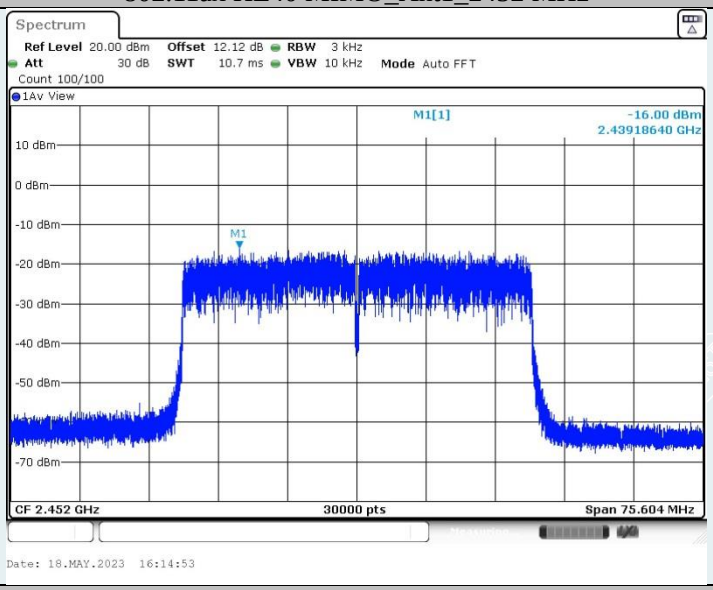
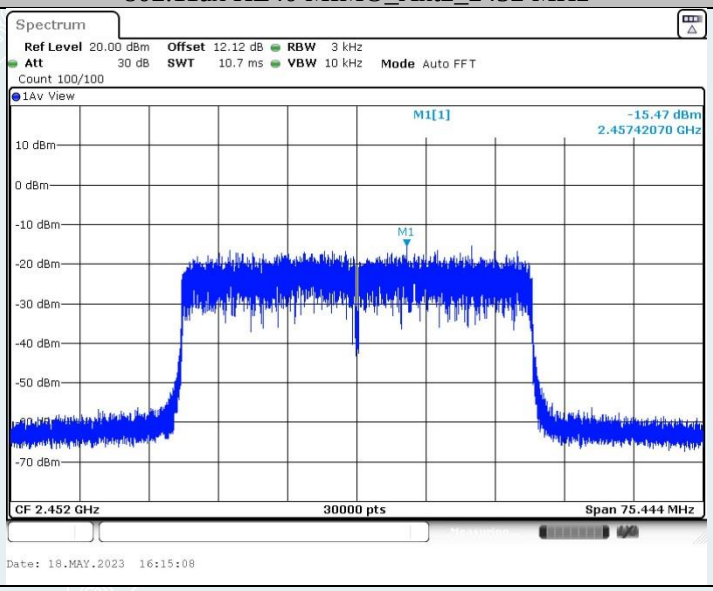
802.11ax HE40 MIMO_Ant1_2452 MHz



802.11ax HE40 MIMO_Ant2_2452 MHz



10. CONDUCTED BAND EDGES AND SPURIOUS EMISSIONS

10.1. LIMITS

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

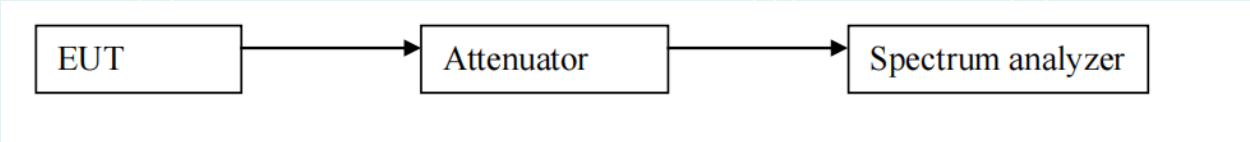
10.2. TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance.

Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum.

1) Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum.
2) Set the spectrum analyzer: RBW =100KHz; VBW =300KHz, Frequency range = 30MHz to 26.5GHz; Sweep = auto; Detector Function = Peak; Trace = Max hold.
3) Measure and record the results in the test report.
4) The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

10.3. TEST SETUP



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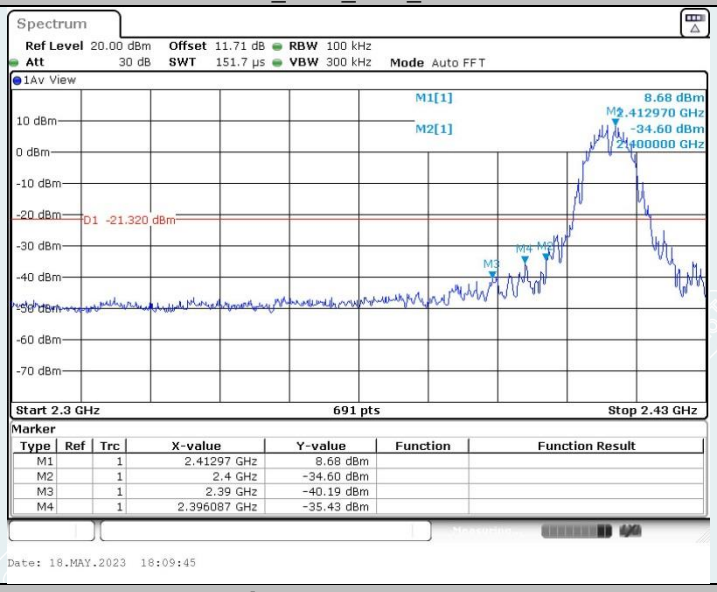
10.4. TEST RESULTS

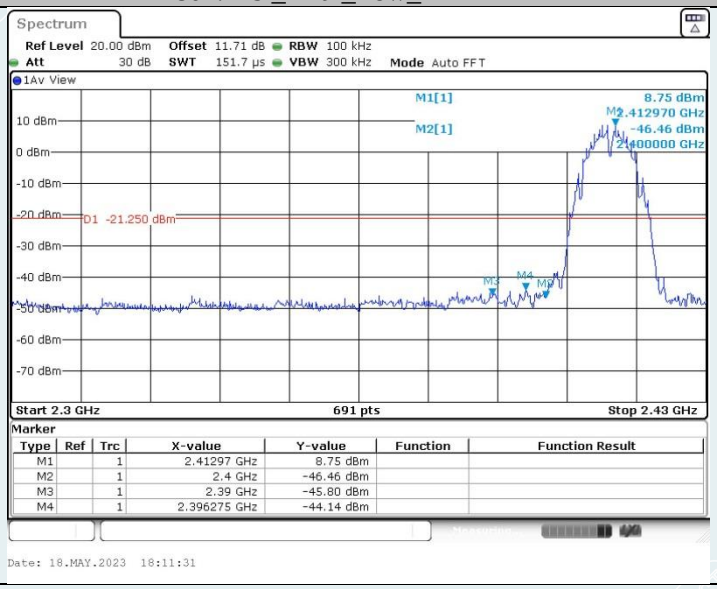
Pre-scan all modes and recorded the worst case results in this report (CDD).
Band edge
Environment: 22.5℃/54%RH/101.0kPa Voltage:AC120V/60Hz
Tested By:Huang Tianmei Date: 2023-05-18
CDD

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
802.11b	Ant1	Low	2412	8.68	-35.43	≤-21.32	PASS
	Ant2	Low	2412	8.75	-44.14	≤-21.25	PASS
	Ant1	High	2462	9.83	-45.36	≤-20.17	PASS
	Ant2	High	2462	9.70	-45.34	≤-20.3	PASS
802.11g	Ant1	Low	2412	5.32	-32.58	≤-24.68	PASS
	Ant2	Low	2412	5.69	-25.62	≤-24.31	PASS
	Ant1	High	2462	5.93	-37.06	≤-24.07	PASS
	Ant2	High	2462	5.65	-37.37	≤-24.35	PASS
11N20	Ant1	Low	2412	4.74	-28.37	≤-25.26	PASS
	Ant2	Low	2412	5.58	-24.84	≤-24.42	PASS
	Ant1	High	2462	5.39	-35.51	≤-24.61	PASS
	Ant2	High	2462	5.11	-32.69	≤-24.89	PASS
11N40	Ant1	Low	2422	0.54	-34.6	≤-29.46	PASS
	Ant2	Low	2422	0.91	-34.67	≤-29.09	PASS
	Ant1	High	2452	2.84	-32.17	≤-27.16	PASS
	Ant2	High	2452	2.88	-31.82	≤-27.12	PASS
VHT20	Ant1	Low	2412	4.81	-31.59	≤-25.19	PASS
	Ant2	Low	2412	5.34	-26.07	≤-24.66	PASS
	Ant1	High	2462	5.33	-33.72	≤-24.67	PASS
	Ant2	High	2462	5.22	-33.88	≤-24.78	PASS
VHT40	Ant1	Low	2422	-1.09	-41.04	≤-31.09	PASS
	Ant2	Low	2422	-1.27	-36.62	≤-31.27	PASS
	Ant1	High	2452	0.85	-42.29	≤-29.15	PASS
	Ant2	High	2452	0.85	-37.58	≤-29.15	PASS
11AX20	Ant1	Low	2412	2.15	-37.28	≤-27.85	PASS
	Ant2	Low	2412	2.56	-28.53	≤-27.44	PASS
	Ant1	High	2462	2.40	-43.77	≤-27.6	PASS
	Ant2	High	2462	2.27	-42.04	≤-27.73	PASS
11AX40	Ant1	Low	2422	-1.11	-41.06	≤-31.11	PASS
	Ant2	Low	2422	-1.20	-37.18	≤-31.2	PASS
	Ant1	High	2452	0.72	-43.72	≤-29.28	PASS
	Ant2	High	2452	0.92	-36.86	≤-29.08	PASS

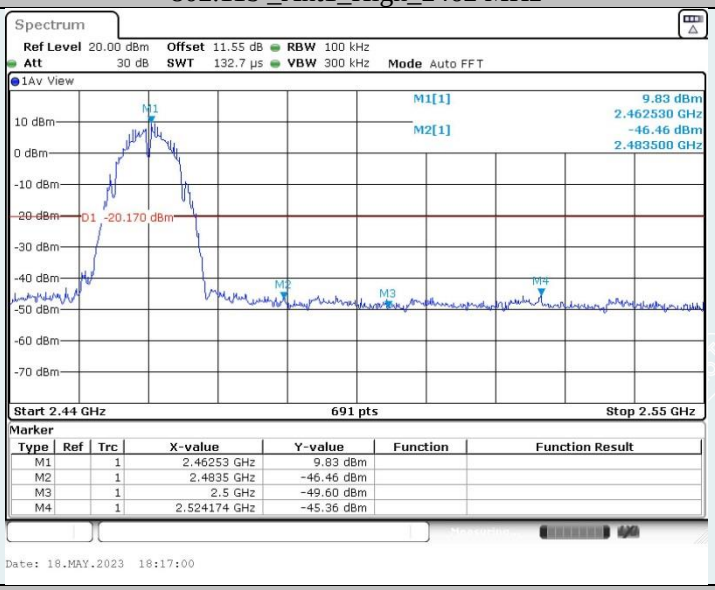
802.11b _Ant1_Low_2412 MHz



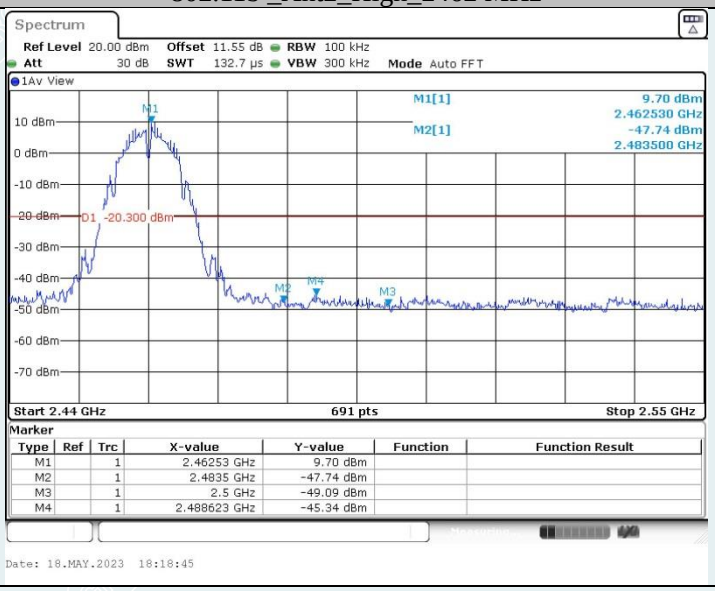
802.11b _Ant2_Low_2412 MHz



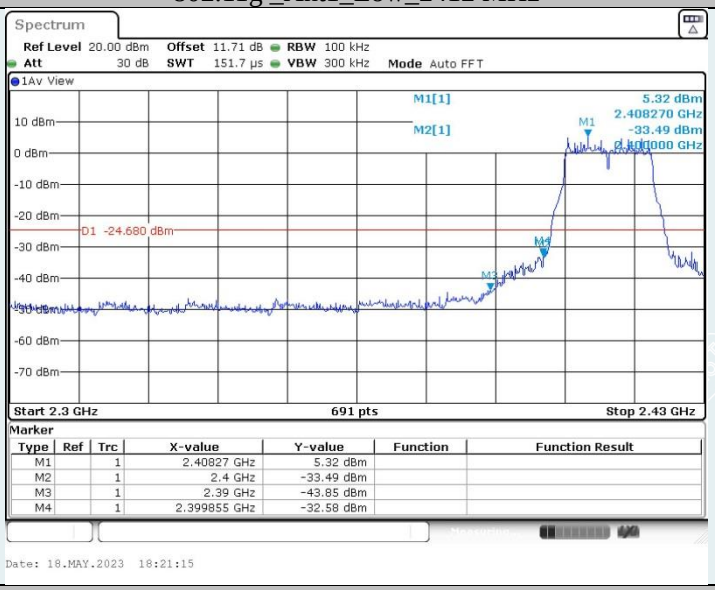
802.11b _Ant1_High_2462 MHz



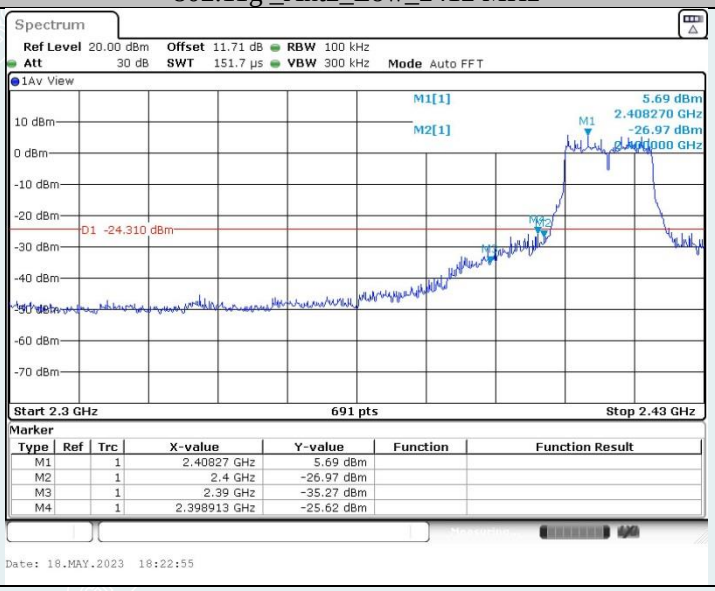
802.11b _Ant2_High_2462 MHz



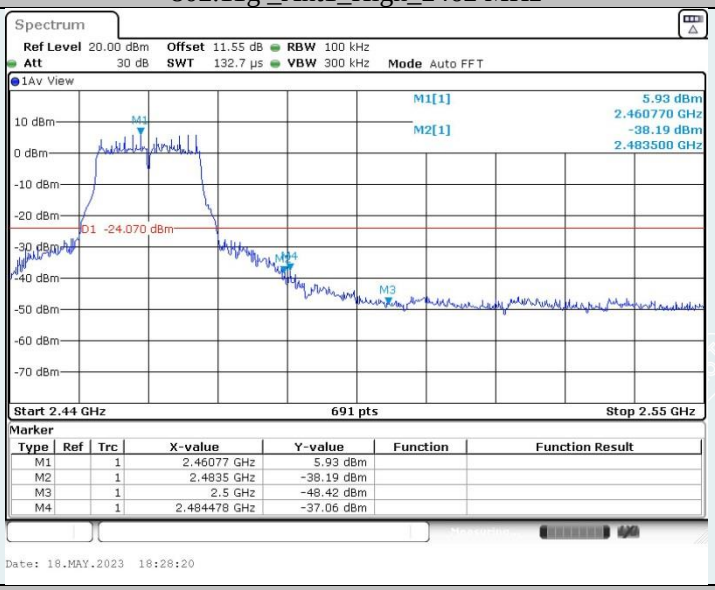
802.11g _Ant1_Low_2412 MHz



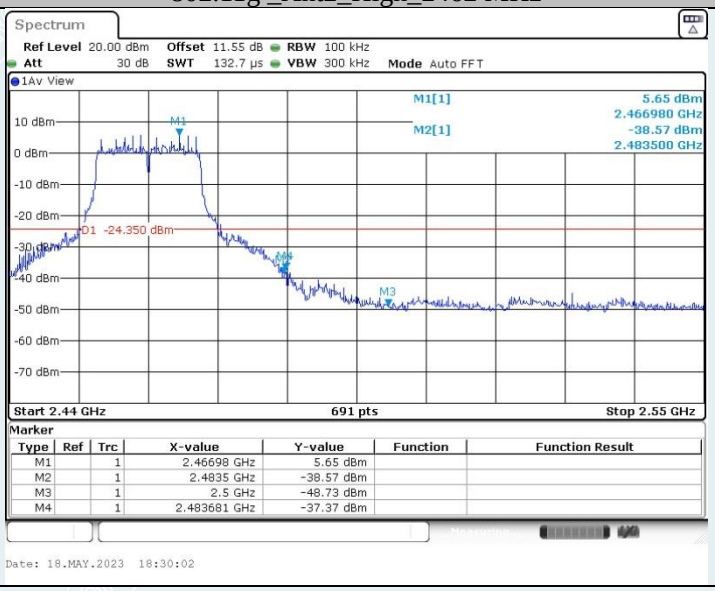
802.11g _Ant2_Low_2412 MHz

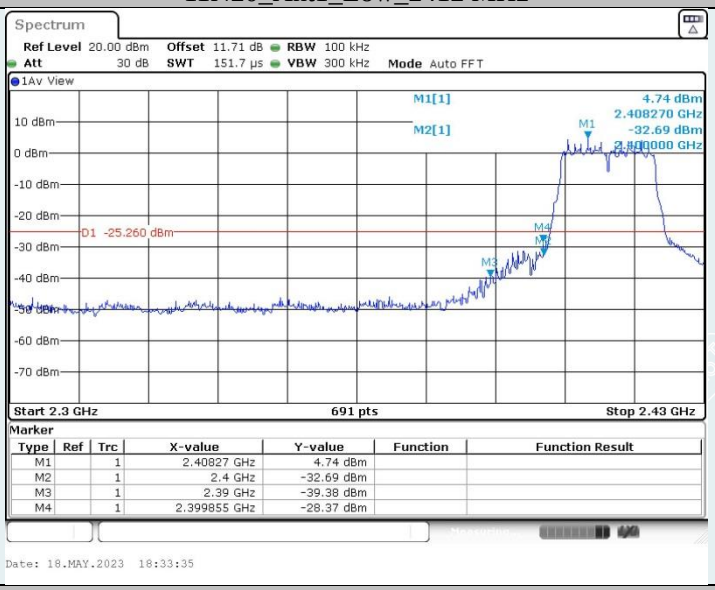


802.11g _Ant1_High_2462 MHz



802.11g _Ant2_High_2462 MHz



11N20_Ant1_Low_2412 MHz


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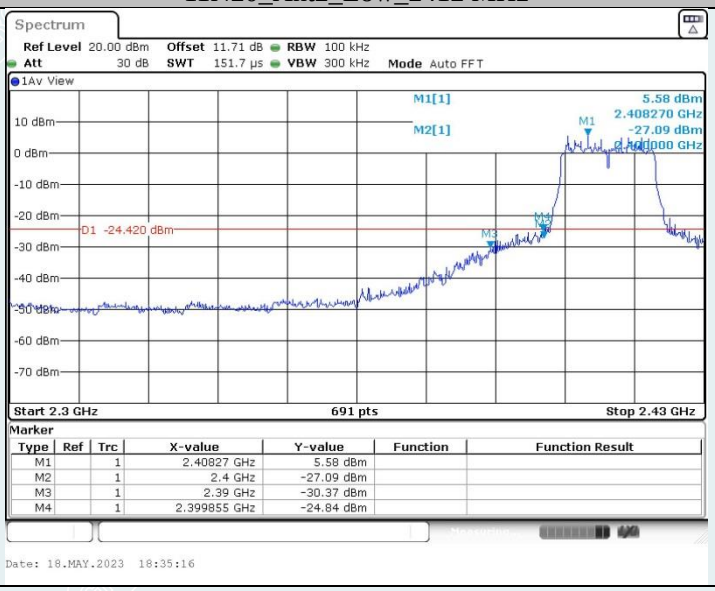
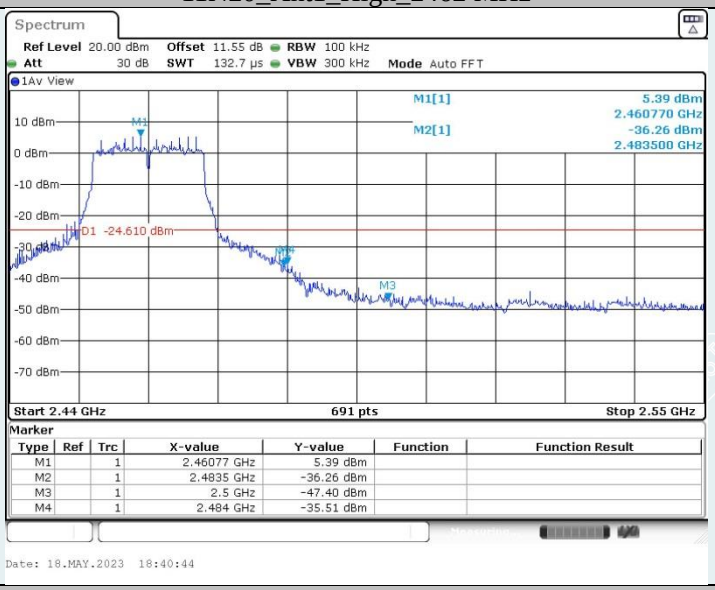
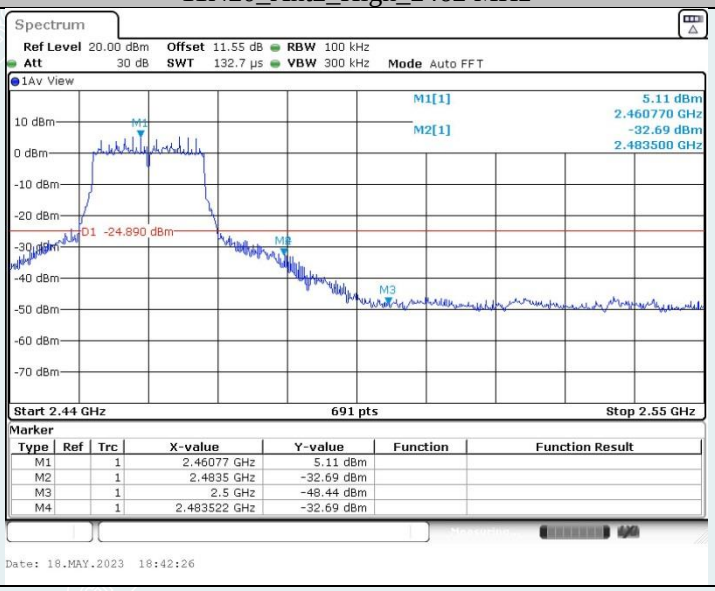


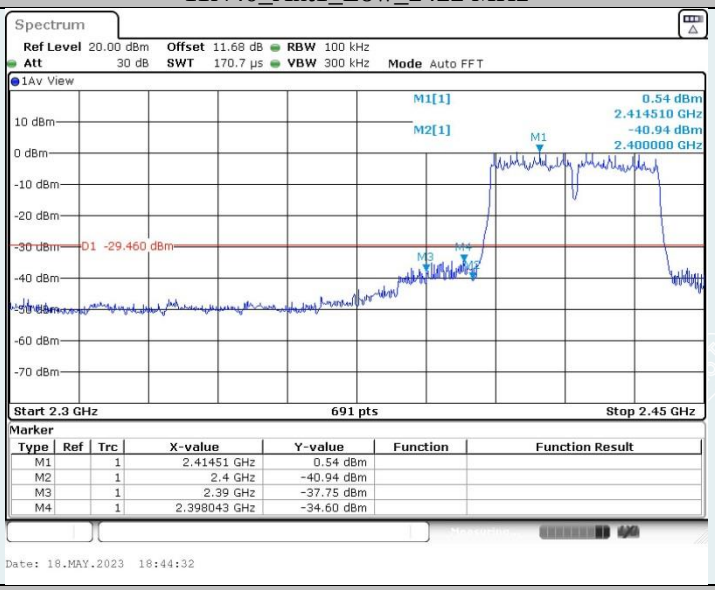
11N20_Ant1_High_2462 MHz



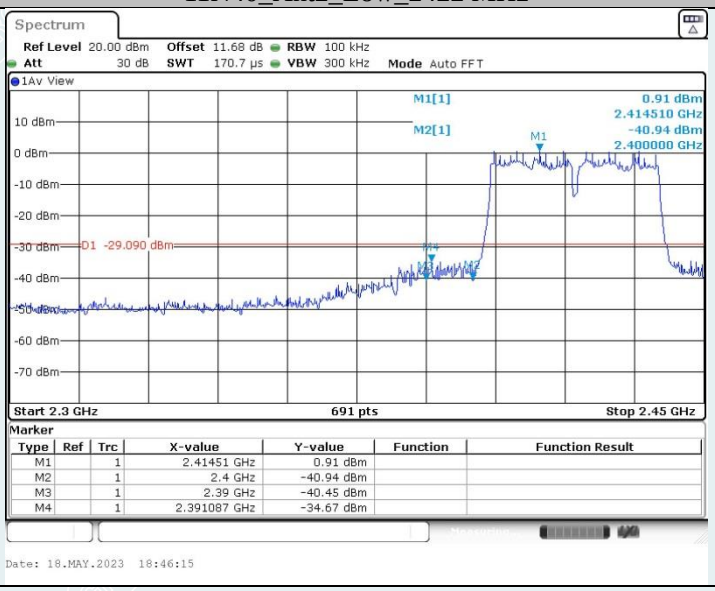
11N20_Ant2_High_2462 MHz



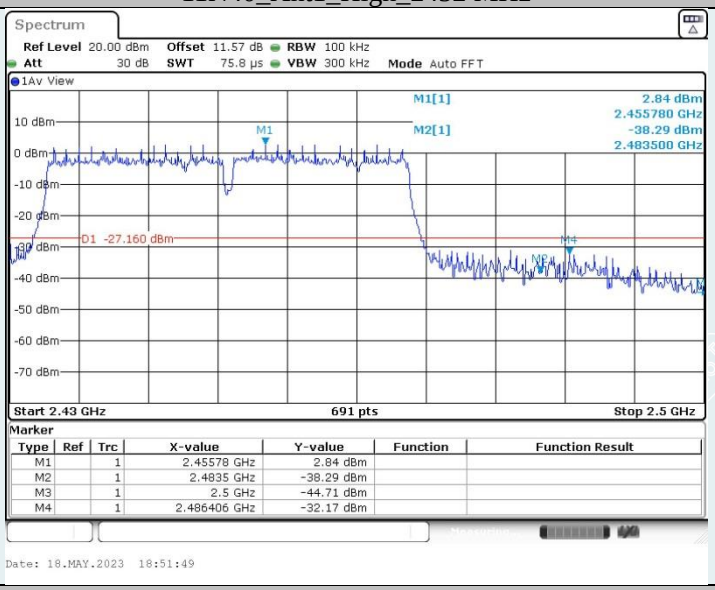
11N40_Ant1_Low_2422 MHz



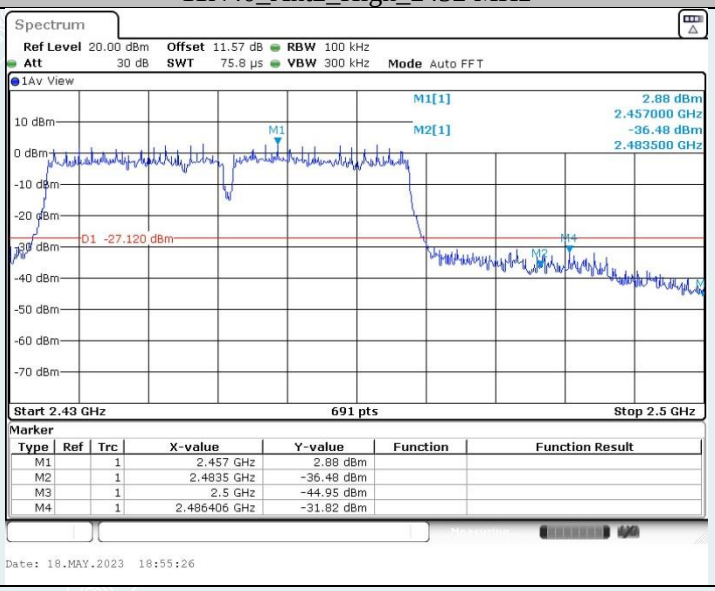
11N40_Ant2_Low_2422 MHz



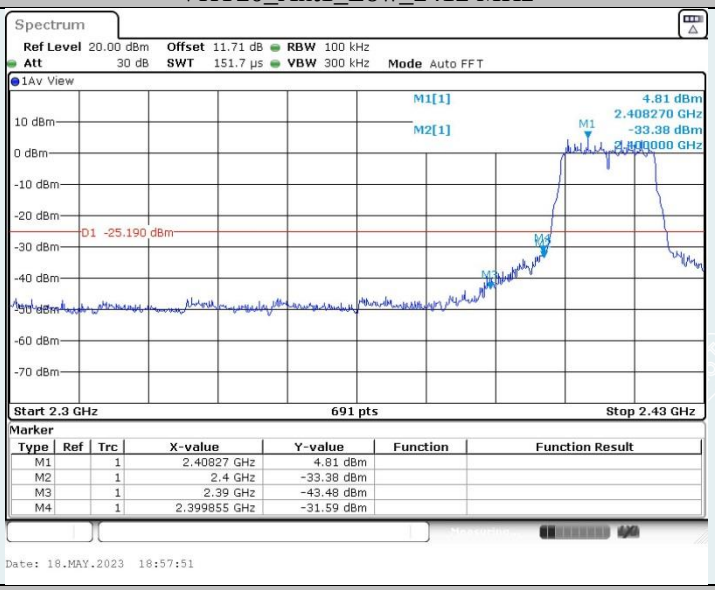
11N40_Ant1_High_2452 MHz



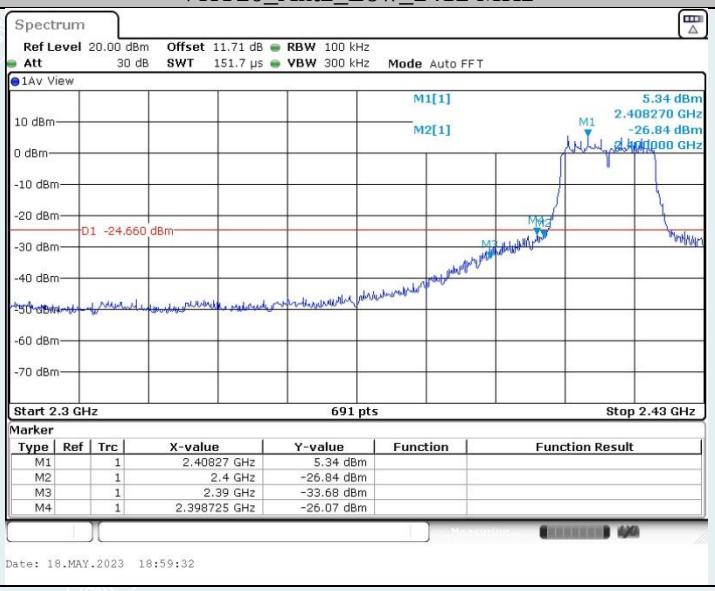
11N40_Ant2_High_2452 MHz



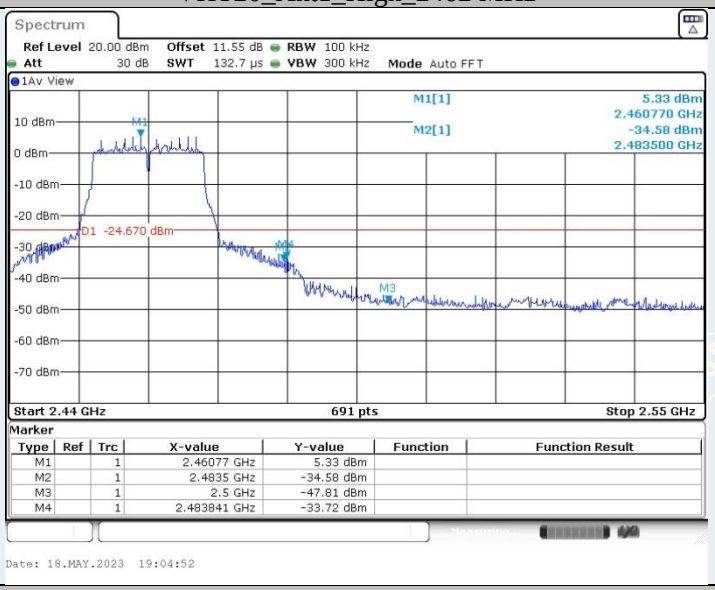
VHT20_Ant1_Low_2412 MHz



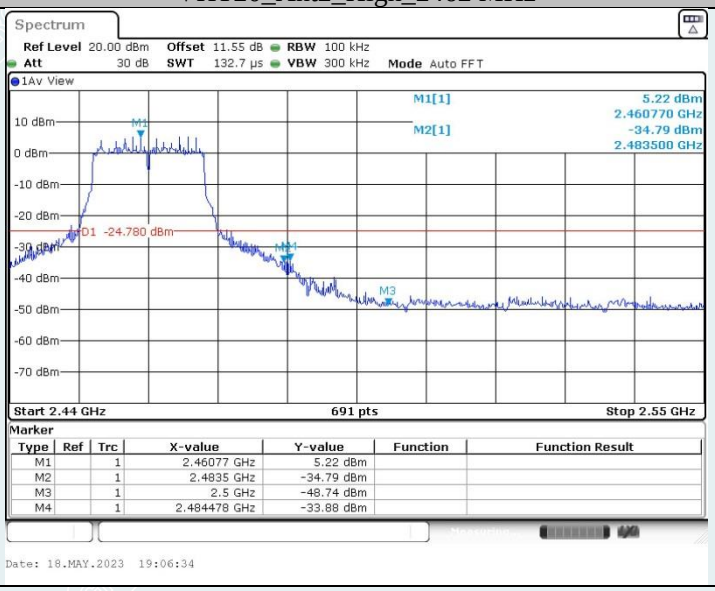
VHT20_Ant2_Low_2412 MHz



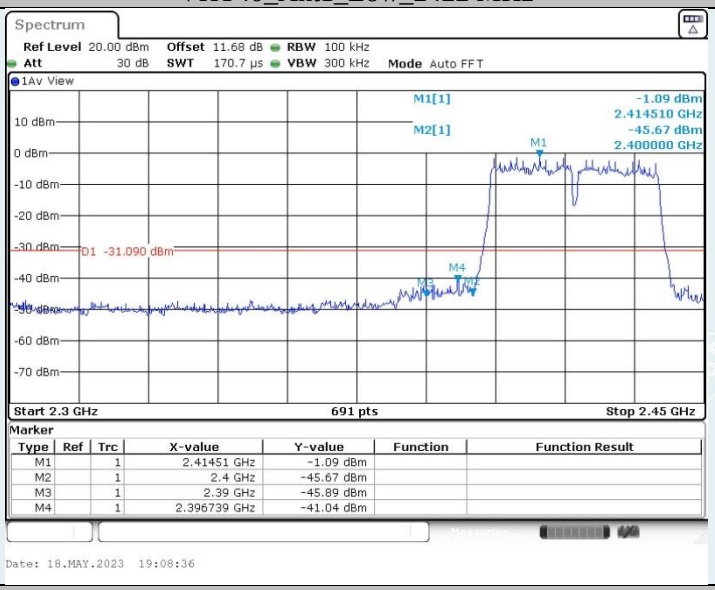
VHT20_Ant1_High_2462 MHz



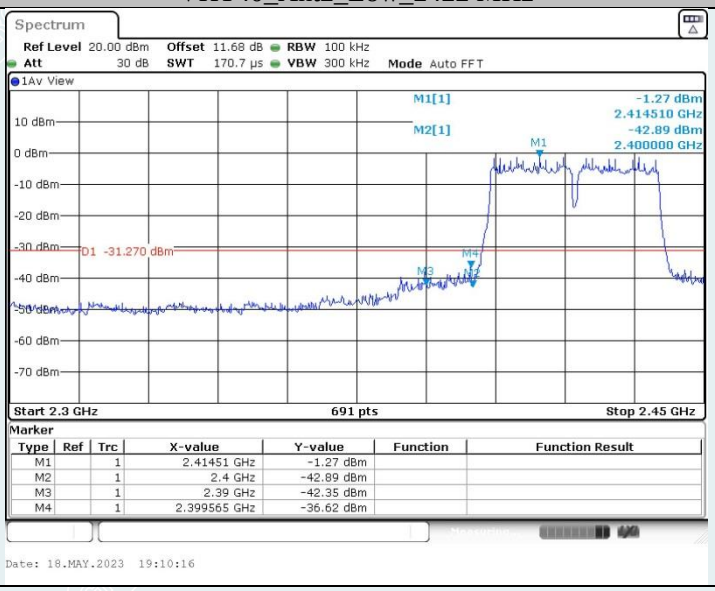
VHT20_Ant2_High_2462 MHz



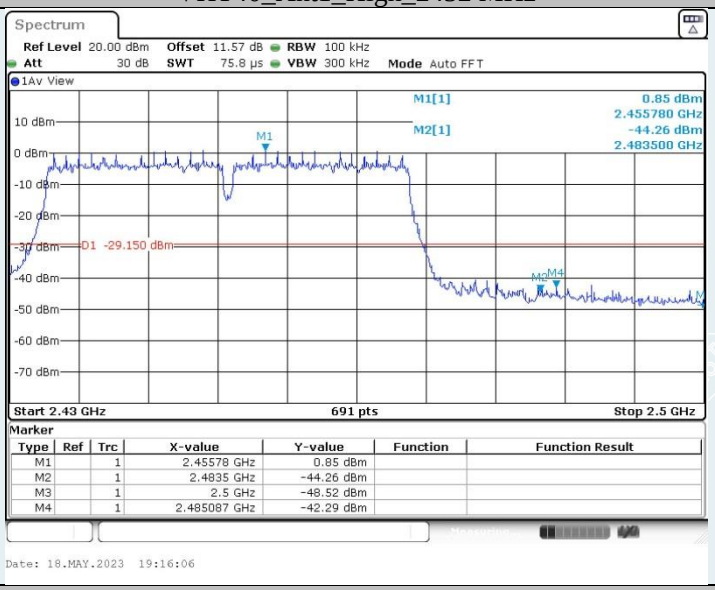
VHT40_Ant1_Low_2422 MHz



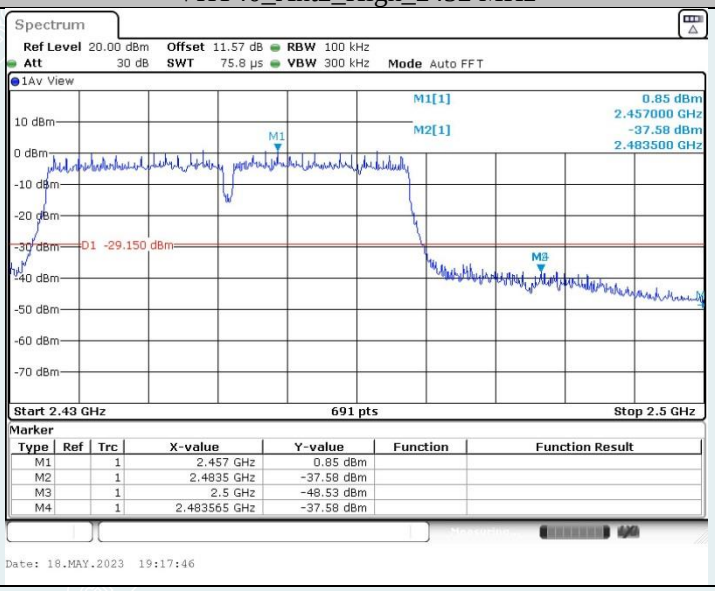
VHT40_Ant2_Low_2422 MHz



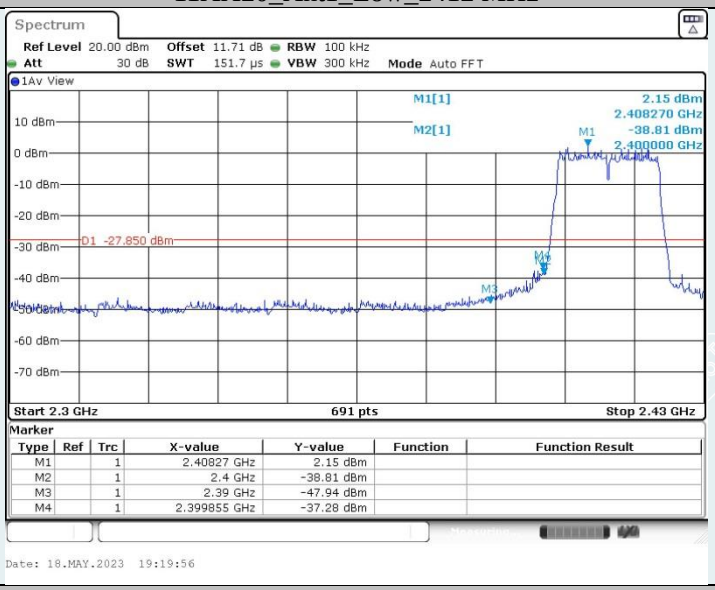
VHT40_Ant1_High_2452 MHz



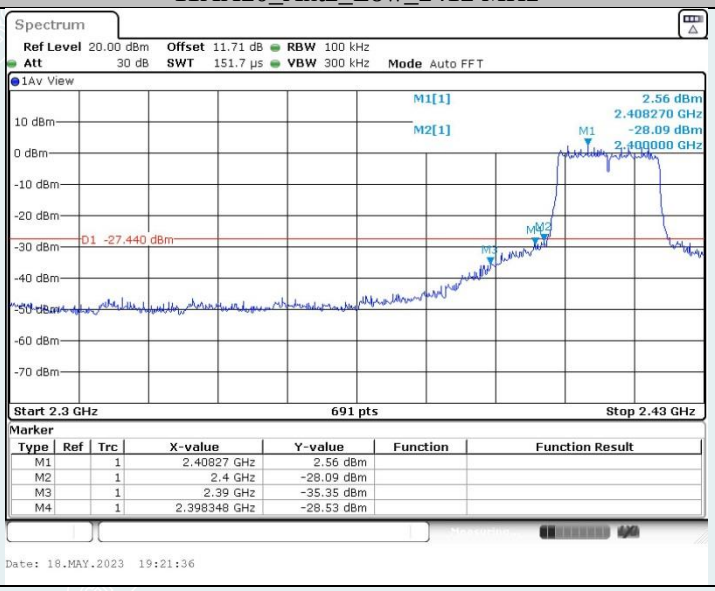
VHT40_Ant2_High_2452 MHz



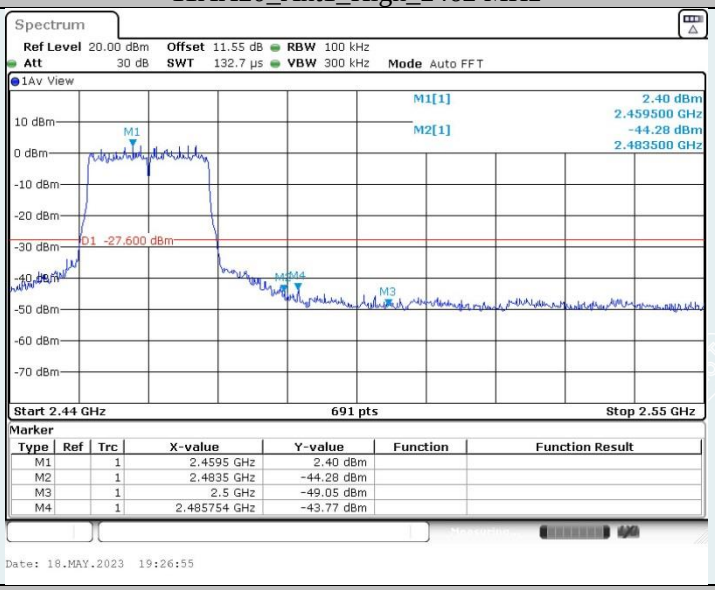
11AX20_Ant1_Low_2412 MHz



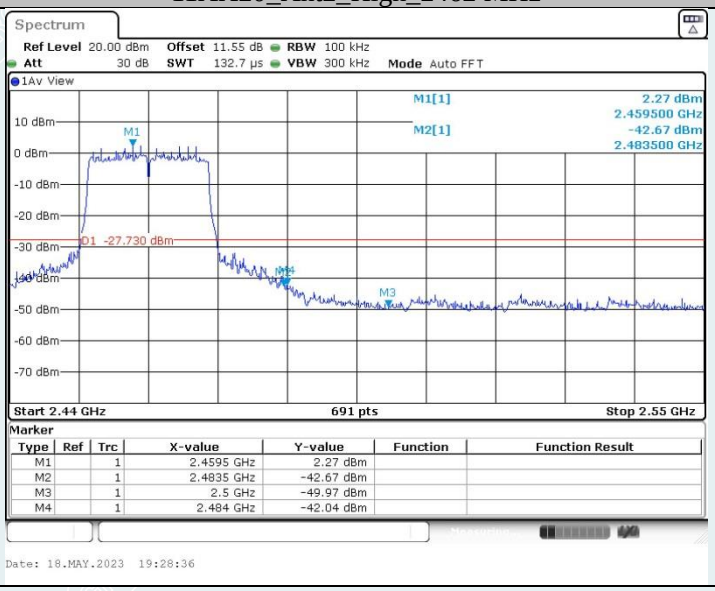
11AX20_Ant2_Low_2412 MHz



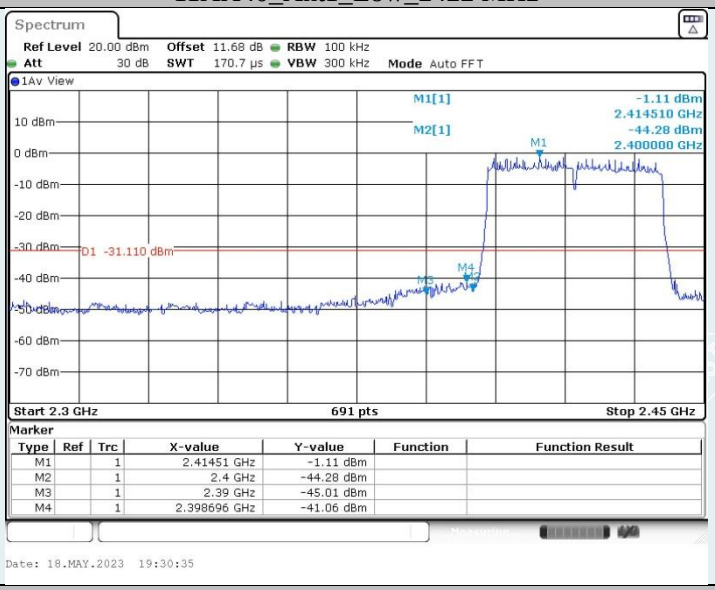
11AX20_Ant1_High_2462 MHz



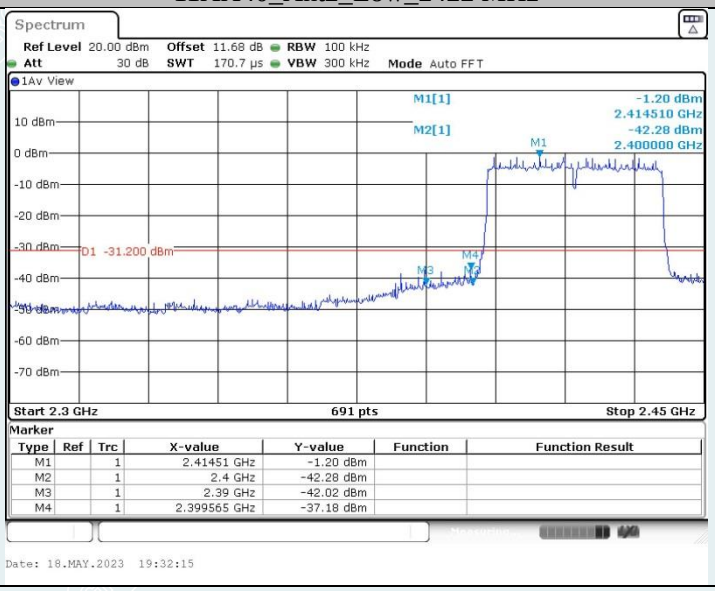
11AX20_Ant2_High_2462 MHz



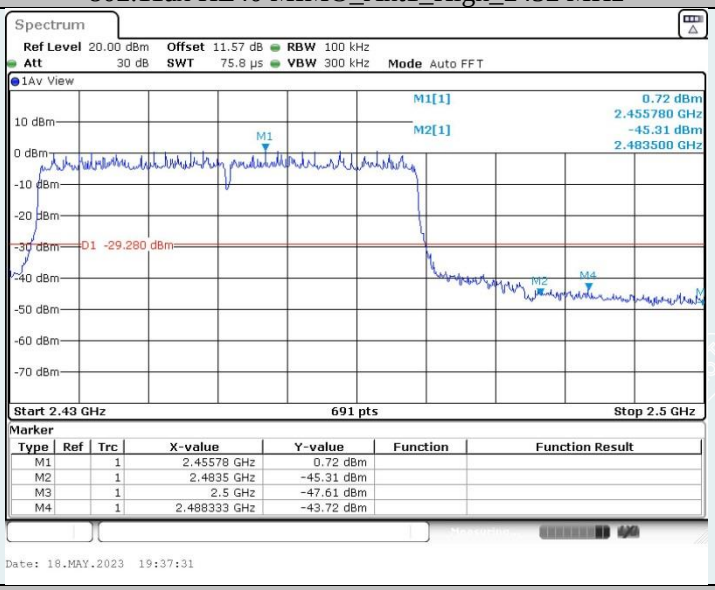
11AX40_Ant1_Low_2422 MHz



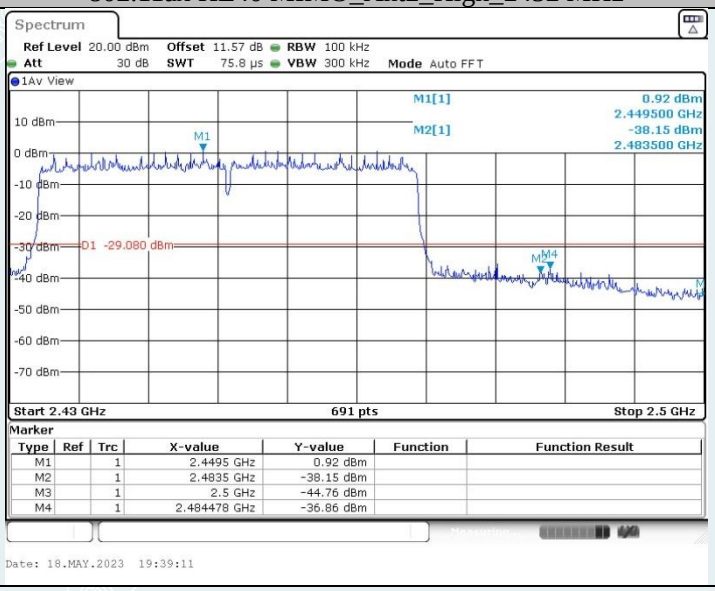
11AX40_Ant2_Low_2422 MHz



802.11ax HE40 MIMO_Ant1_High_2452 MHz



802.11ax HE40 MIMO_Ant2_High_2452 MHz



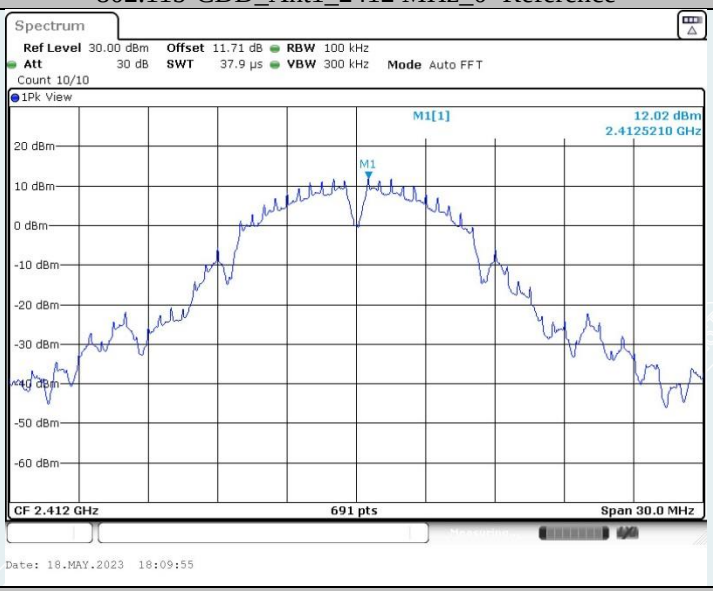
Conducted Spurious Emission:
Pre-scan all modes and recorded the worst case results in this report (CDD).
Test Result
Environment: 22.5℃/54%RH/101.0kPa Voltage:AC120V/60Hz
Tested By:Huang Tianmei Date: 2023-05-18

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
802.11b-CDD	Ant1	2412	Reference	12.02	12.02	---	PASS
			30~1000	12.02	-62.23	≤-17.98	PASS
			1000~26500	12.02	-46.32	≤-17.98	PASS
	Ant2	2412	Reference	12.23	12.23	---	PASS
			30~1000	12.23	-62.8	≤-17.77	PASS
			1000~26500	12.23	-46.46	≤-17.77	PASS
	Ant1	2437	Reference	11.65	11.65	---	PASS
			30~1000	11.65	-62.83	≤-18.35	PASS
			1000~26500	11.65	-46.44	≤-18.35	PASS
	Ant2	2437	Reference	12.15	12.15	---	PASS
			30~1000	12.15	-62.73	≤-17.85	PASS
			1000~26500	12.15	-46.53	≤-17.85	PASS
	Ant1	2462	Reference	11.62	11.62	---	PASS
			30~1000	11.62	-62.44	≤-18.38	PASS
			1000~26500	11.62	-46.79	≤-18.38	PASS
	Ant2	2462	Reference	11.66	11.66	---	PASS
			30~1000	11.66	-62.18	≤-18.34	PASS
			1000~26500	11.66	-46.54	≤-18.34	PASS
802.11g-CDD	Ant1	2412	Reference	7.56	7.56	---	PASS
			30~1000	7.56	-62.74	≤-22.44	PASS
			1000~26500	7.56	-46.32	≤-22.44	PASS
	Ant2	2412	Reference	8.03	8.03	---	PASS
			30~1000	8.03	-62.65	≤-21.97	PASS
			1000~26500	8.03	-46.21	≤-21.97	PASS
	Ant1	2437	Reference	7.81	7.81	---	PASS
			30~1000	7.81	-63.03	≤-22.19	PASS
			1000~26500	7.81	-46.49	≤-22.19	PASS
	Ant2	2437	Reference	8.26	8.26	---	PASS
			30~1000	8.26	-62.4	≤-21.74	PASS
			1000~26500	8.26	-46.57	≤-21.74	PASS
	Ant1	2462	Reference	7.84	7.84	---	PASS
			30~1000	7.84	-62.87	≤-22.16	PASS
			1000~26500	7.84	-46.31	≤-22.16	PASS
	Ant2	2462	Reference	7.94	7.94	---	PASS
			30~1000	7.94	-62.33	≤-22.06	PASS
			1000~26500	7.94	-46.4	≤-22.06	PASS

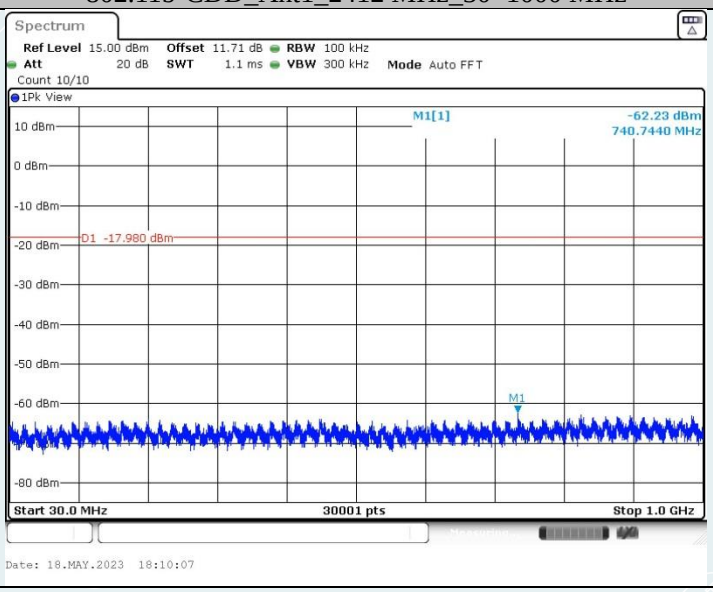
802.11n HT20 MIMO	Ant1	2412	Reference	6.95	6.95	---	PASS
			30~1000	6.95	-58.17	≤-23.05	PASS
			1000~26500	6.95	-46.38	≤-23.05	PASS
	Ant2	2412	Reference	7.86	7.86	---	PASS
			30~1000	7.86	-62.23	≤-22.14	PASS
			1000~26500	7.86	-46.38	≤-22.14	PASS
	Ant1	2437	Reference	7.17	7.17	---	PASS
			30~1000	7.17	-61.99	≤-22.83	PASS
			1000~26500	7.17	-46.38	≤-22.83	PASS
	Ant2	2437	Reference	7.49	7.49	---	PASS
			30~1000	7.49	-62.36	≤-22.51	PASS
			1000~26500	7.49	-46.32	≤-22.51	PASS
	Ant1	2462	Reference	7.30	7.30	---	PASS
			30~1000	7.30	-63.43	≤-22.7	PASS
			1000~26500	7.30	-46.32	≤-22.7	PASS
	Ant2	2462	Reference	7.44	7.44	---	PASS
			30~1000	7.44	-62.93	≤-22.56	PASS
			1000~26500	7.44	-46.42	≤-22.56	PASS
802.11n HT40 MIMO	Ant1	2422	Reference	3.42	3.42	---	PASS
			30~1000	3.42	-62.76	≤-26.58	PASS
			1000~26500	3.42	-46.4	≤-26.58	PASS
	Ant2	2422	Reference	4.04	4.04	---	PASS
			30~1000	4.04	-62.95	≤-25.96	PASS
			1000~26500	4.04	-46.54	≤-25.96	PASS
	Ant1	2437	Reference	3.47	3.47	---	PASS
			30~1000	3.47	-63.22	≤-26.53	PASS
			1000~26500	3.47	-46.36	≤-26.53	PASS
	Ant2	2437	Reference	3.62	3.62	---	PASS
			30~1000	3.62	-62.97	≤-26.38	PASS
			1000~26500	3.62	-46.53	≤-26.38	PASS
	Ant1	2452	Reference	3.84	3.84	---	PASS
			30~1000	3.84	-62.97	≤-26.16	PASS
			1000~26500	3.84	-46.3	≤-26.16	PASS
	Ant2	2452	Reference	3.83	3.83	---	PASS
			30~1000	3.83	-61.34	≤-26.17	PASS
			1000~26500	3.83	-46.52	≤-26.17	PASS
VHT20 MIMO	Ant1	2412	Reference	7.04	7.04	---	PASS
			30~1000	7.04	-62.51	≤-22.96	PASS
			1000~26500	7.04	-45.89	≤-22.96	PASS
	Ant2	2412	Reference	7.86	7.86	---	PASS
			30~1000	7.86	-62.86	≤-22.14	PASS
			1000~26500	7.86	-46.26	≤-22.14	PASS
	Ant1	2437	Reference	7.22	7.22	---	PASS
			30~1000	7.22	-62.72	≤-22.78	PASS
			1000~26500	7.22	-46.53	≤-22.78	PASS
	Ant2	2437	Reference	7.80	7.80	---	PASS
			30~1000	7.80	-63	≤-22.2	PASS
			1000~26500	7.80	-46.25	≤-22.2	PASS
	Ant1	2462	Reference	7.26	7.26	---	PASS
			30~1000	7.26	-63.22	≤-22.74	PASS
			1000~26500	7.26	-46.55	≤-22.74	PASS
	Ant2	2462	Reference	7.52	7.52	---	PASS
			30~1000	7.52	-63.2	≤-22.48	PASS
			1000~26500	7.52	-46.28	≤-22.48	PASS

VHT40 MIMO	Ant1	2422	Reference	1.72	1.72	---	PASS
			30~1000	1.72	-62.06	≤-28.28	PASS
			1000~26500	1.72	-46.22	≤-28.28	PASS
	Ant2	2422	Reference	2.37	2.37	---	PASS
			30~1000	2.37	-62.43	≤-27.63	PASS
			1000~26500	2.37	-46.51	≤-27.63	PASS
	Ant1	2437	Reference	1.60	1.60	---	PASS
			30~1000	1.60	-63.22	≤-28.4	PASS
			1000~26500	1.60	-45.97	≤-28.4	PASS
	Ant2	2437	Reference	1.53	1.53	---	PASS
			30~1000	1.53	-63.12	≤-28.47	PASS
			1000~26500	1.53	-46.6	≤-28.47	PASS
	Ant1	2452	Reference	1.79	1.79	---	PASS
			30~1000	1.79	-62.9	≤-28.21	PASS
			1000~26500	1.79	-46.28	≤-28.21	PASS
	Ant2	2452	Reference	1.84	1.84	---	PASS
			30~1000	1.84	-62.84	≤-28.16	PASS
			1000~26500	1.84	-46.07	≤-28.16	PASS
802.11ax HE20 MIMO	Ant1	2412	Reference	4.36	4.36	---	PASS
			30~1000	4.36	-62.76	≤-25.64	PASS
			1000~26500	4.36	-46.41	≤-25.64	PASS
	Ant2	2412	Reference	4.75	4.75	---	PASS
			30~1000	4.75	-62.91	≤-25.25	PASS
			1000~26500	4.75	-46.27	≤-25.25	PASS
	Ant1	2437	Reference	4.43	4.43	---	PASS
			30~1000	4.43	-63.05	≤-25.57	PASS
			1000~26500	4.43	-46.37	≤-25.57	PASS
	Ant2	2437	Reference	4.84	4.84	---	PASS
			30~1000	4.84	-62.21	≤-25.16	PASS
			1000~26500	4.84	-46.25	≤-25.16	PASS
	Ant1	2462	Reference	4.36	4.36	---	PASS
			30~1000	4.36	-62.46	≤-25.64	PASS
			1000~26500	4.36	-46.07	≤-25.64	PASS
	Ant2	2462	Reference	4.40	4.40	---	PASS
			30~1000	4.40	-62.44	≤-25.6	PASS
			1000~26500	4.40	-46.41	≤-25.6	PASS
802.11ax HE40 MIMO	Ant1	2422	Reference	1.84	1.84	---	PASS
			30~1000	1.84	-62.11	≤-28.16	PASS
			1000~26500	1.84	-46.13	≤-28.16	PASS
	Ant2	2422	Reference	2.15	2.15	---	PASS
			30~1000	2.15	-62.77	≤-27.85	PASS
			1000~26500	2.15	-46.44	≤-27.85	PASS
	Ant1	2437	Reference	1.66	1.66	---	PASS
			30~1000	1.66	-62.69	≤-28.34	PASS
			1000~26500	1.66	-46.54	≤-28.34	PASS
	Ant2	2437	Reference	1.80	1.80	---	PASS
			30~1000	1.80	-62.61	≤-28.2	PASS
			1000~26500	1.80	-46.52	≤-28.2	PASS
	Ant1	2452	Reference	1.66	1.66	---	PASS
			30~1000	1.66	-63.12	≤-28.34	PASS
			1000~26500	1.66	-46.43	≤-28.34	PASS
	Ant2	2452	Reference	1.63	1.63	---	PASS
			30~1000	1.63	-62.53	≤-28.37	PASS
			1000~26500	1.63	-46.04	≤-28.37	PASS

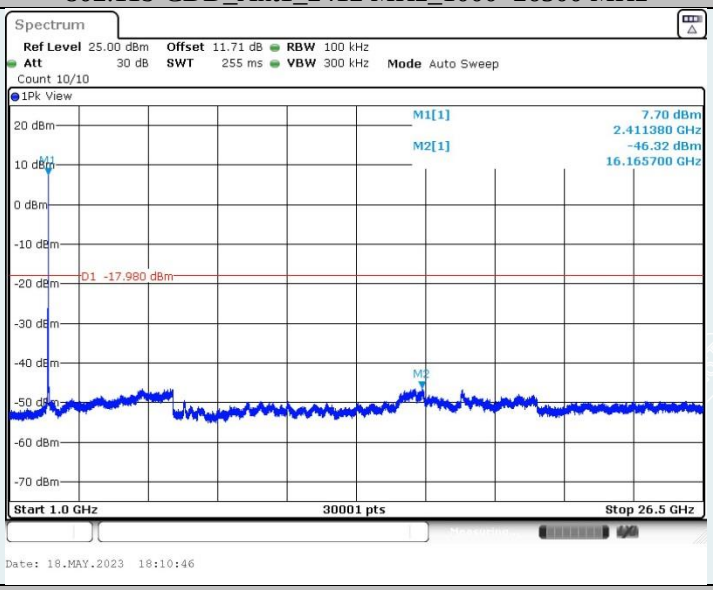
802.11b-CDD_Ant1_2412 MHz_0~Reference



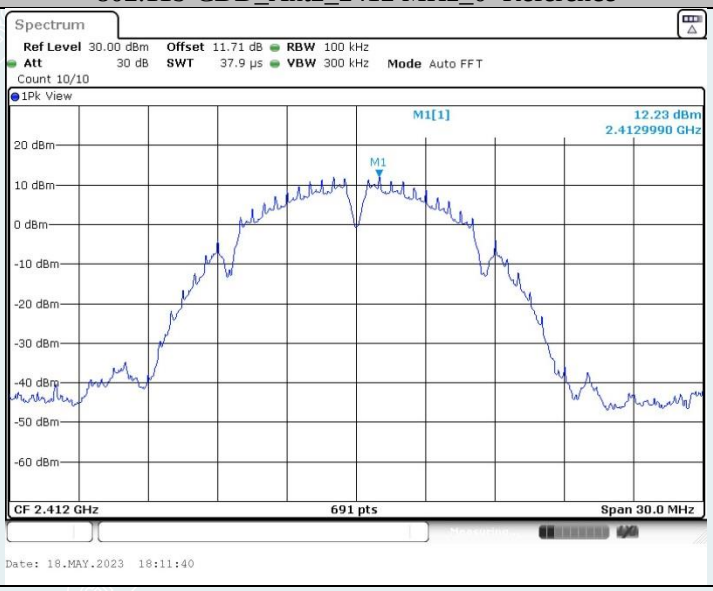
802.11b-CDD_Ant1_2412 MHz_30~1000 MHz



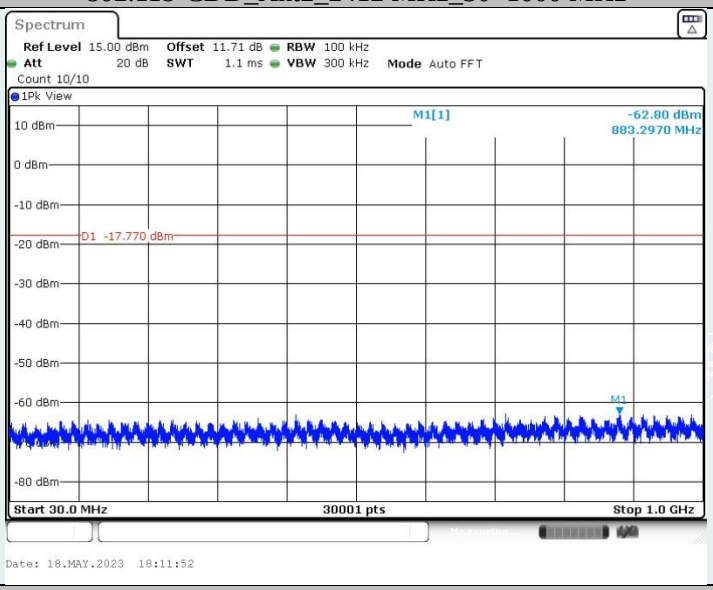
802.11b-CDD_Ant1_2412 MHz_1000~26500 MHz



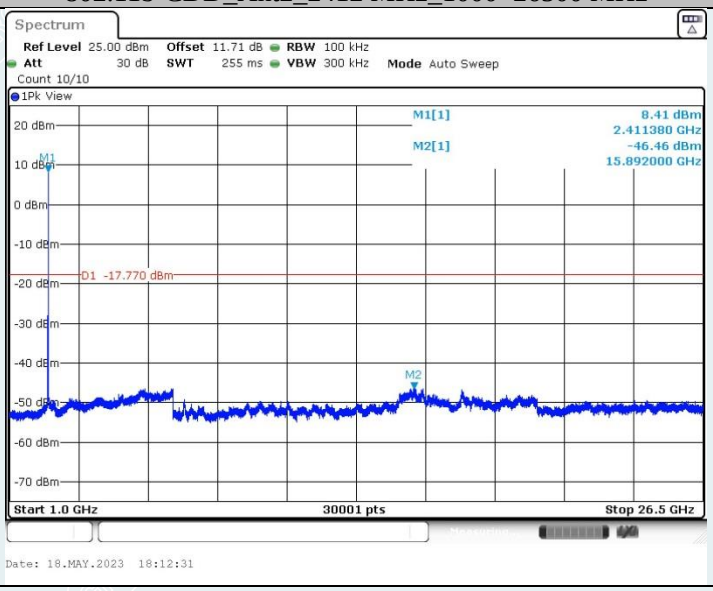
802.11b-CDD_Ant2_2412 MHz_0~Reference



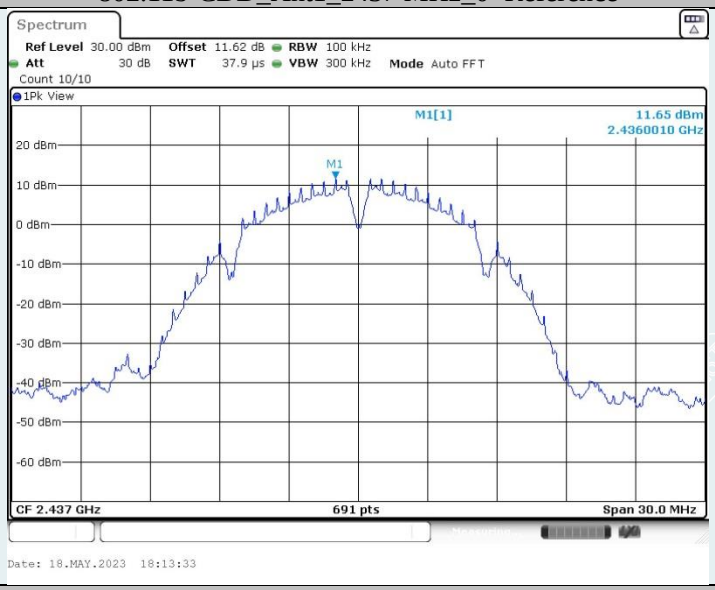
802.11b-CDD_Ant2_2412 MHz_30~1000 MHz



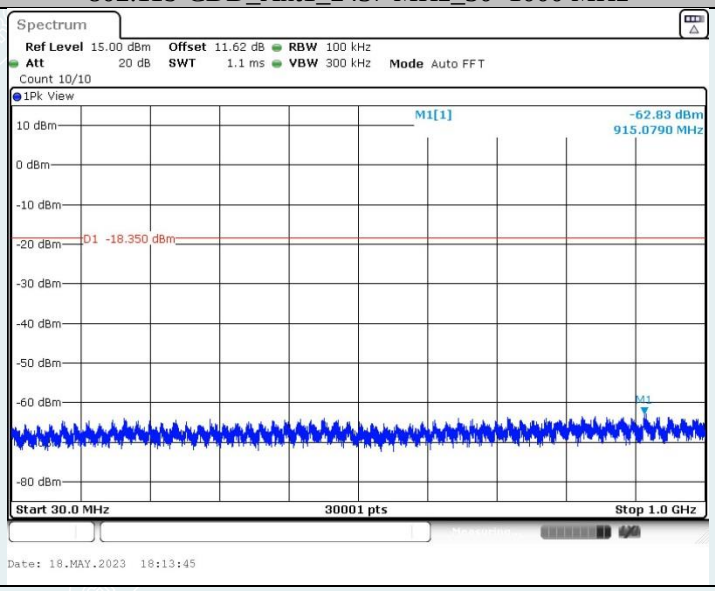
802.11b-CDD_Ant2_2412 MHz_1000~26500 MHz



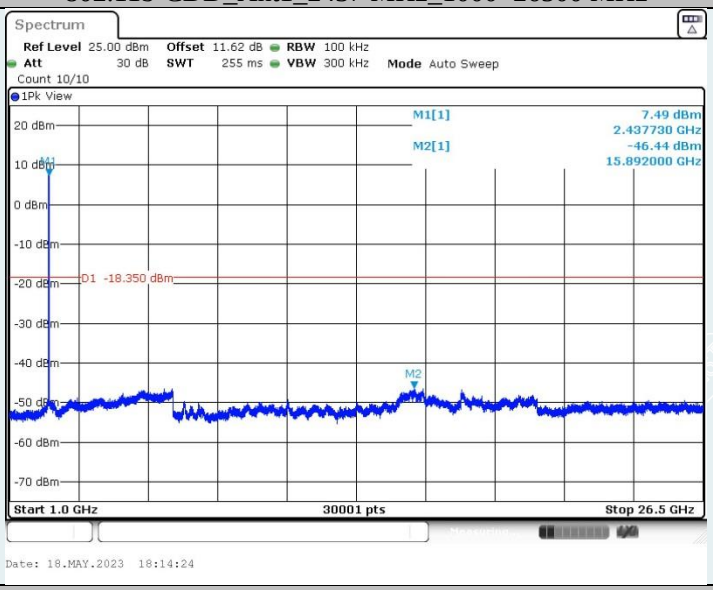
802.11b-CDD_Ant1_2437 MHz_0~Reference



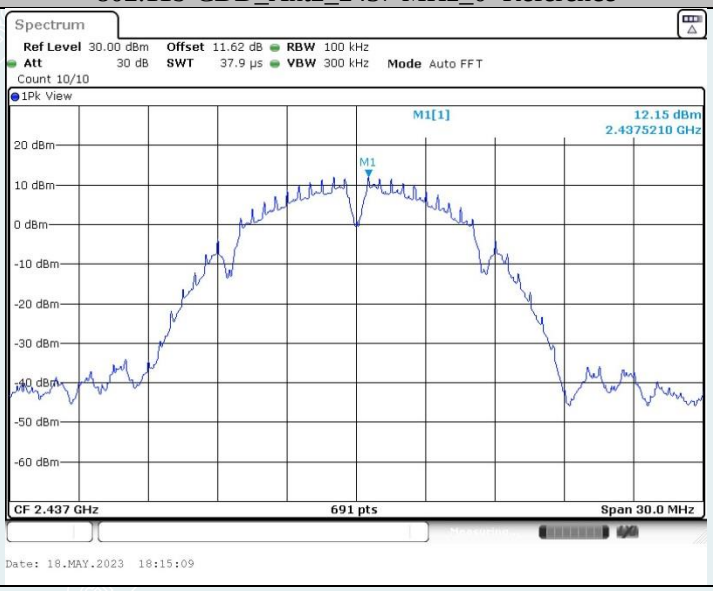
802.11b-CDD_Ant1_2437 MHz_30~1000 MHz



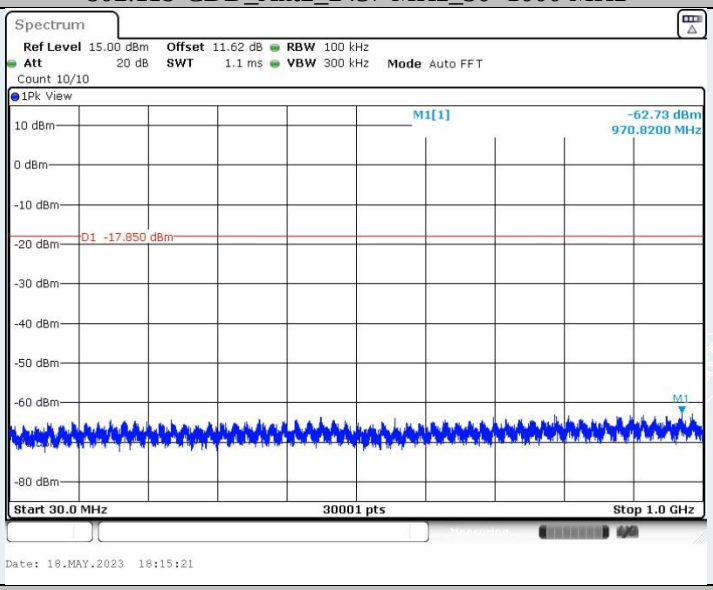
802.11b-CDD_Ant1_2437 MHz_1000~26500 MHz



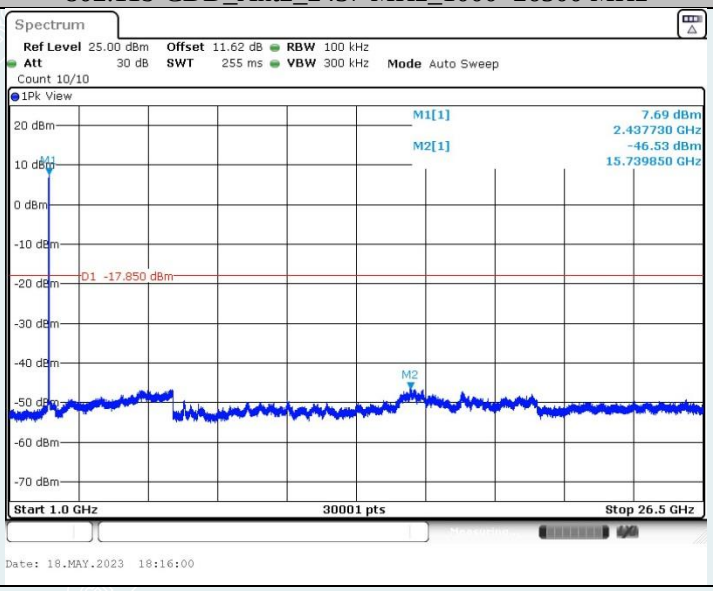
802.11b-CDD_Ant2_2437 MHz_0~Reference



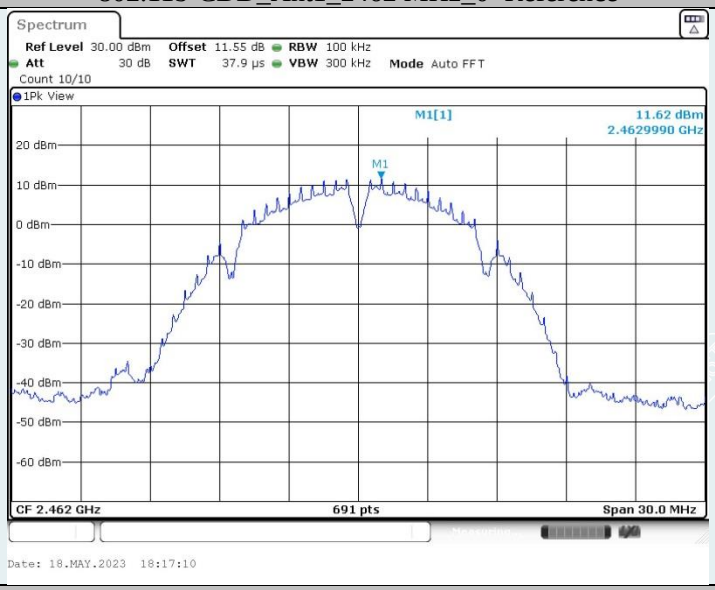
802.11b-CDD_Ant2_2437 MHz_30~1000 MHz



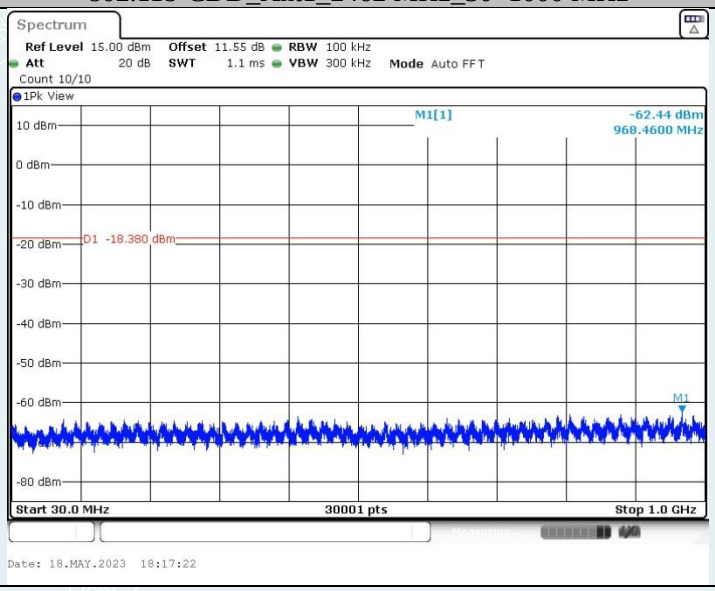
802.11b-CDD_Ant2_2437 MHz_1000~26500 MHz



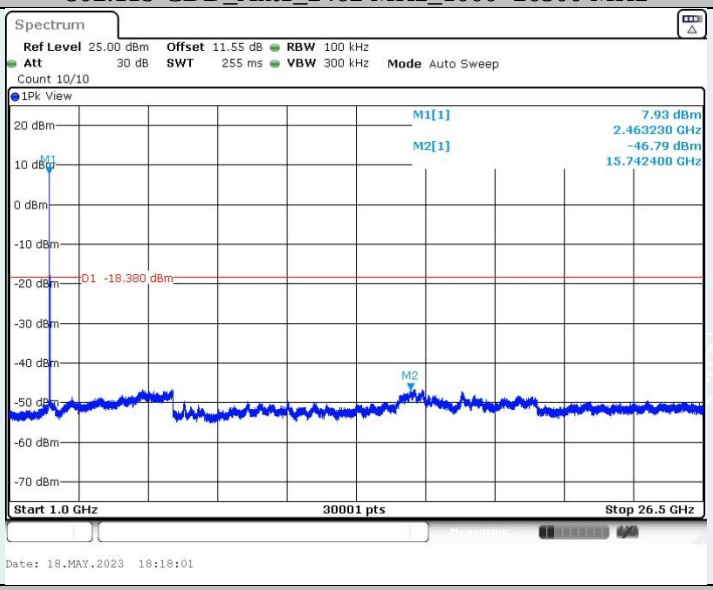
802.11b-CDD_Ant1_2462 MHz_0~Reference



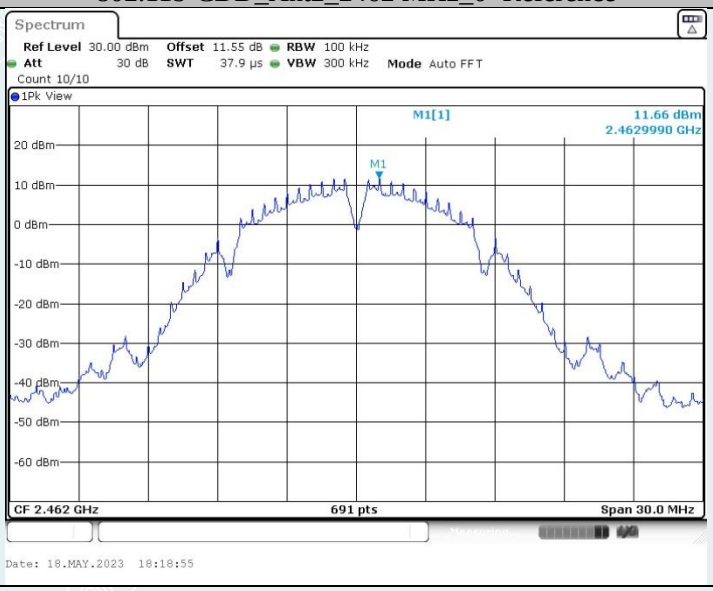
802.11b-CDD_Ant1_2462 MHz_30~1000 MHz



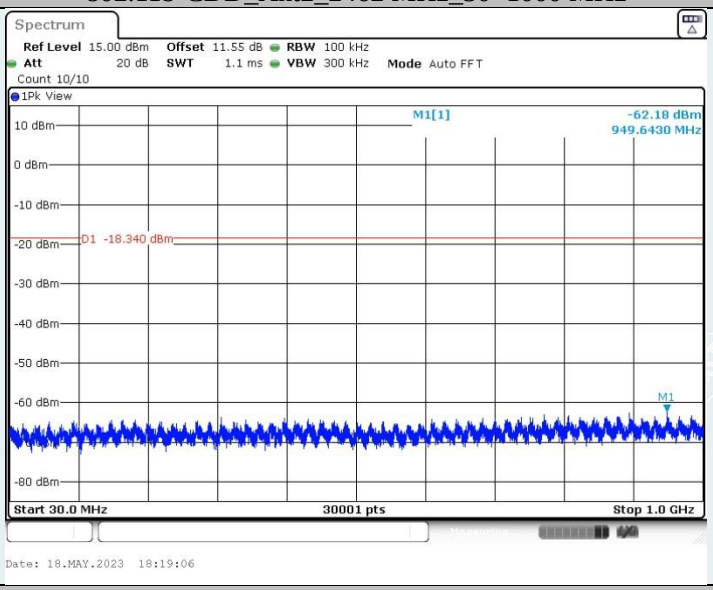
802.11b-CDD_Ant1_2462 MHz_1000~26500 MHz



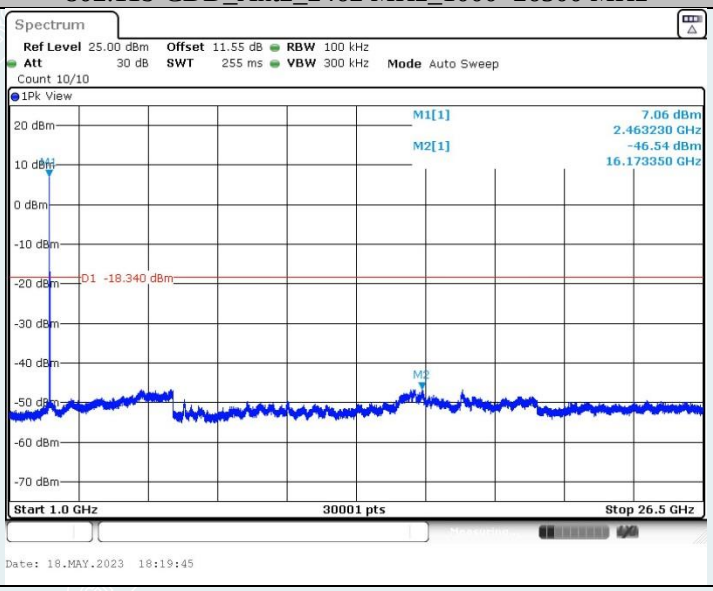
802.11b-CDD_Ant2_2462 MHz_0~Reference



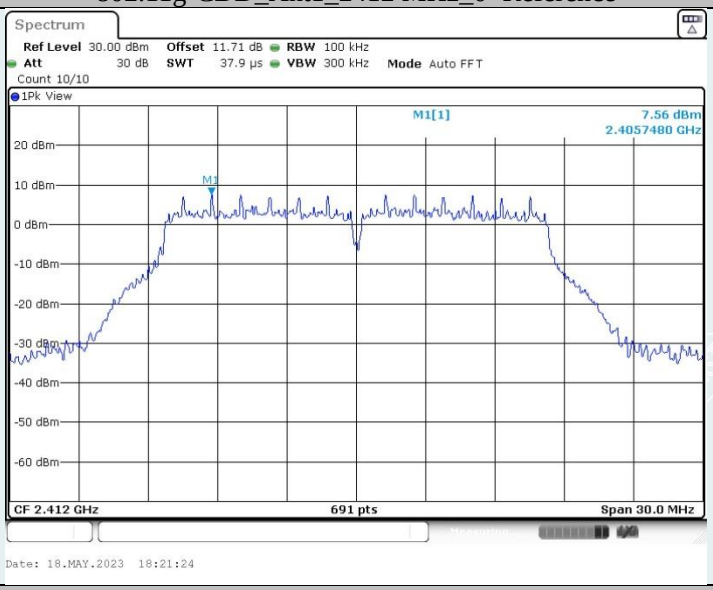
802.11b-CDD_Ant2_2462 MHz_30~1000 MHz



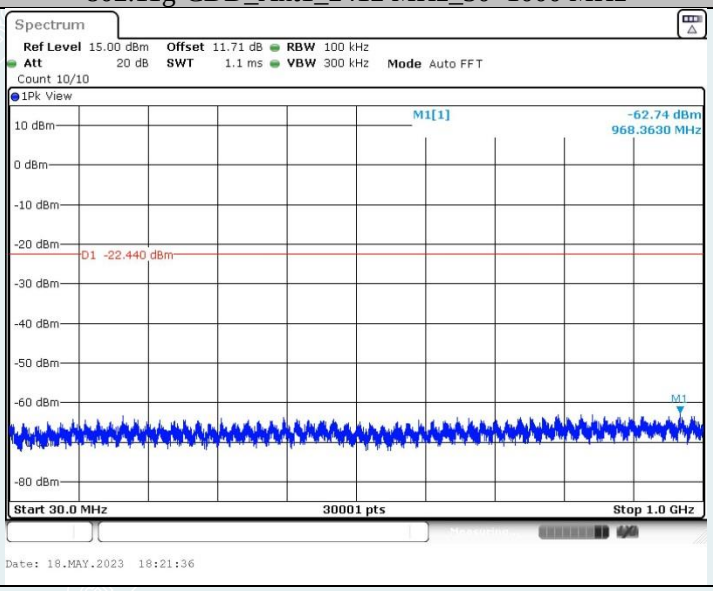
802.11b-CDD_Ant2_2462 MHz_1000~26500 MHz



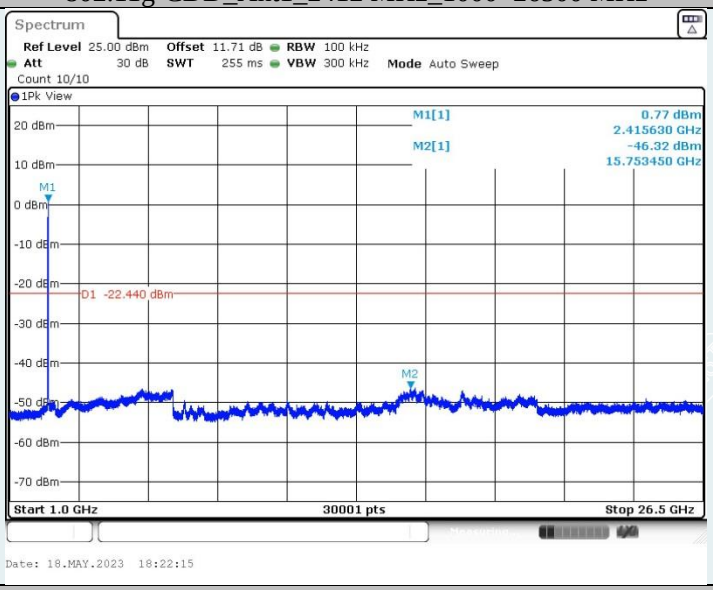
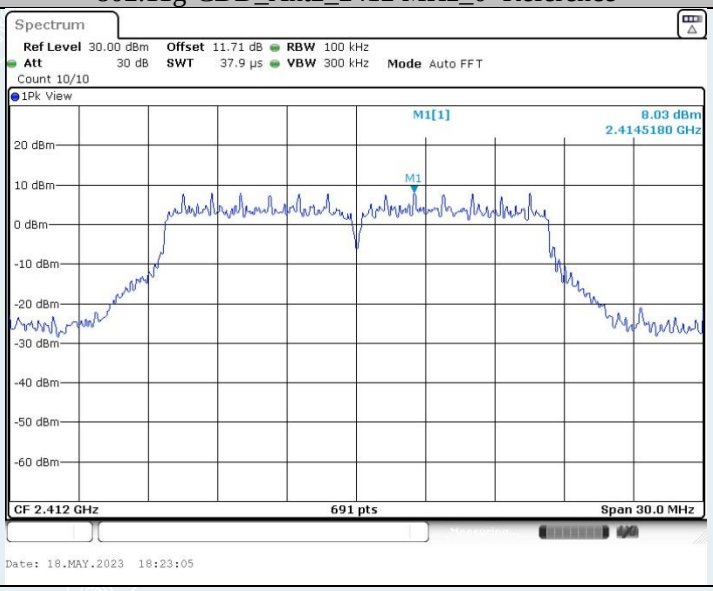
802.11g-CDD_Ant1_2412 MHz_0~Reference



802.11g-CDD_Ant1_2412 MHz_30~1000 MHz



802.11g-CDD_Ant1_2412 MHz_1000~26500 MHz



802.11g-CDD_Ant2_2412 MHz_0~Reference