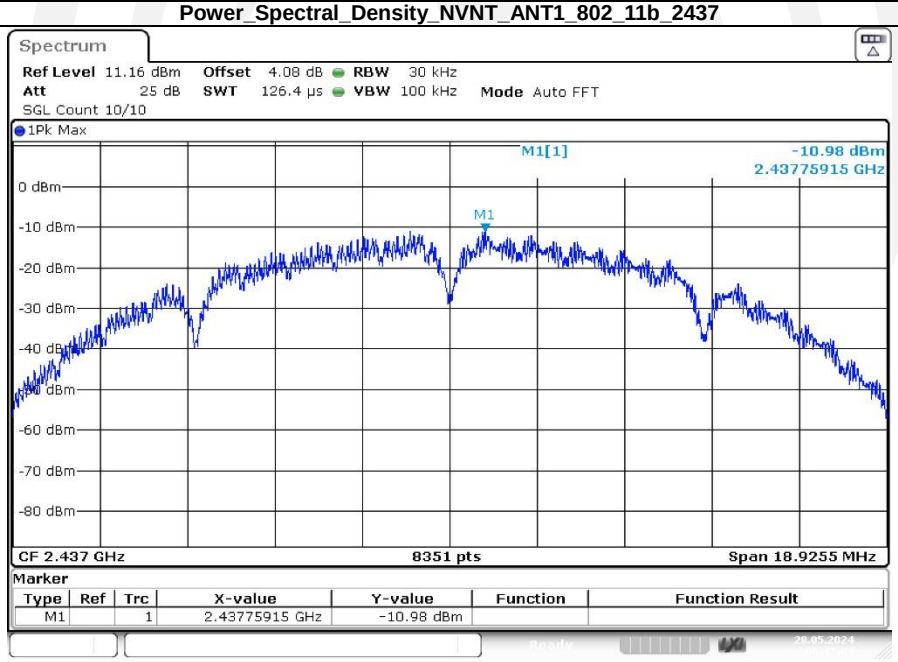
Power_Spectral_Density_NVNT_ANT1_802_11b_2437



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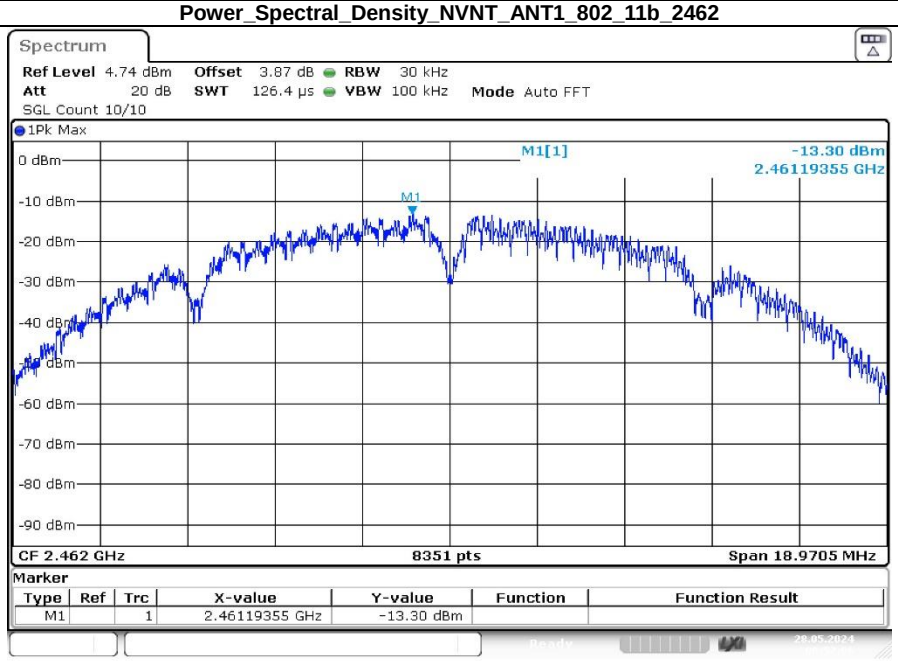

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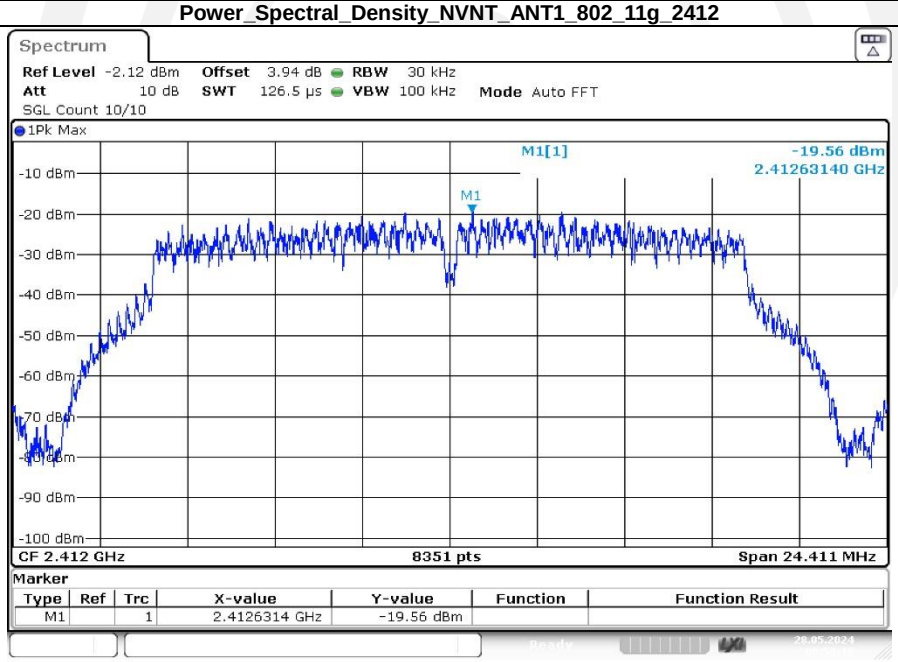

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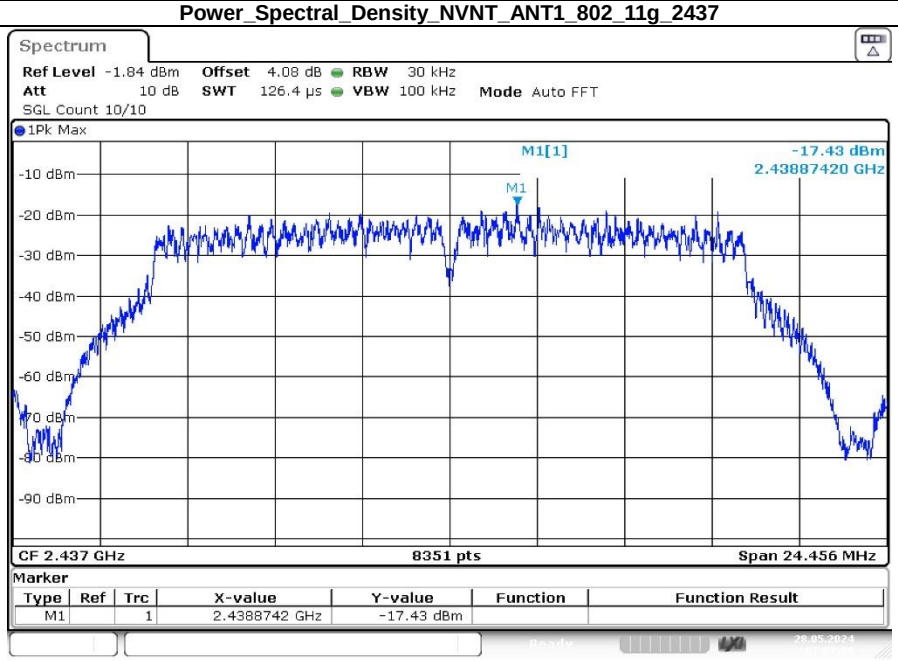

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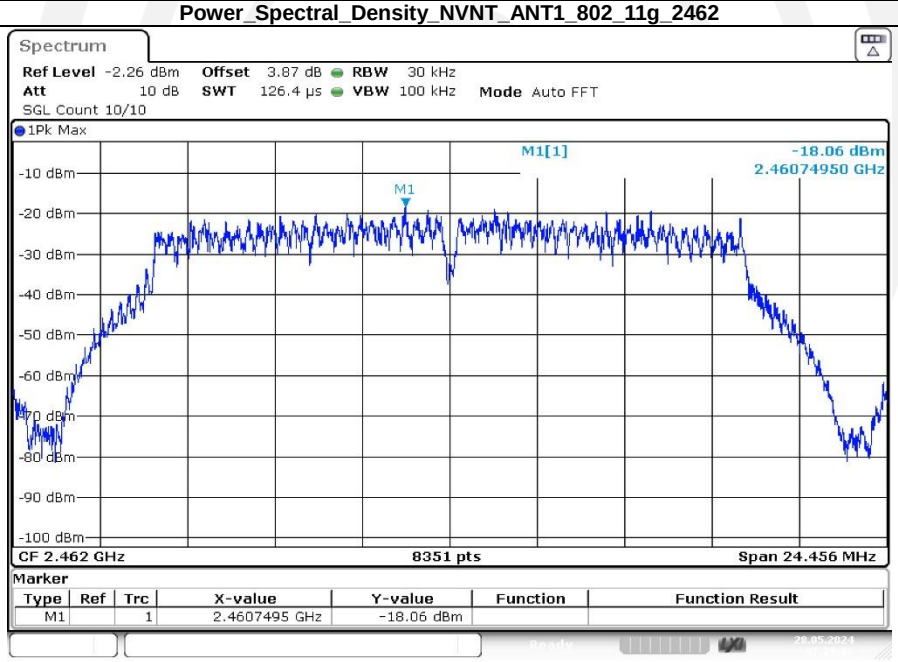
Power_Spectral_Density_NVNT_ANT1_802_11g_2462



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