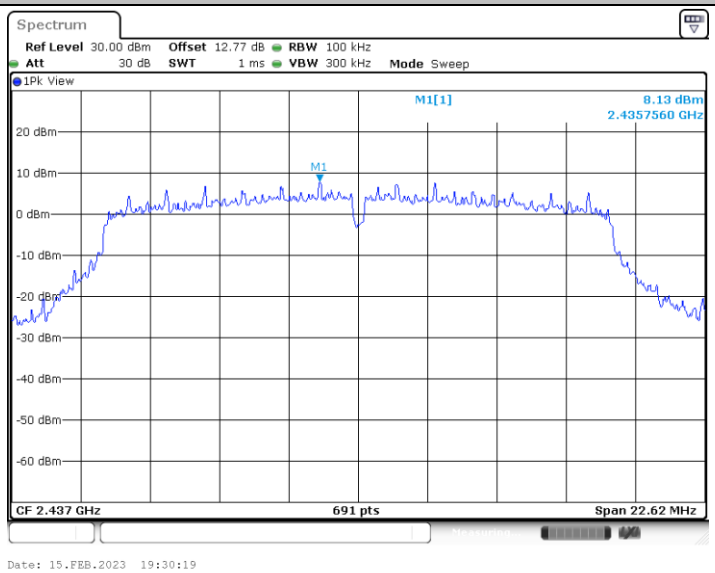
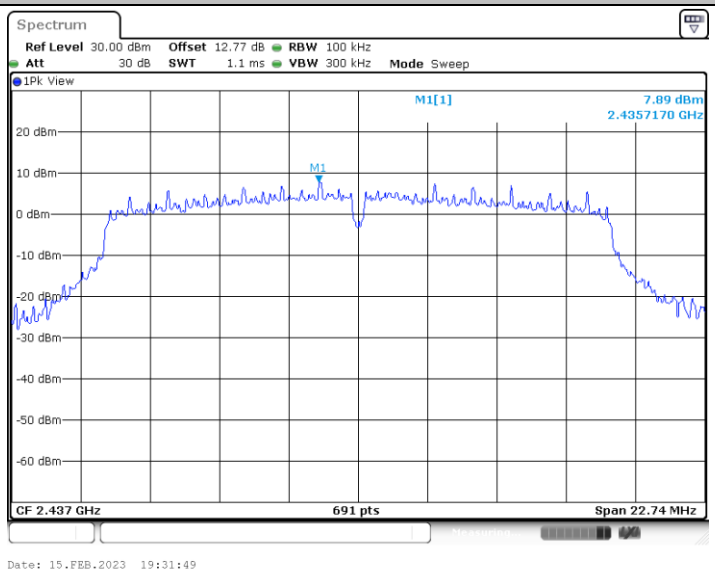
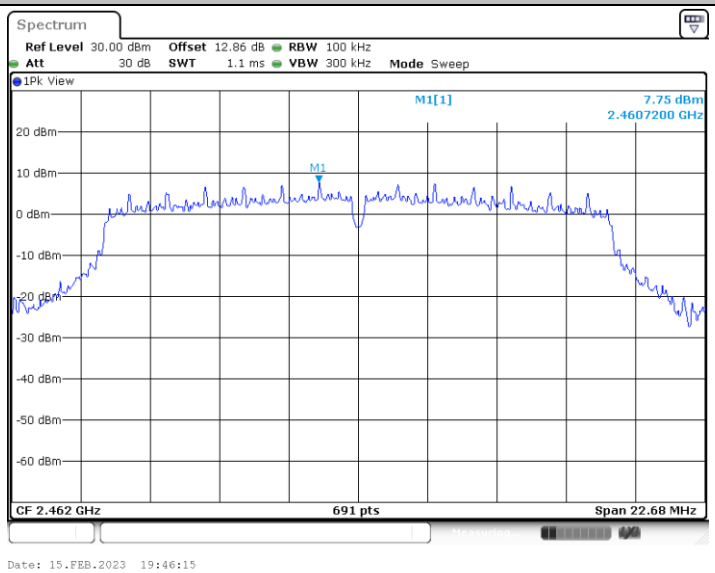
11G-CDD_Ant6_2437



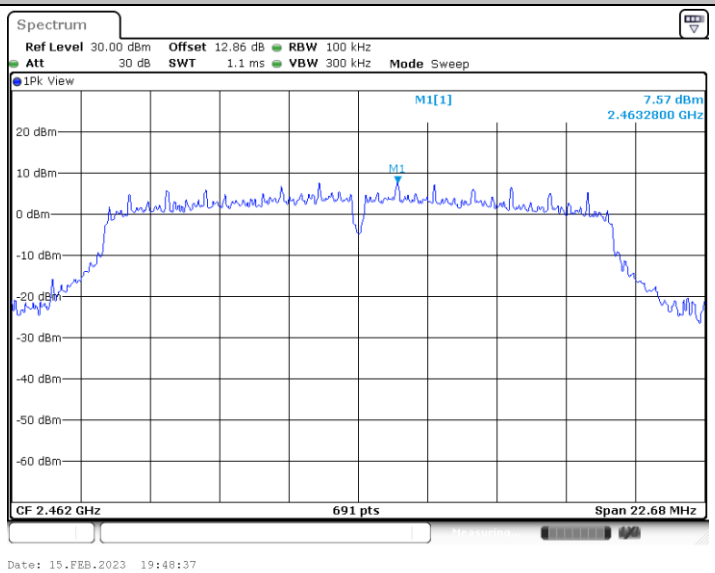
11G-CDD_Ant3_2437



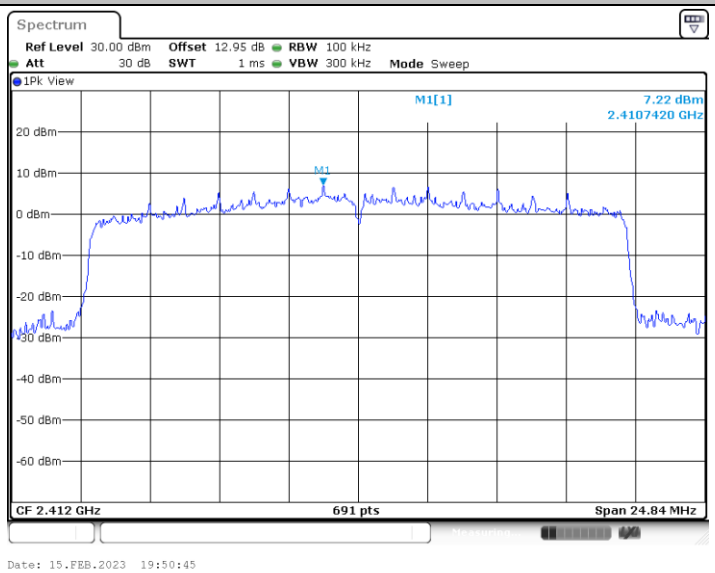
11G-CDD_Ant6_2462



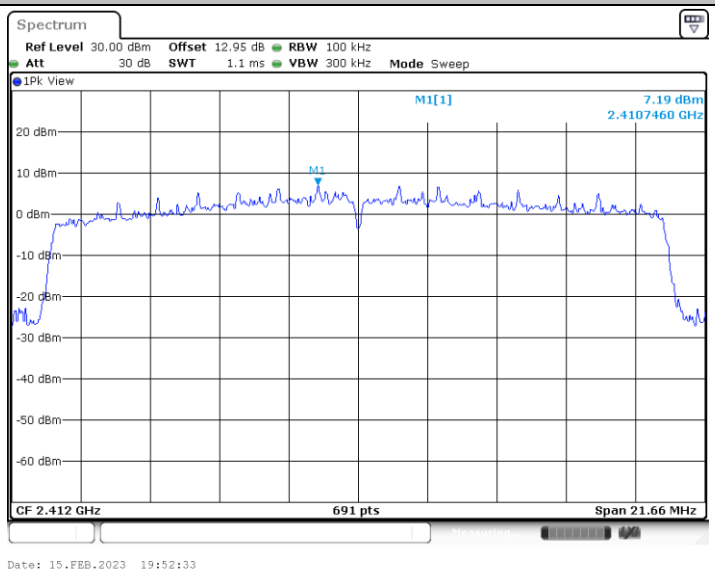
11G-CDD_Ant3_2462



11AX20MIMO_Ant6_2412



11AX20MIMO_Ant3_2412



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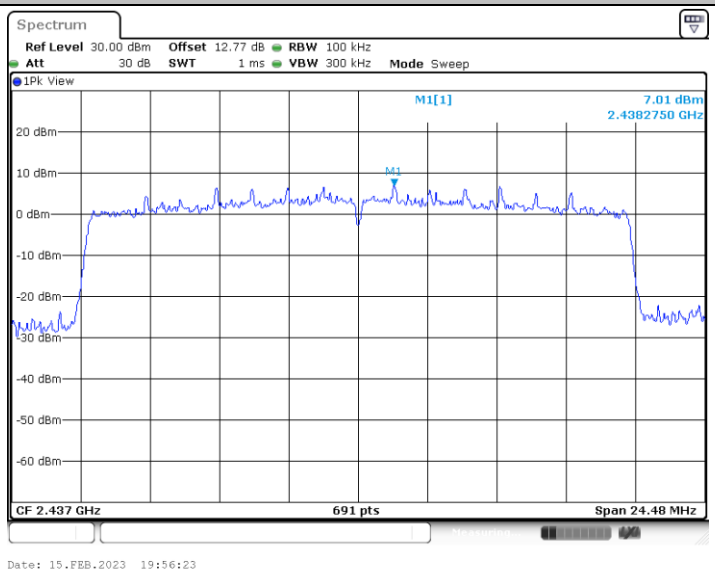
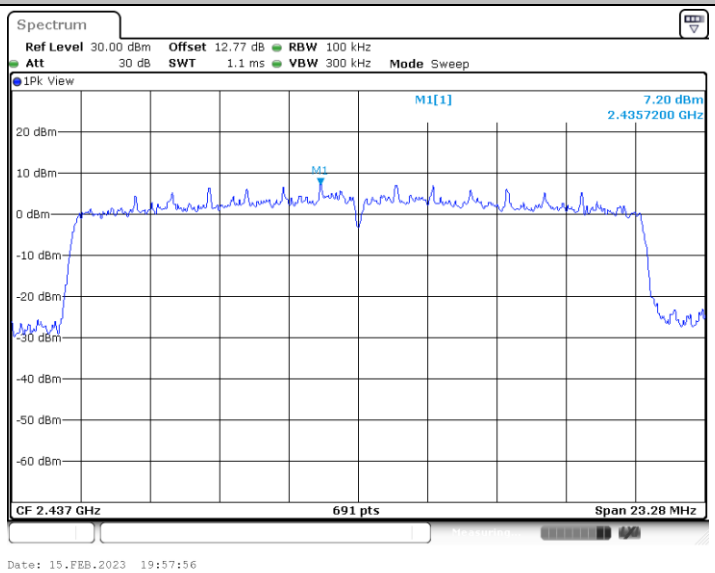


11AX20MIMO_Ant3_2437



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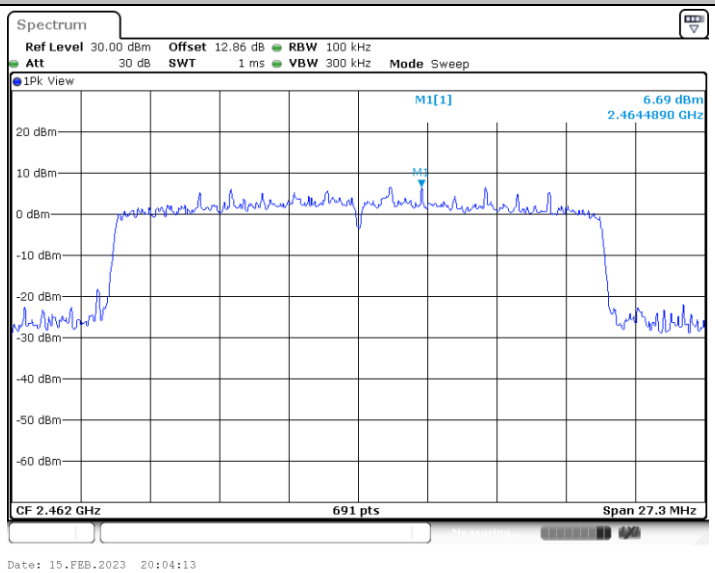
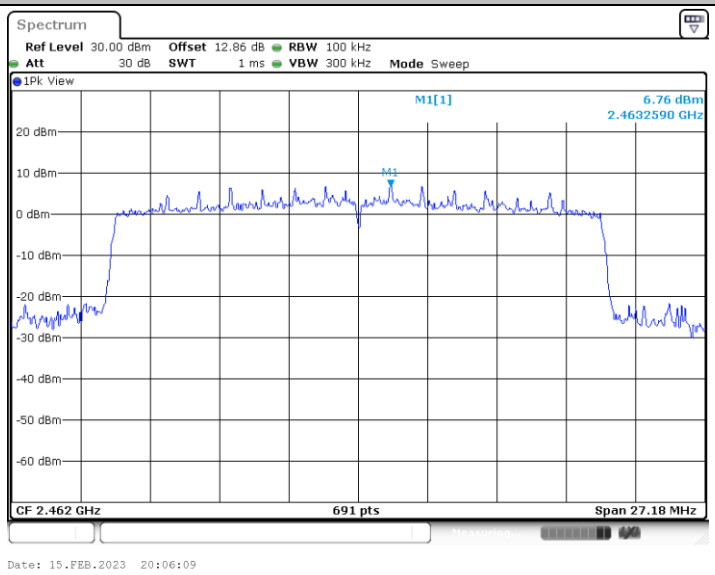
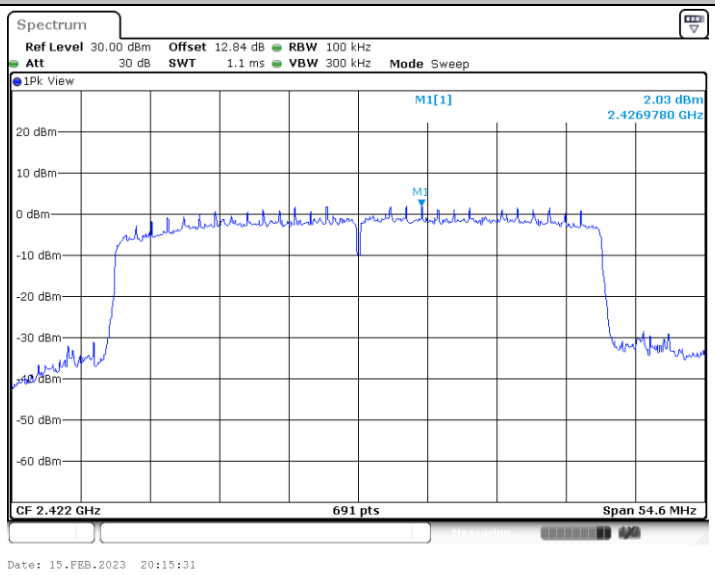


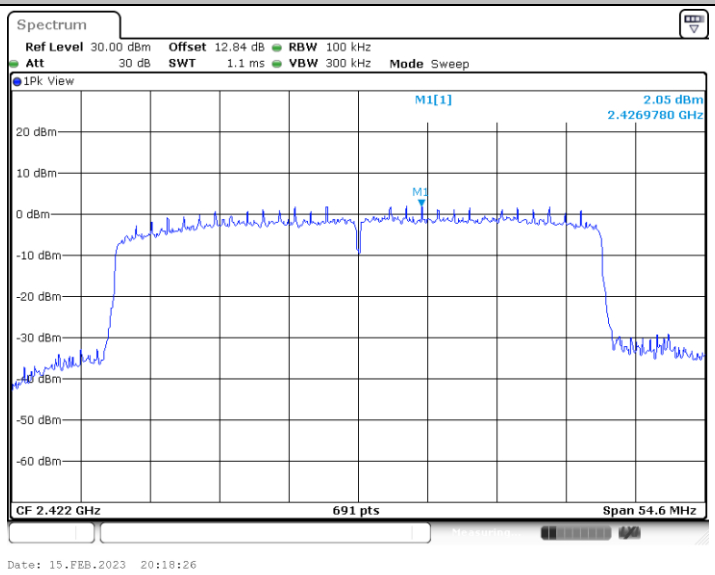
11AX20MIMO_Ant3_2462



11AX40MIMO_Ant6_2422



11AX40MIMO_Ant3_2422



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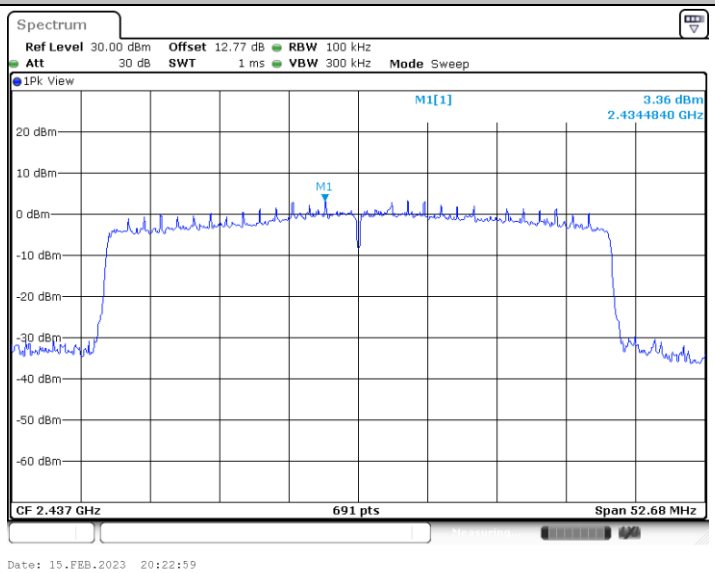
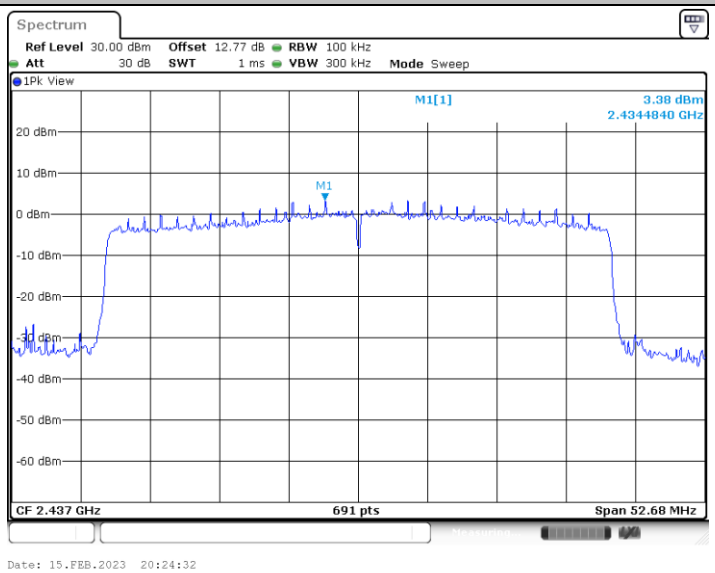
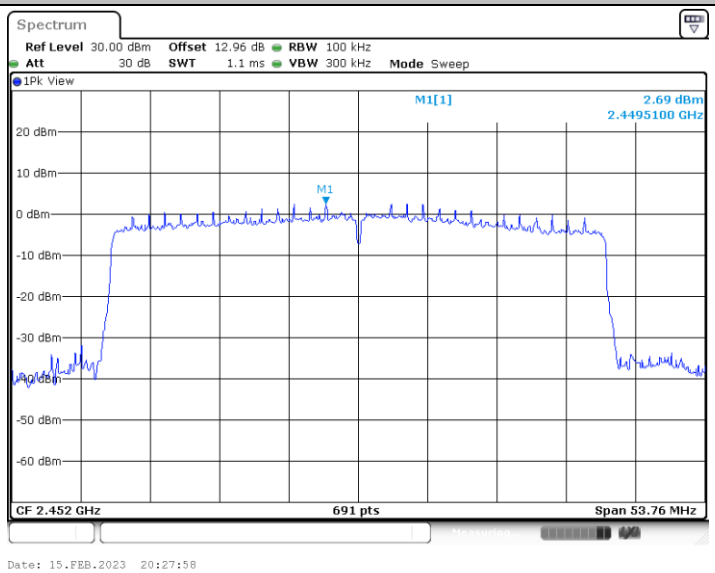


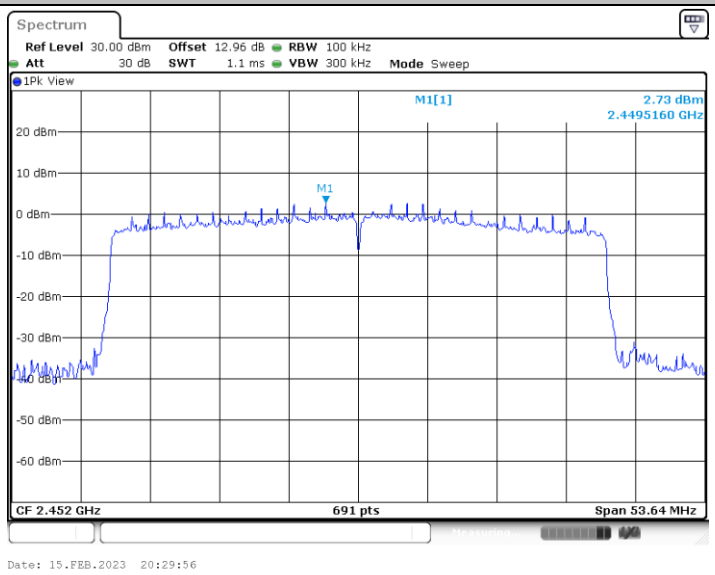
11AX40MIMO_Ant3_2437



11AX40MIMO_Ant6_2452



11AX40MIMO_Ant3_2452



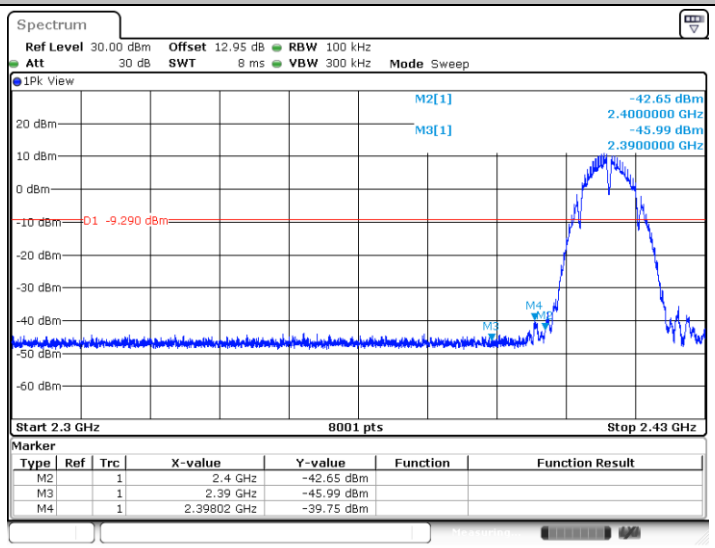
Band edge measurements

Test Result

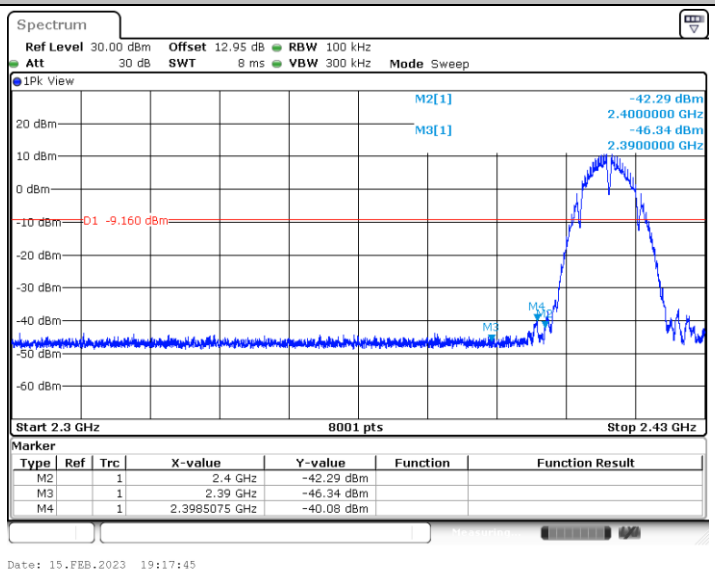
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm/100KHz]	Result[dBm/100KHz]	Limit[dBm/100KHz]	Verdict
11B-CDD	Ant6	Low	2412	10.71	-39.75	≤-9.29	PASS
	Ant3	Low	2412	10.84	-40.08	≤-9.16	PASS
	Ant6	High	2462	10.97	-43.13	≤-9.03	PASS
	Ant3	High	2462	10.93	-42.78	≤-9.07	PASS
11G-CDD	Ant6	Low	2412	8.08	-22.5	≤-11.92	PASS
	Ant3	Low	2412	7.89	-23.95	≤-12.11	PASS
	Ant6	High	2462	7.75	-36.29	≤-12.25	PASS
	Ant3	High	2462	7.57	-35.82	≤-12.43	PASS
11AX20MIMO	Ant6	Low	2412	7.22	-24.11	≤-12.78	PASS
	Ant3	Low	2412	7.19	-24.11	≤-12.81	PASS
	Ant6	High	2462	6.69	-32.12	≤-13.31	PASS
	Ant3	High	2462	6.76	-35.42	≤-13.24	PASS
11AX40MIMO	Ant6	Low	2422	2.03	-33.11	≤-17.97	PASS
	Ant3	Low	2422	2.05	-35.53	≤-17.95	PASS
	Ant6	High	2452	2.69	-40.01	≤-17.31	PASS
	Ant3	High	2452	2.73	-40.67	≤-17.27	PASS

Test Graphs

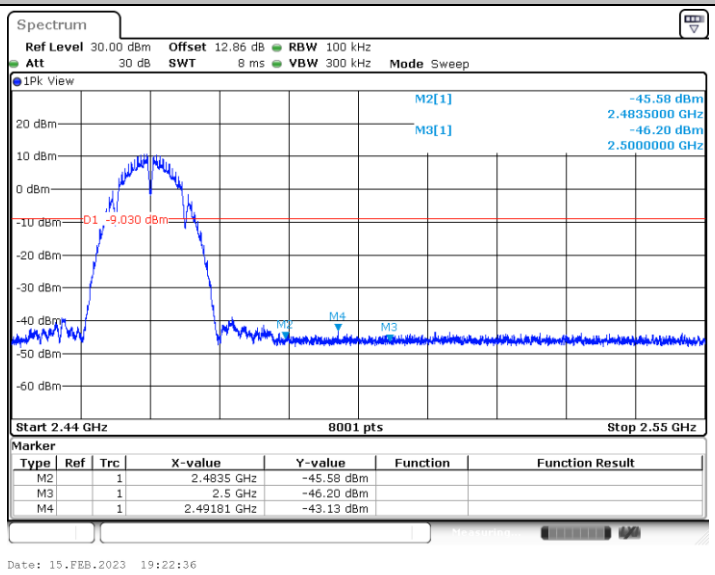
11B-CDD_Ant6_Low_2412



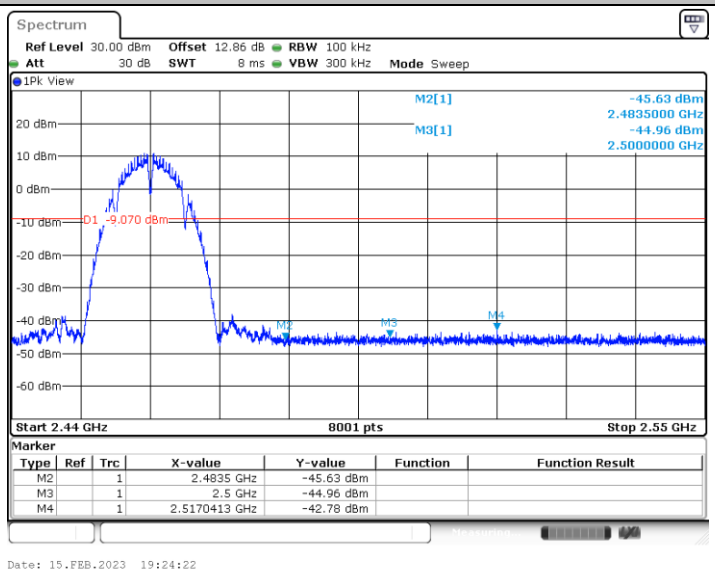
11B-CDD_Ant3_Low_2412



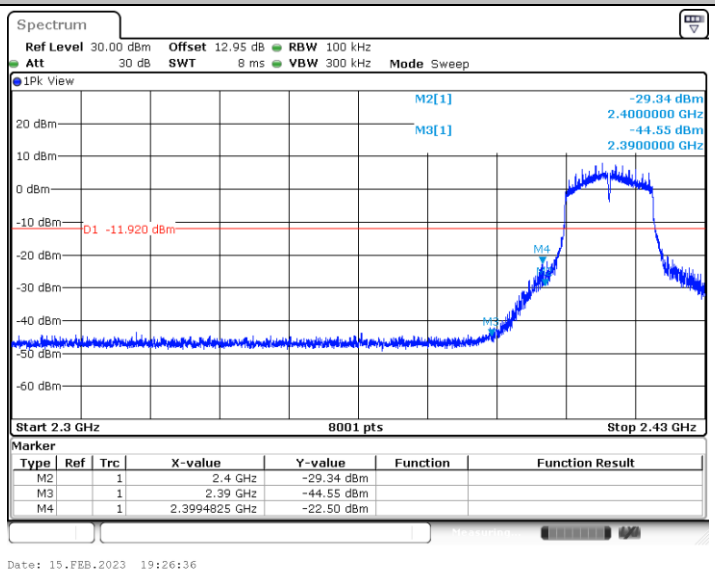
11B-CDD_Ant6_High_2462



11B-CDD_Ant3_High_2462

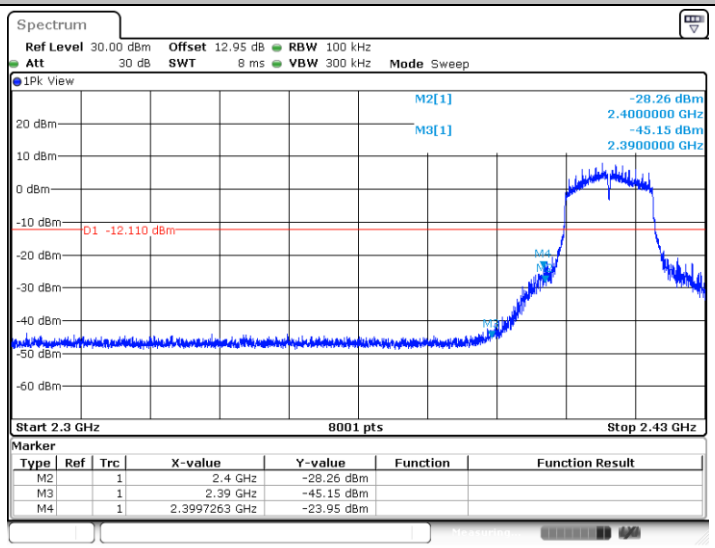


11G-CDD_Ant6_Low_2412



Date: 15.FEB.2023 19:26:36

11G-CDD_Ant3_Low_2412



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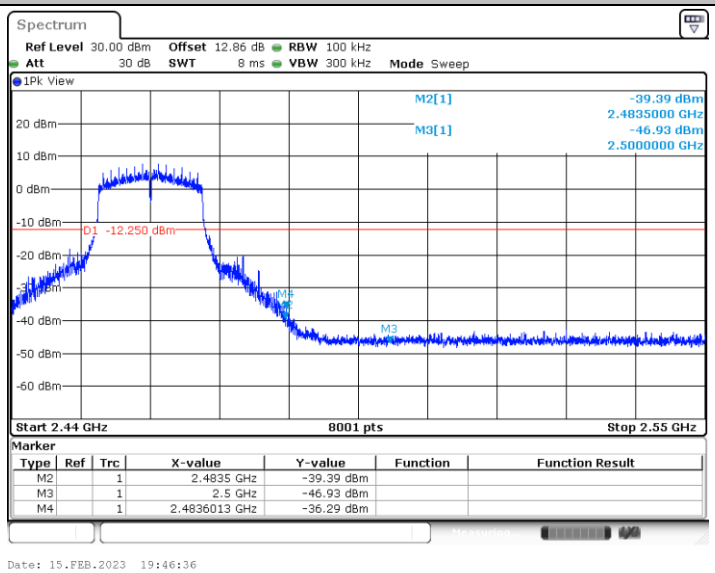
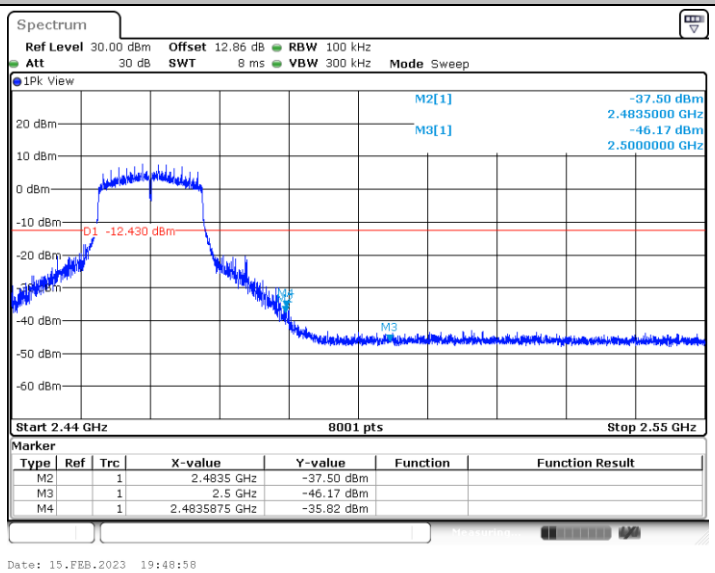
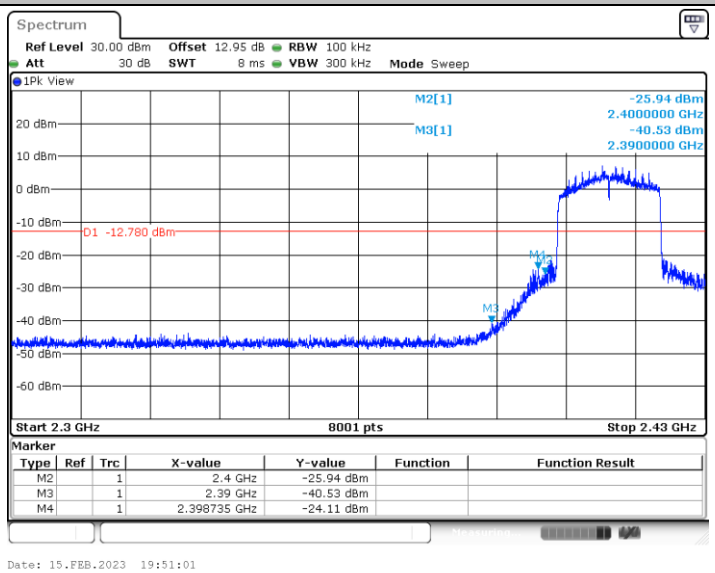
11G-CDD_Ant6_High_2462



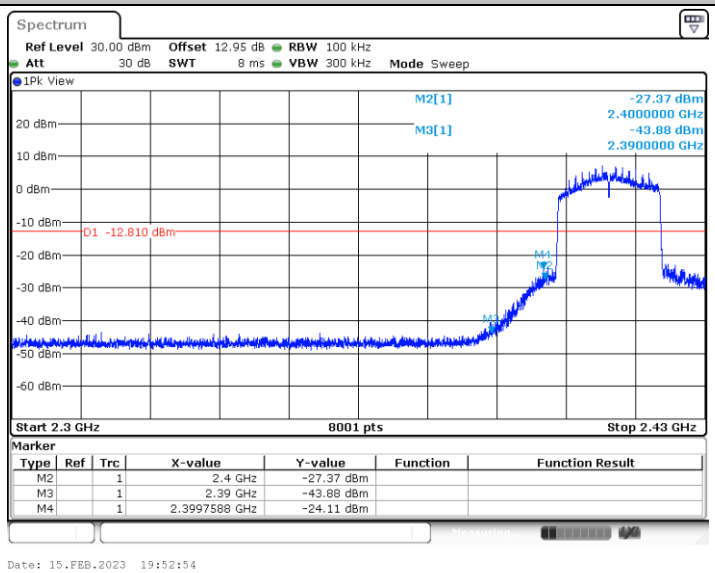
11G-CDD_Ant3_High_2462



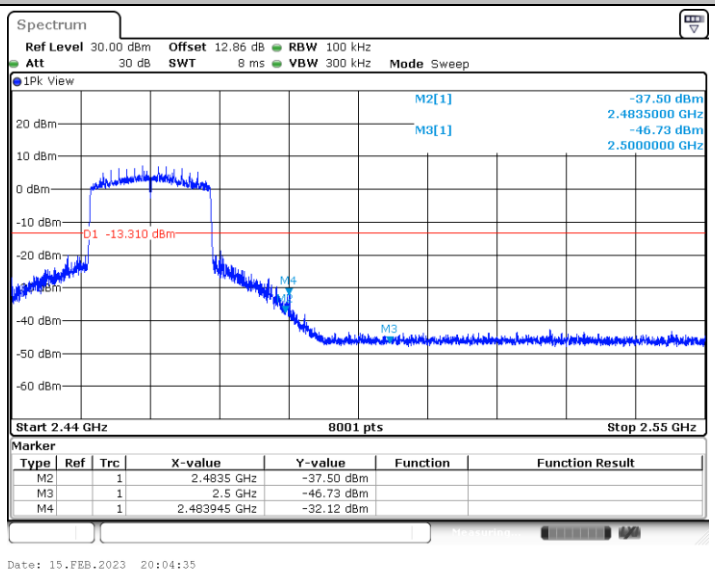
11AX20MIMO_Ant6_Low_2412



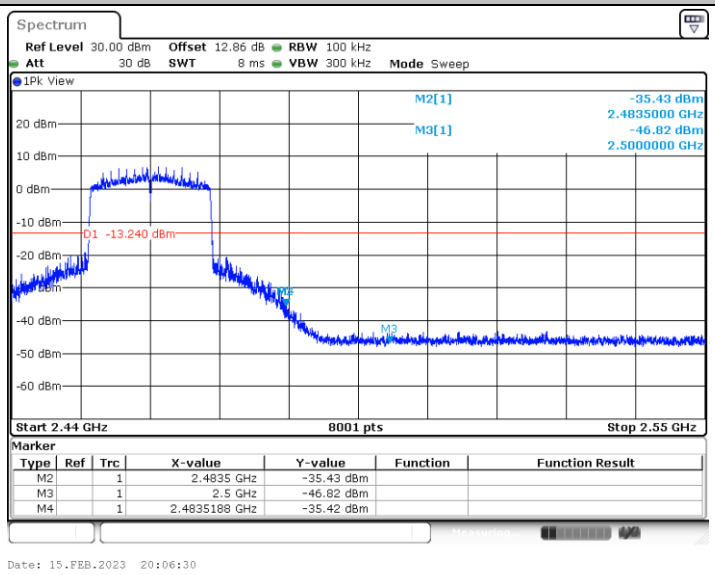
11AX20MIMO_Ant3_Low_2412



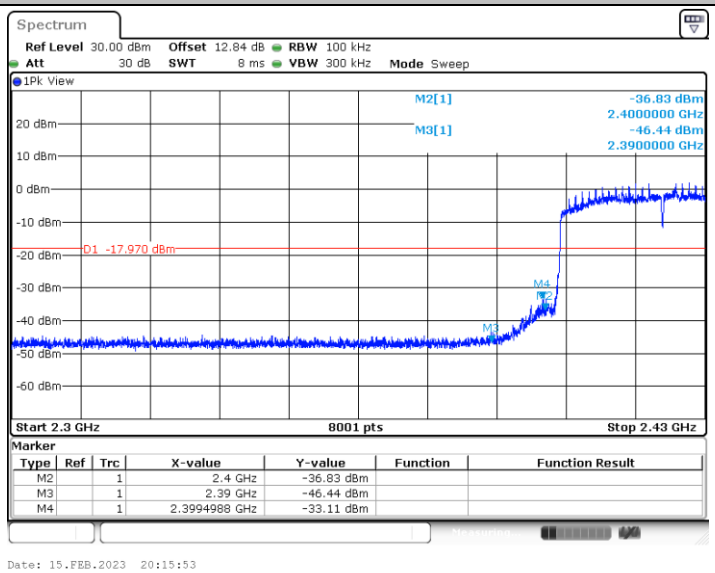
11AX20MIMO_Ant6_High_2462



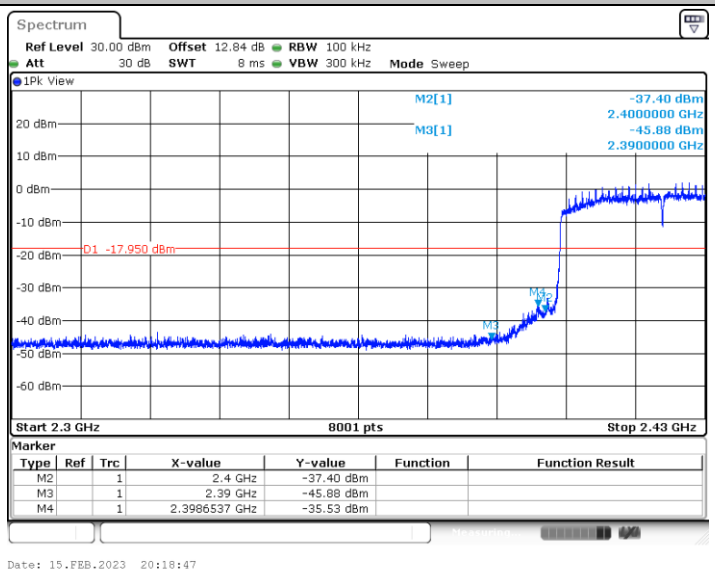
11AX20MIMO_Ant3_High_2462



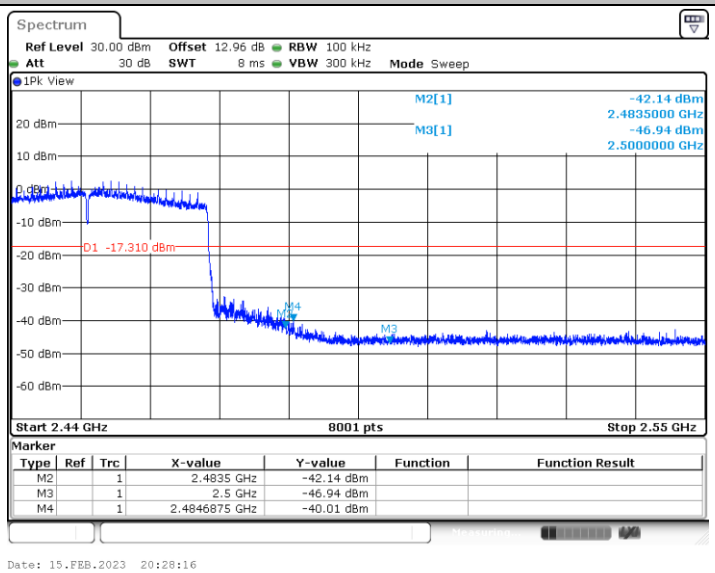
11AX40MIMO_Ant6_Low_2422



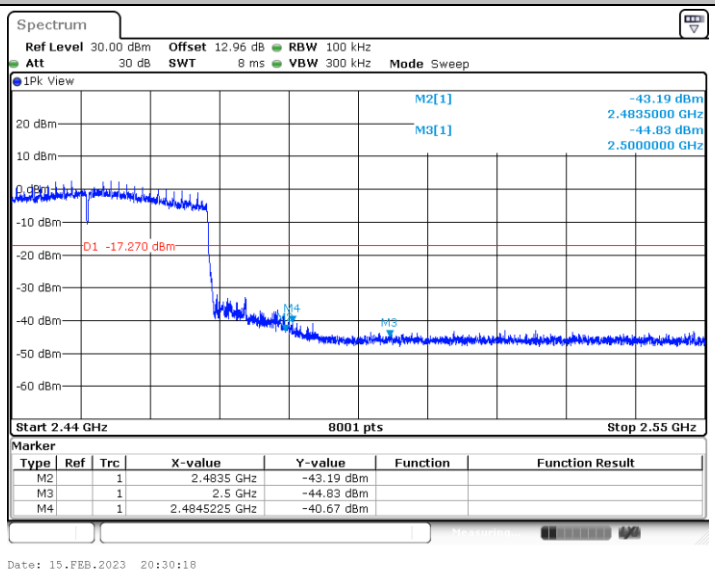
11AX40MIMO_Ant3_Low_2422



11AX40MIMO_Ant6_High_2452



11AX40MIMO_Ant3_High_2452



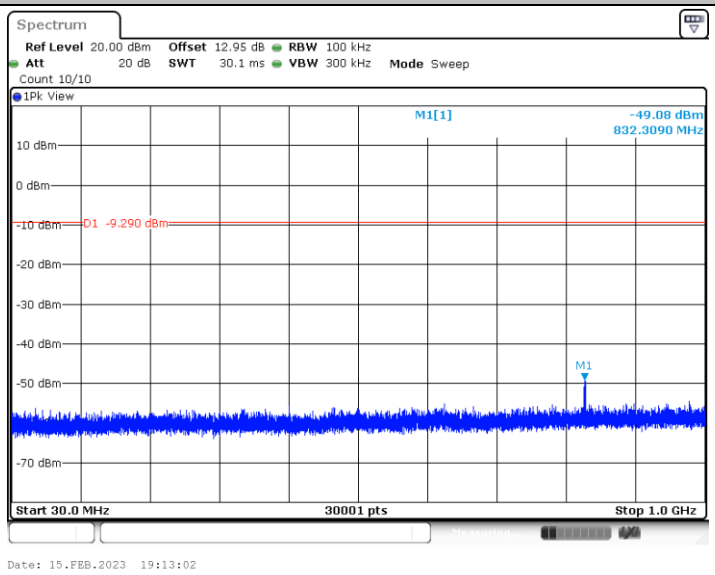
Conducted Spurious Emission

Test Result

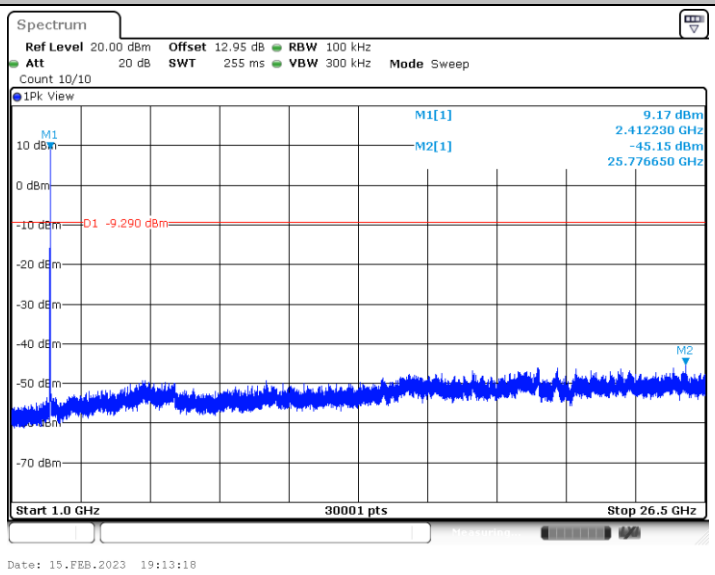
TestMode	Antenna	Freq(MHz)	FreqRange [Mhz]	RefLevel [dBm/100KHz]	Result [dBm/100KHz]	Limit [dBm/100KHz]	Verdict
11B-CDD	Ant6	2412	30~1000	10.71	-49.08	≤-9.29	PASS
			1000~26500	10.71	-45.15	≤-9.29	PASS
	Ant3	2412	30~1000	10.84	-54.82	≤-9.16	PASS
			1000~26500	10.84	-45.89	≤-9.16	PASS
	Ant6	2437	30~1000	11.53	-54.81	≤-8.47	PASS
			1000~26500	11.53	-46.65	≤-8.47	PASS
	Ant3	2437	30~1000	11.46	-54.61	≤-8.54	PASS
			1000~26500	11.46	-46.04	≤-8.54	PASS
	Ant6	2462	30~1000	10.97	-55.14	≤-9.03	PASS
			1000~26500	10.97	-45.6	≤-9.03	PASS
	Ant3	2462	30~1000	10.93	-54.08	≤-9.07	PASS
			1000~26500	10.93	-45.39	≤-9.07	PASS
11G-CDD	Ant6	2412	30~1000	8.08	-54.51	≤-11.92	PASS
			1000~26500	8.08	-45.71	≤-11.92	PASS
	Ant3	2412	30~1000	7.89	-54.24	≤-12.11	PASS
			1000~26500	7.89	-46.65	≤-12.11	PASS
	Ant6	2437	30~1000	8.13	-54.52	≤-11.87	PASS
			1000~26500	8.13	-46.43	≤-11.87	PASS
	Ant3	2437	30~1000	7.89	-54.89	≤-12.11	PASS
			1000~26500	7.89	-46.07	≤-12.11	PASS
	Ant6	2462	30~1000	7.75	-49.5	≤-12.25	PASS
			1000~26500	7.75	-46.13	≤-12.25	PASS
	Ant3	2462	30~1000	7.57	-53.7	≤-12.43	PASS
			1000~26500	7.57	-46.06	≤-12.43	PASS
11AX20MIMO	Ant6	2412	30~1000	7.22	-54.38	≤-12.78	PASS
			1000~26500	7.22	-45.15	≤-12.78	PASS
	Ant3	2412	30~1000	7.19	-54.73	≤-12.81	PASS
			1000~26500	7.19	-45.94	≤-12.81	PASS
	Ant6	2437	30~1000	7.01	-54.86	≤-12.99	PASS
			1000~26500	7.01	-46.15	≤-12.99	PASS
	Ant3	2437	30~1000	7.20	-54.62	≤-12.8	PASS
			1000~26500	7.20	-45.32	≤-12.8	PASS
	Ant6	2462	30~1000	6.69	-54.86	≤-13.31	PASS
			1000~26500	6.69	-46.27	≤-13.31	PASS
	Ant3	2462	30~1000	6.76	-54.98	≤-13.24	PASS
			1000~26500	6.76	-45.87	≤-13.24	PASS
11AX40MIMO	Ant6	2422	30~1000	2.03	-53.95	≤-17.97	PASS
			1000~26500	2.03	-46.26	≤-17.97	PASS
	Ant3	2422	30~1000	2.05	-54.46	≤-17.95	PASS
			1000~26500	2.05	-45.66	≤-17.95	PASS
	Ant6	2437	30~1000	3.36	-54.42	≤-16.64	PASS
			1000~26500	3.36	-46.76	≤-16.64	PASS
	Ant3	2437	30~1000	3.38	-55.23	≤-16.62	PASS
			1000~26500	3.38	-46.14	≤-16.62	PASS
	Ant6	2452	30~1000	2.69	-54.77	≤-17.31	PASS
			1000~26500	2.69	-45.71	≤-17.31	PASS
	Ant3	2452	30~1000	2.73	-54.73	≤-17.27	PASS
			1000~26500	2.73	-46.34	≤-17.27	PASS

Test Graphs

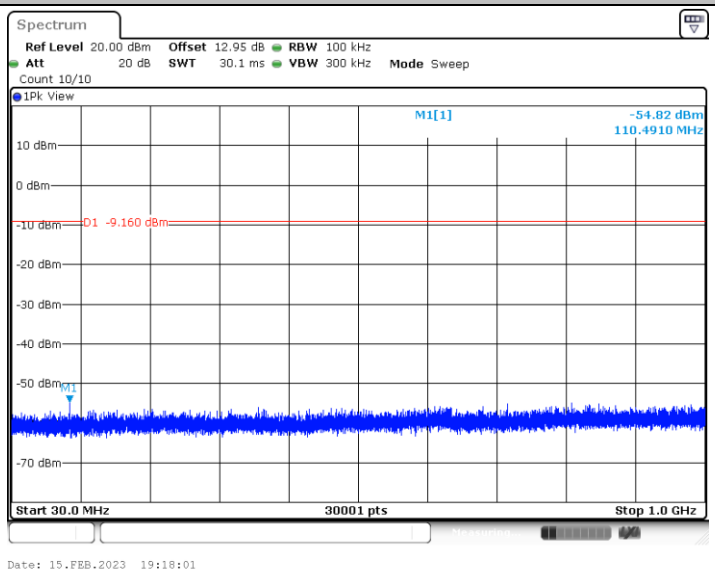
11B-CDD_Ant6_2412_30~1000



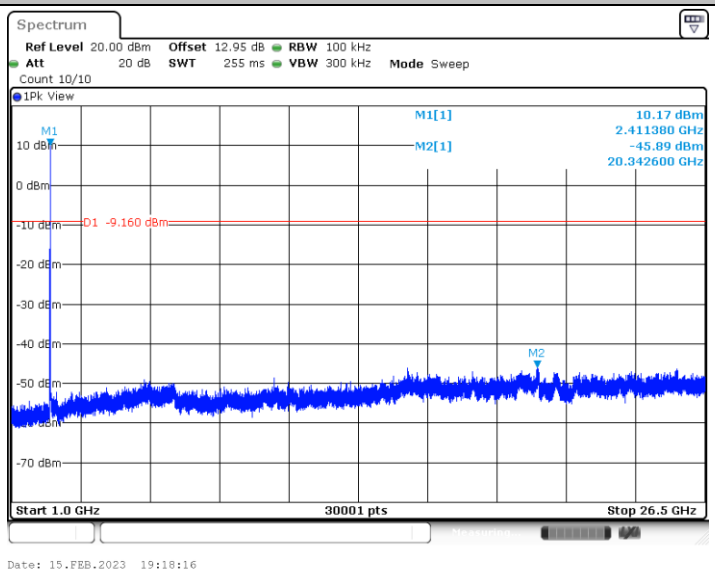
11B-CDD_Ant6_2412_1000~26500



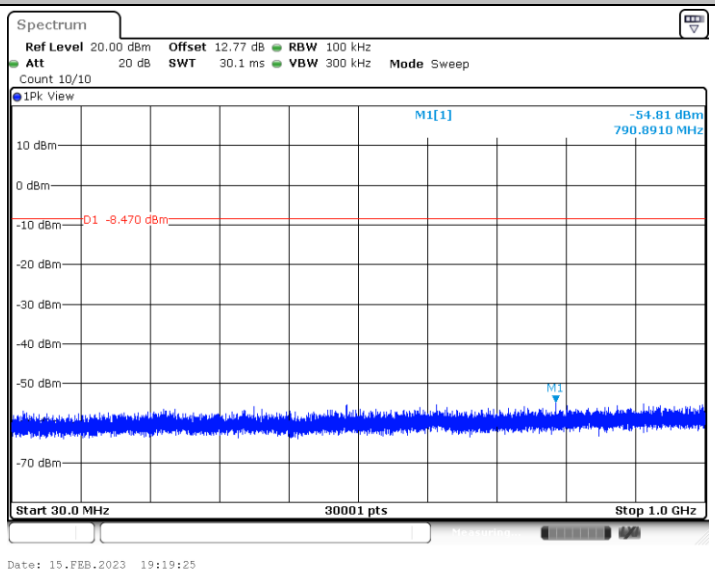
11B-CDD_Ant3_2412_30~1000



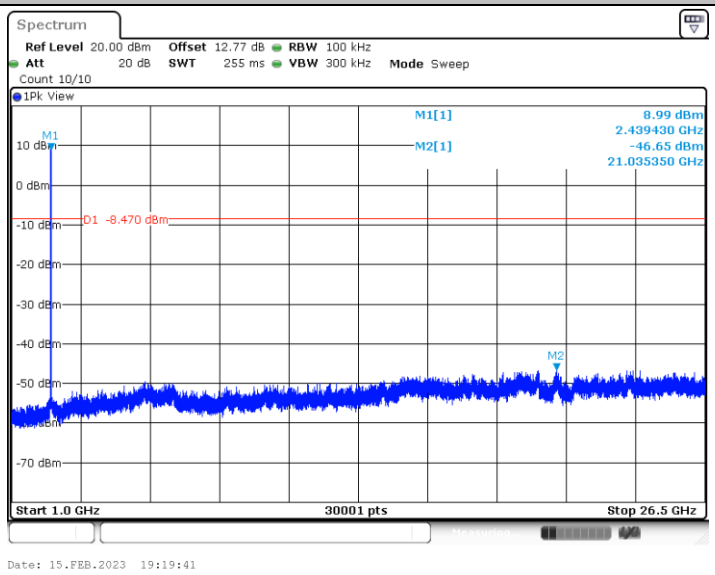
11B-CDD_Ant3_2412_1000~26500



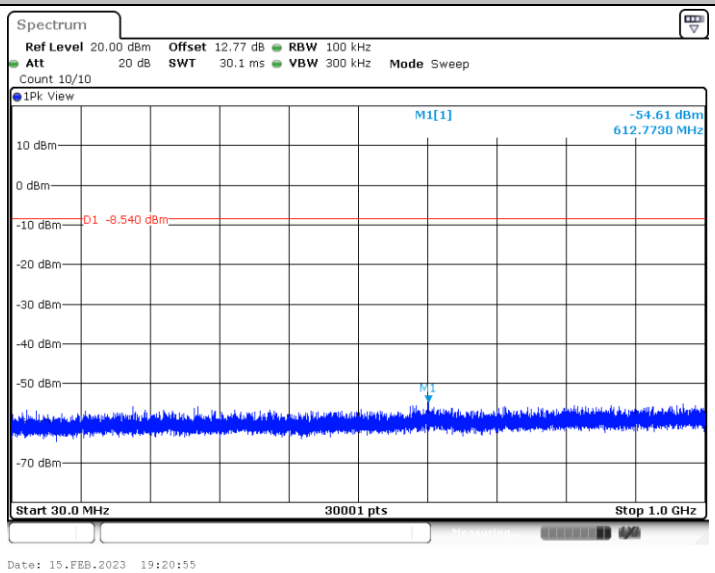
11B-CDD_Ant6_2437_30~1000



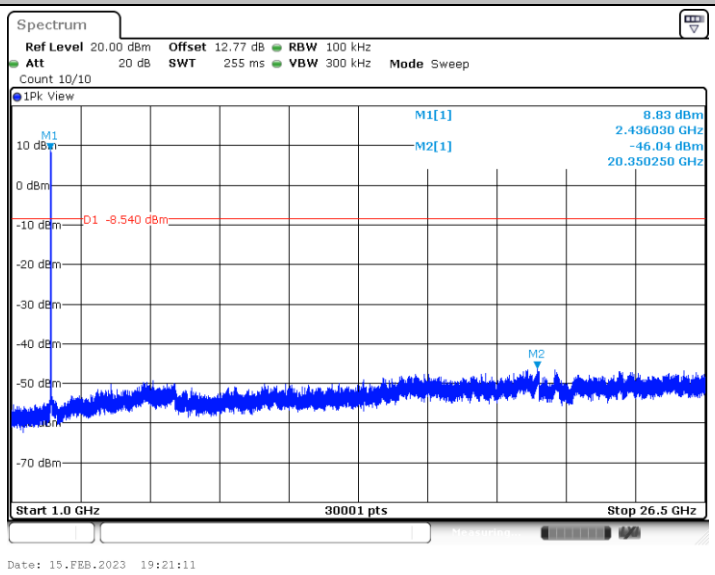
11B-CDD_Ant6_2437_1000~26500



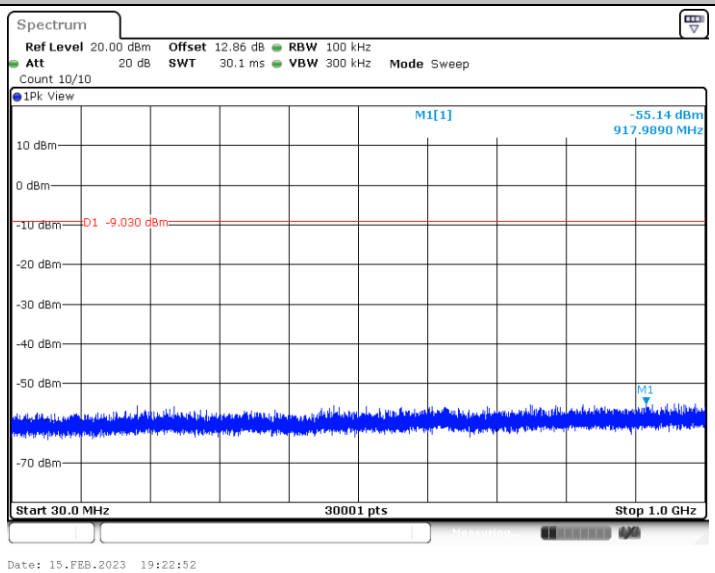
11B-CDD_Ant3_2437_30~1000



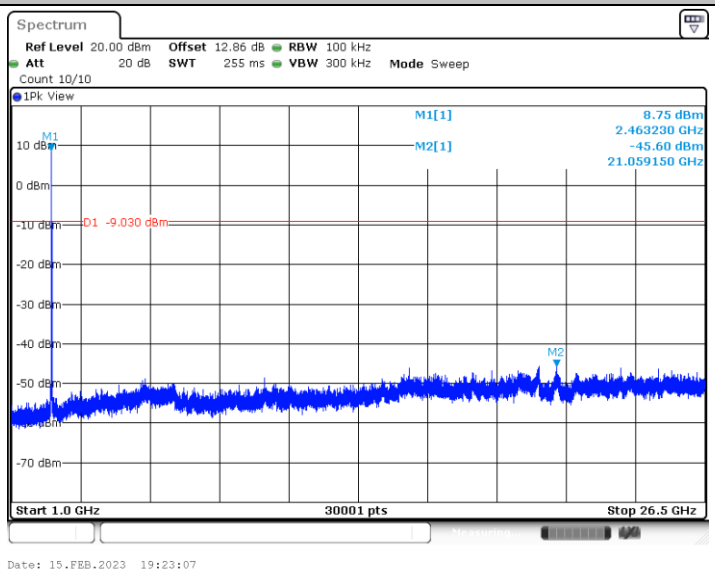
11B-CDD_Ant3_2437_1000~26500



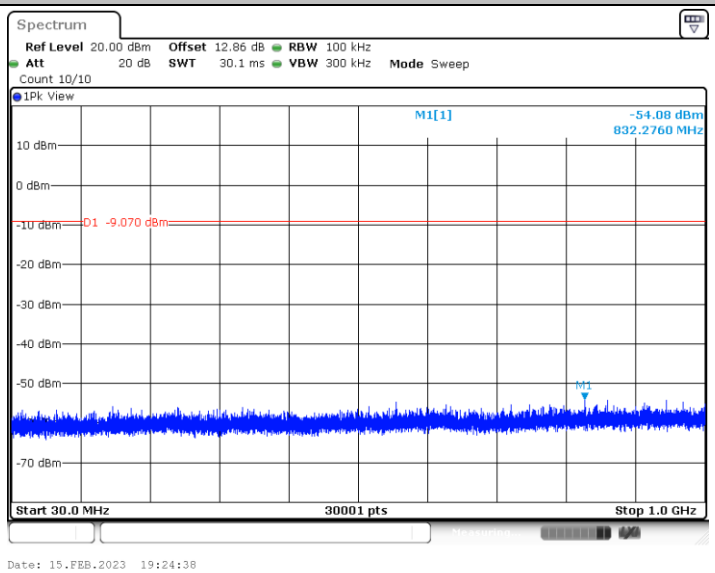
11B-CDD_Ant6_2462_30~1000



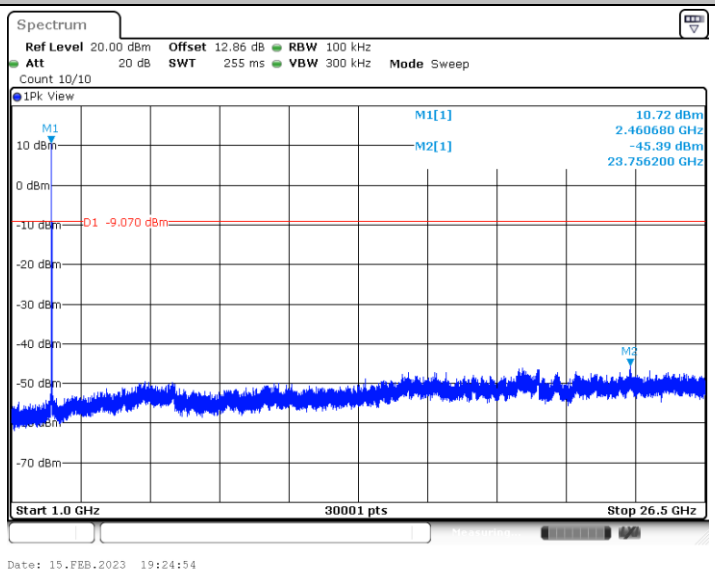
11B-CDD_Ant6_2462_1000~26500



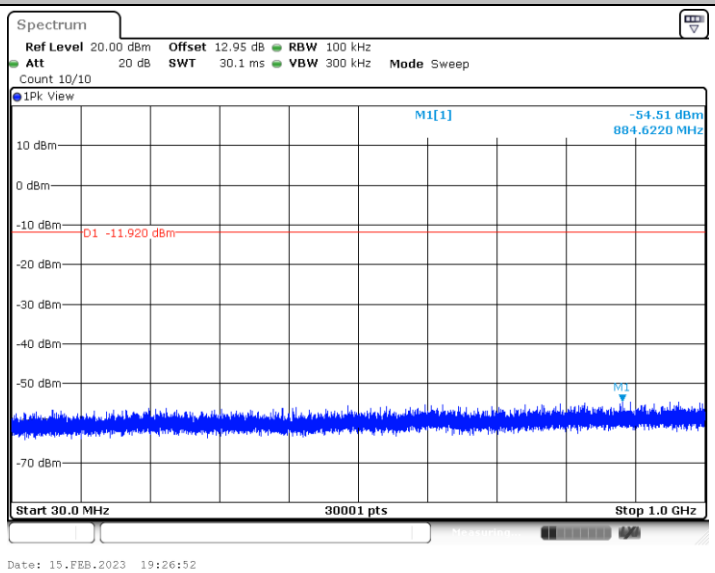
11B-CDD_Ant3_2462_30~1000



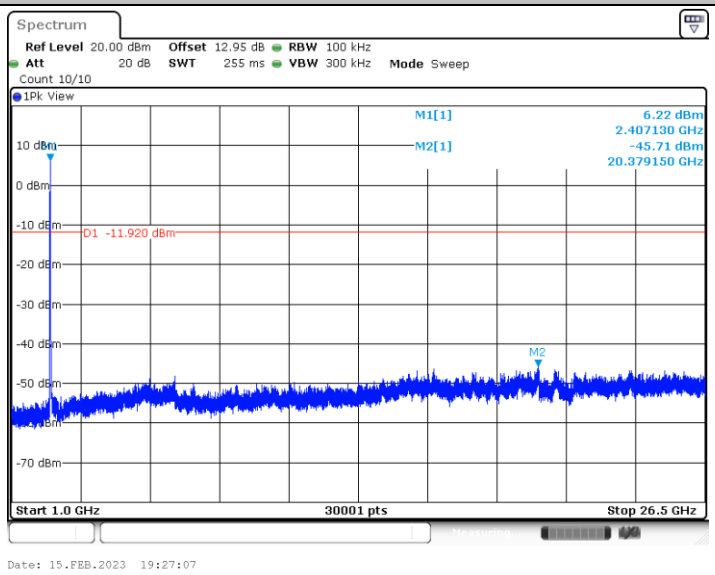
11B-CDD_Ant3_2462_1000~26500



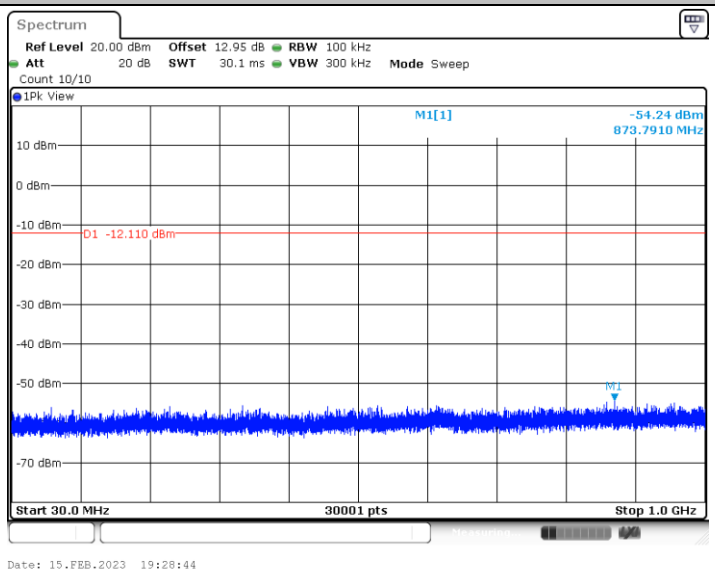
11G-CDD_Ant6_2412_30~1000



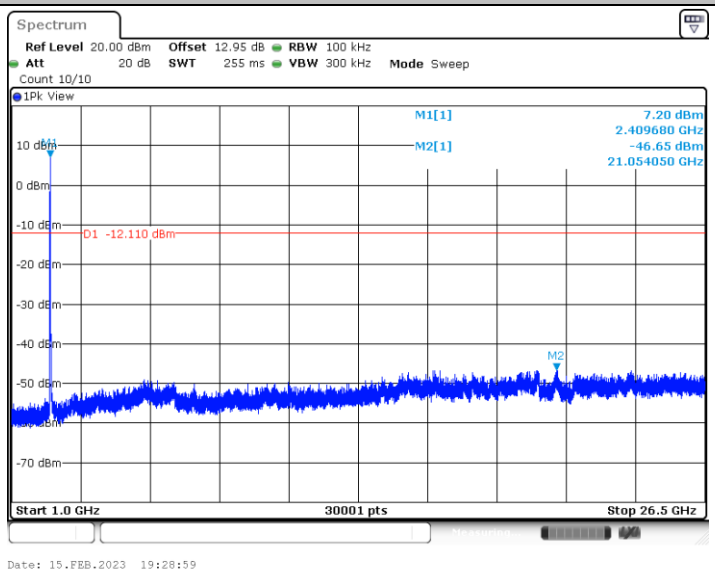
11G-CDD_Ant6_2412_1000~26500



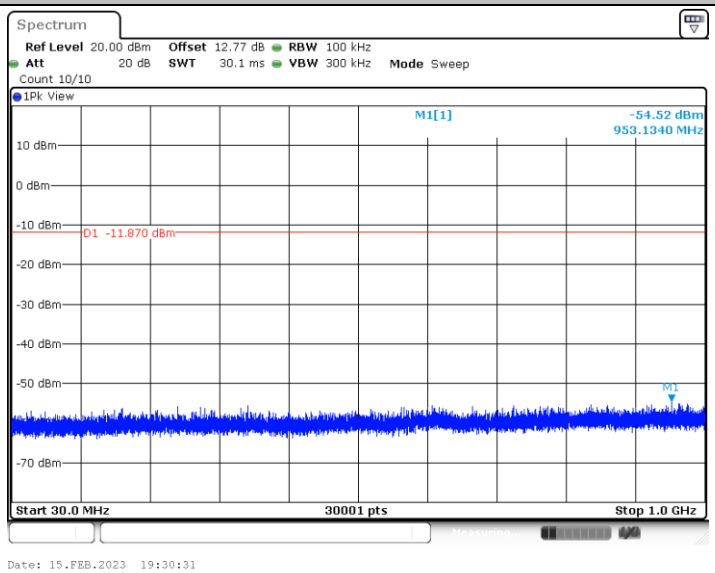
11G-CDD_Ant3_2412_30~1000



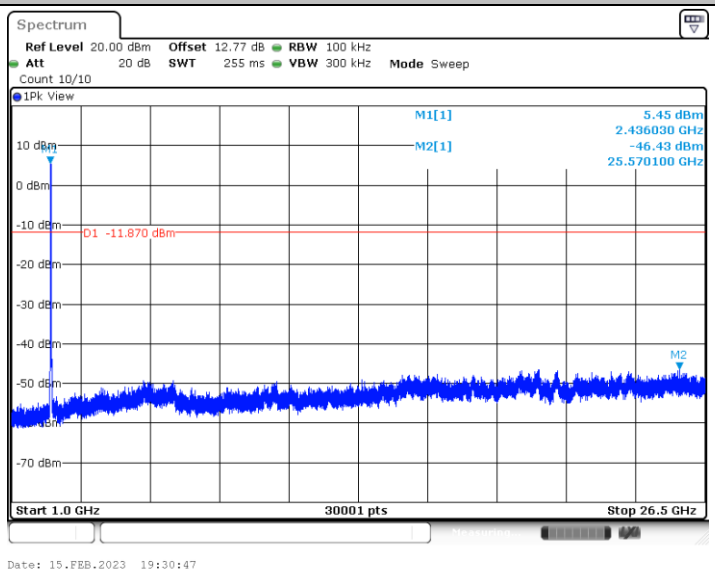
11G-CDD_Ant3_2412_1000~26500



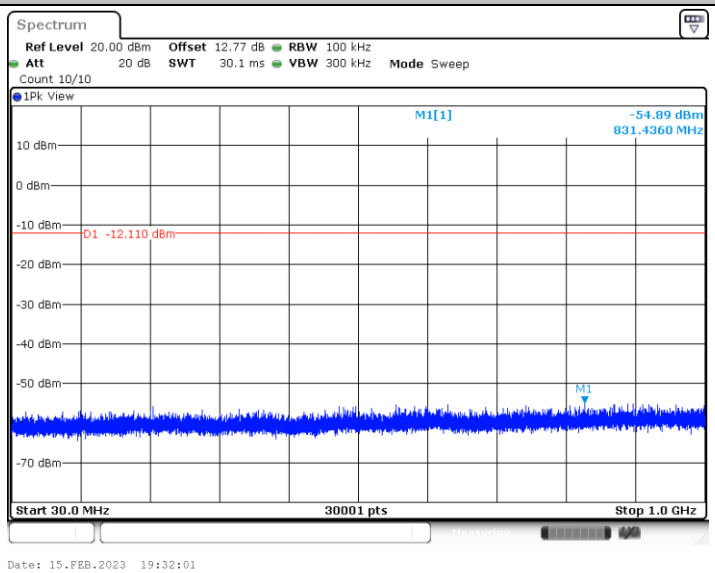
11G-CDD_Ant6_2437_30~1000



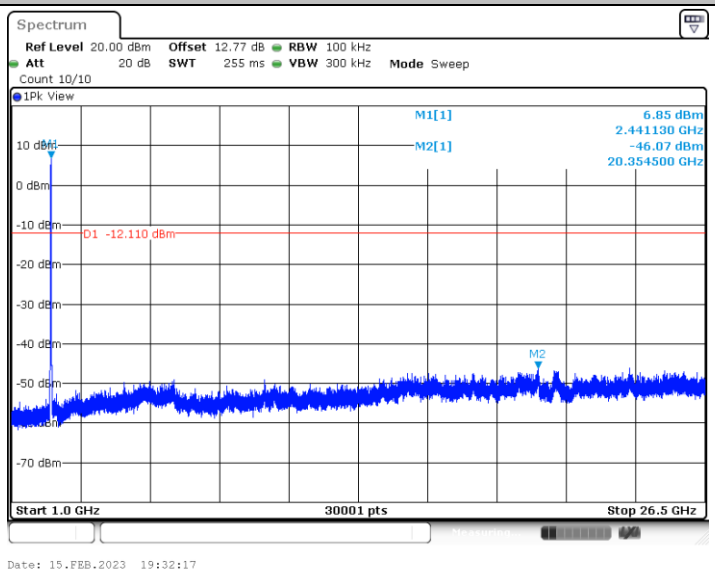
11G-CDD_Ant6_2437_1000~26500



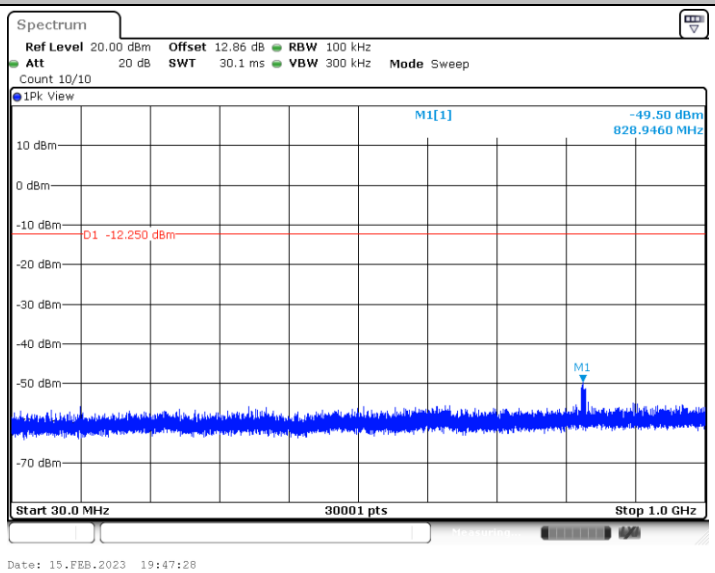
11G-CDD_Ant3_2437_30~1000



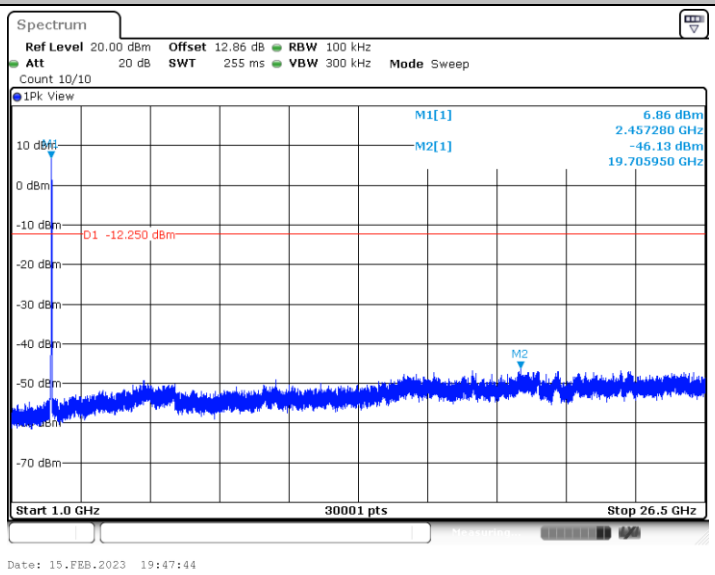
11G-CDD_Ant3_2437_1000~26500



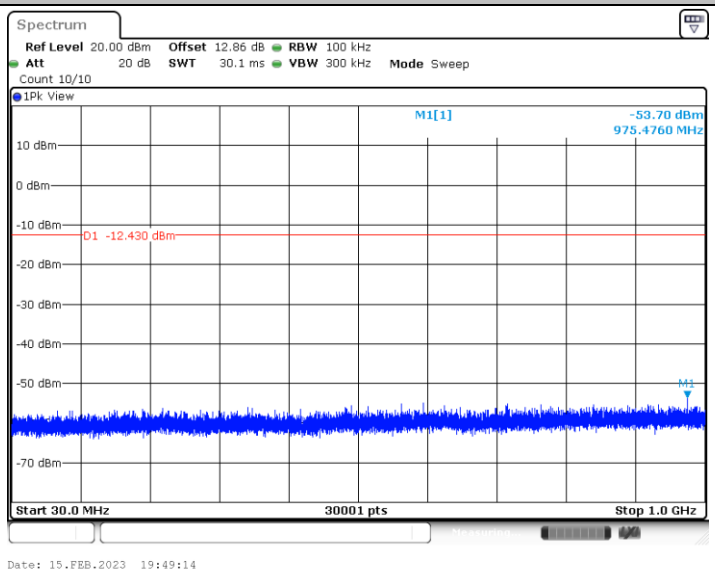
11G-CDD_Ant6_2462_30~1000



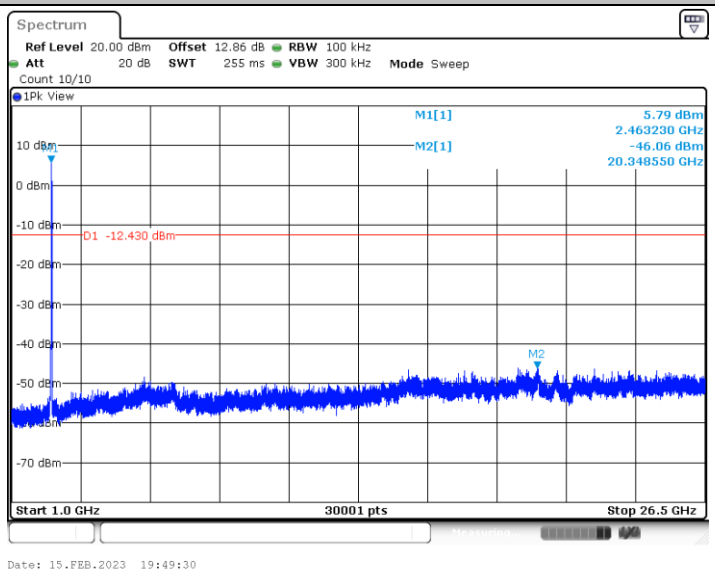
11G-CDD_Ant6_2462_1000~26500



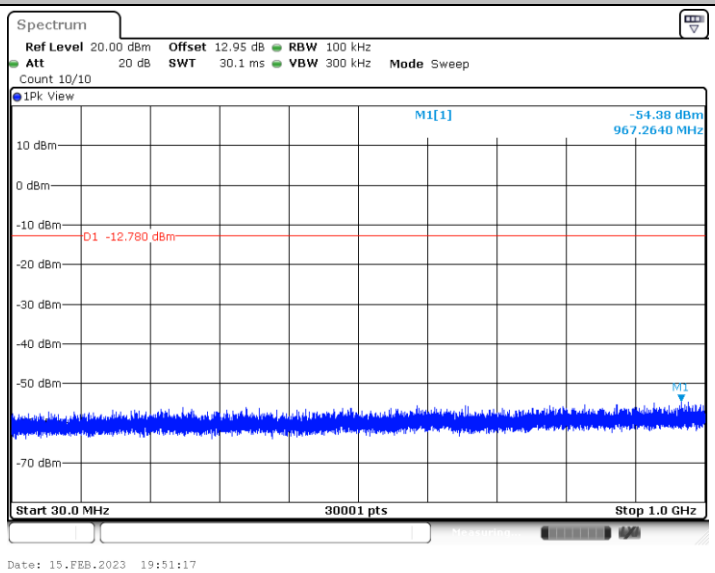
11G-CDD_Ant3_2462_30~1000



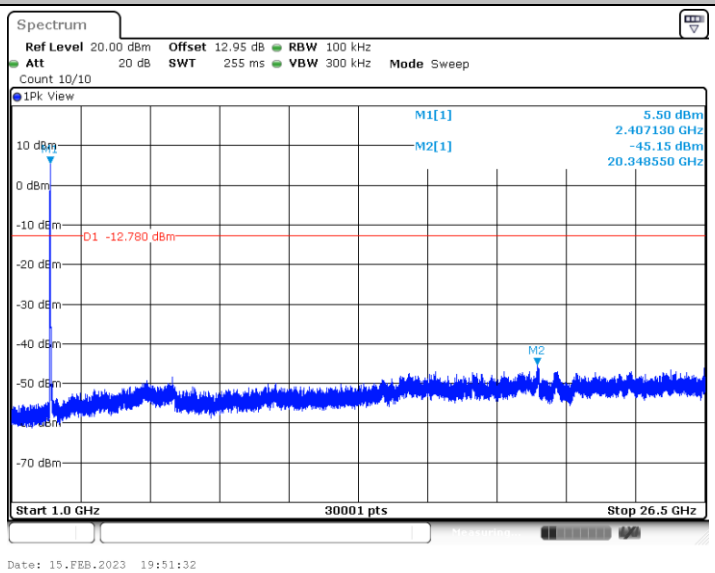
11G-CDD_Ant3_2462_1000~26500



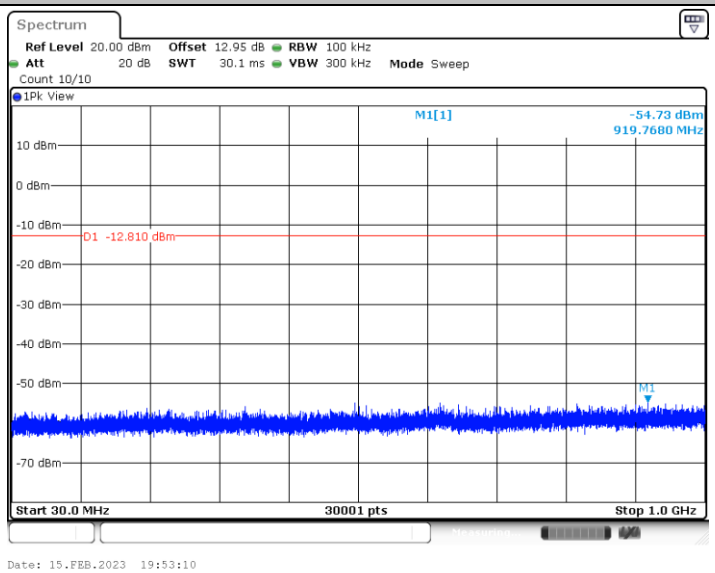
11AX20MIMO_Ant6_2412_30~1000



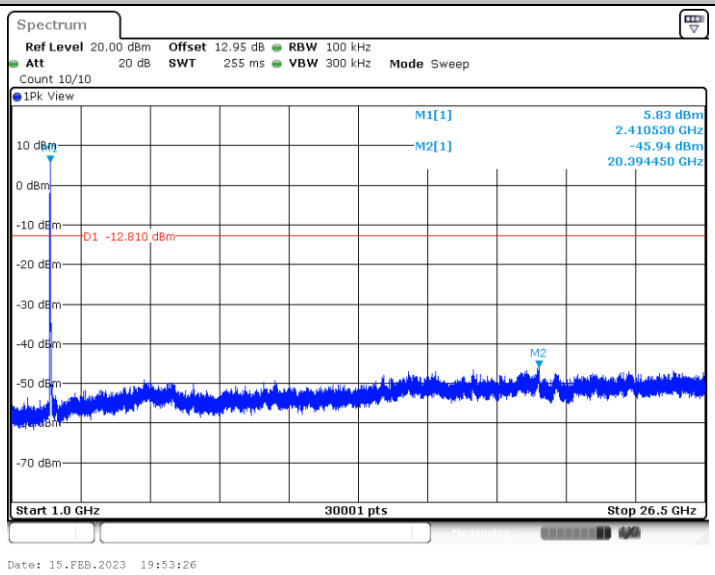
11AX20MIMO_Ant6_2412_1000~26500



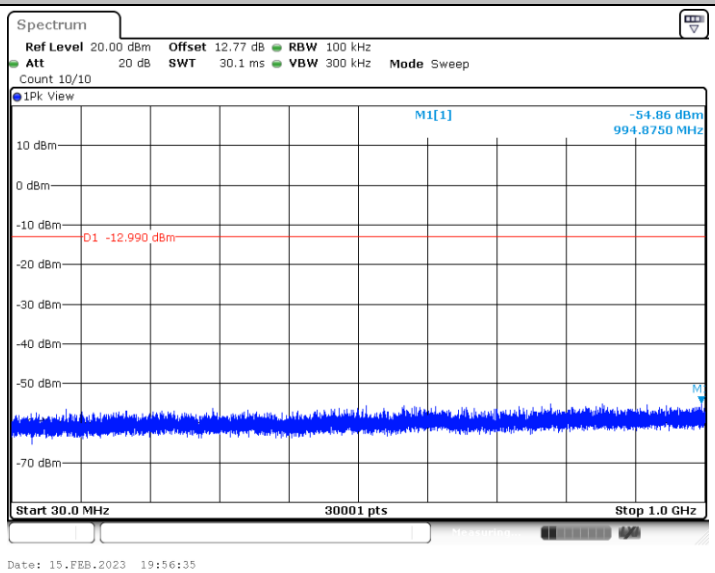
11AX20MIMO_Ant3_2412_30~1000



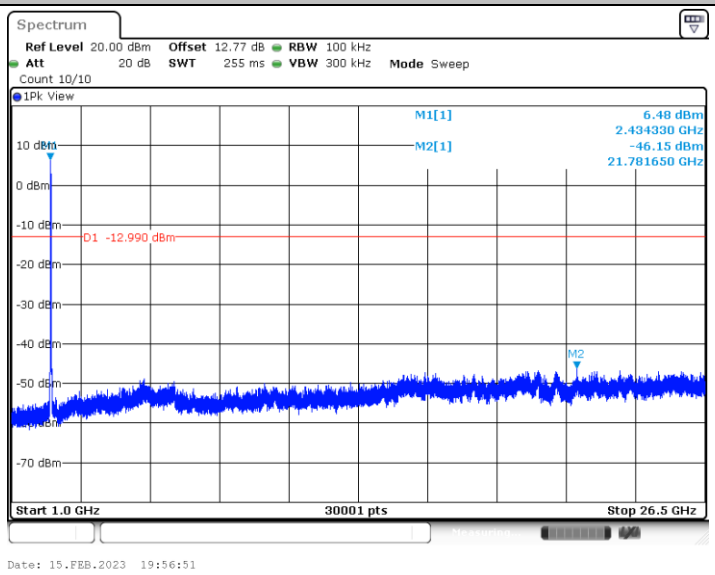
11AX20MIMO_Ant3_2412_1000~26500



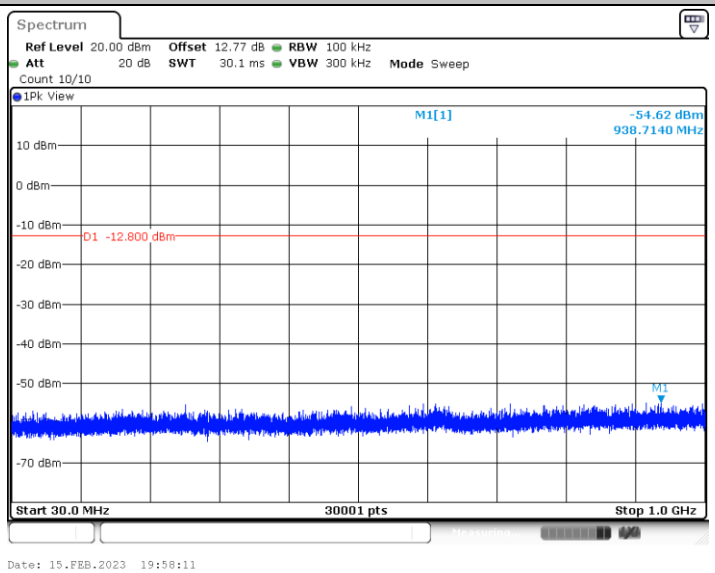
11AX20MIMO_Ant6_2437_30~1000



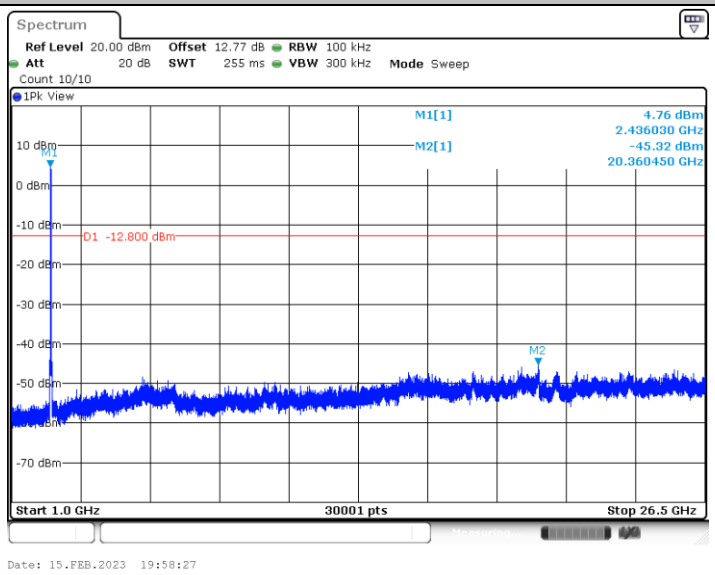
11AX20MIMO_Ant6_2437_1000~26500



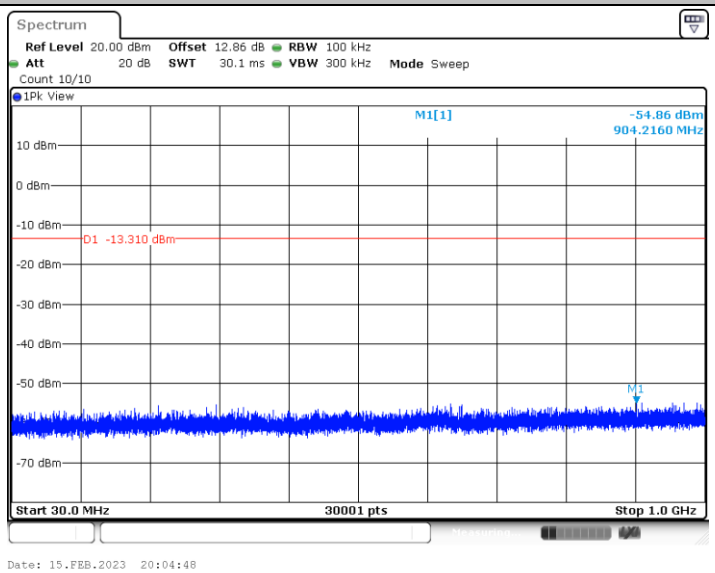
11AX20MIMO_Ant3_2437_30~1000



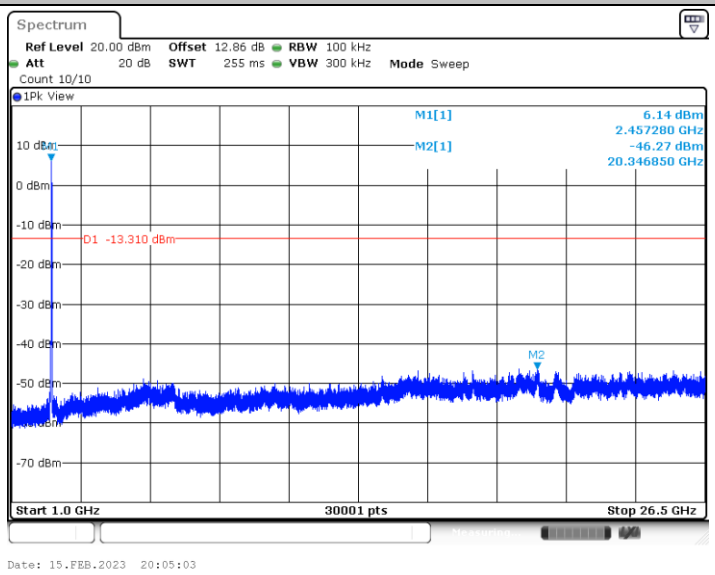
11AX20MIMO_Ant3_2437_1000~26500



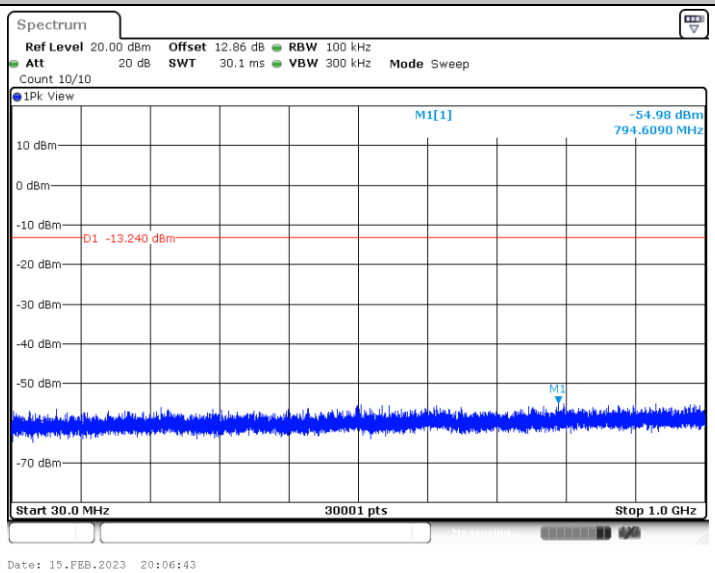
11AX20MIMO_Ant6_2462_30~1000



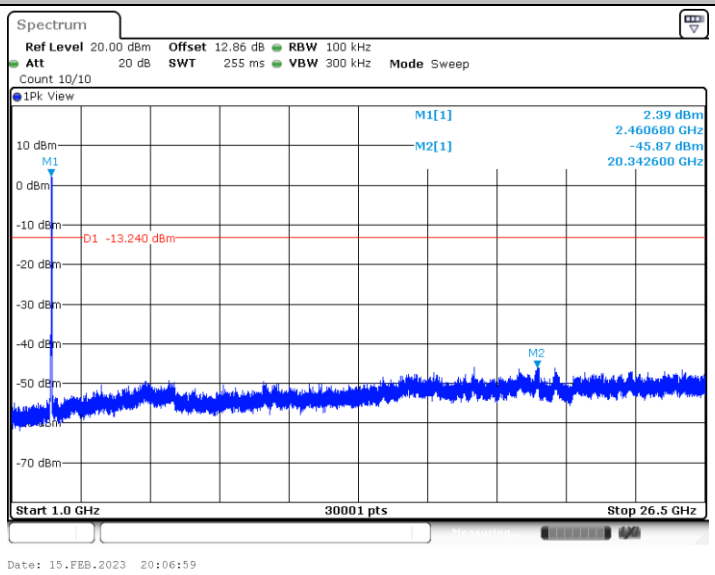
11AX20MIMO_Ant6_2462_1000~26500



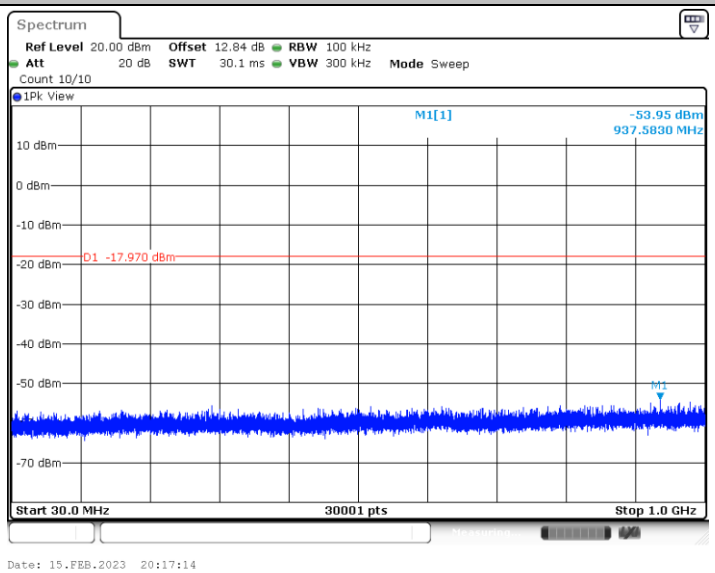
11AX20MIMO_Ant3_2462_30~1000



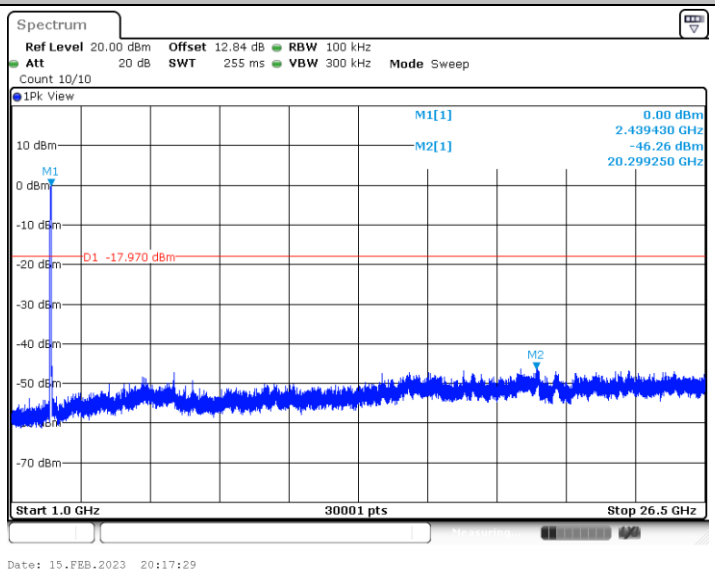
11AX20MIMO_Ant3_2462_1000~26500



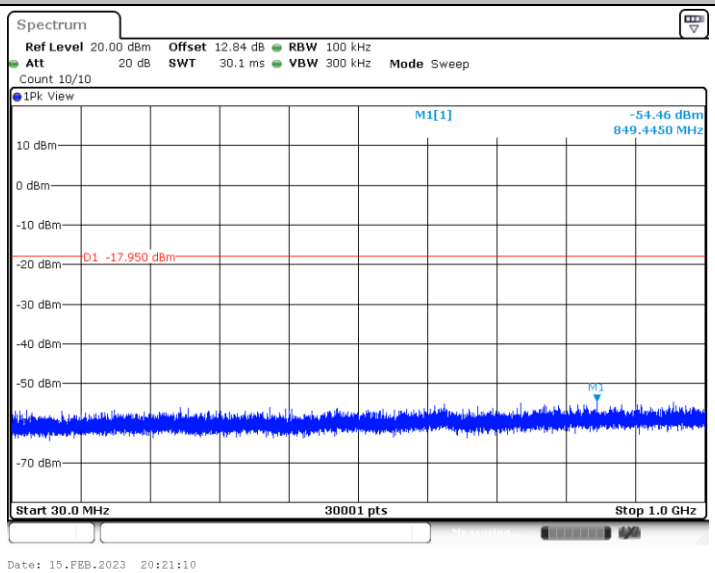
11AX40MIMO_Ant6_2422_30~1000



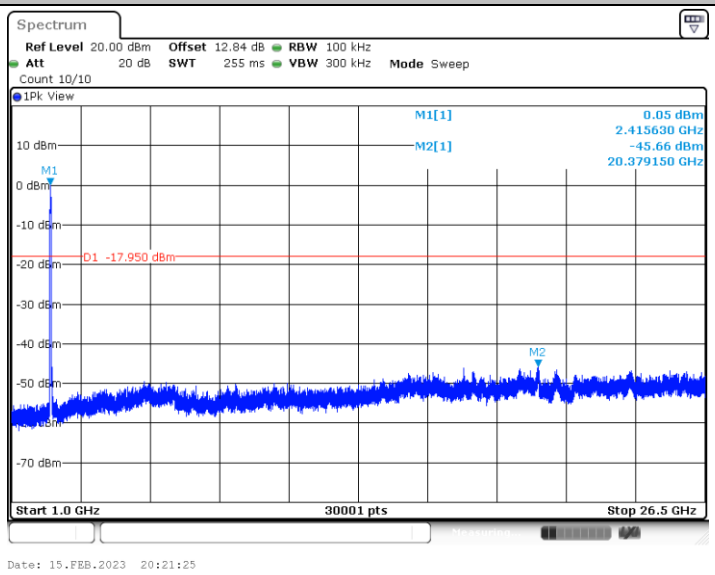
11AX40MIMO_Ant6_2422_1000~26500



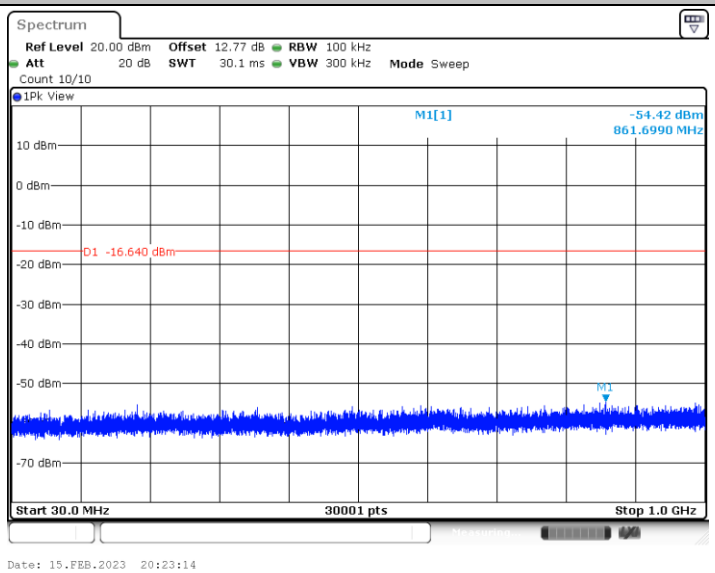
11AX40MIMO_Ant3_2422_30~1000



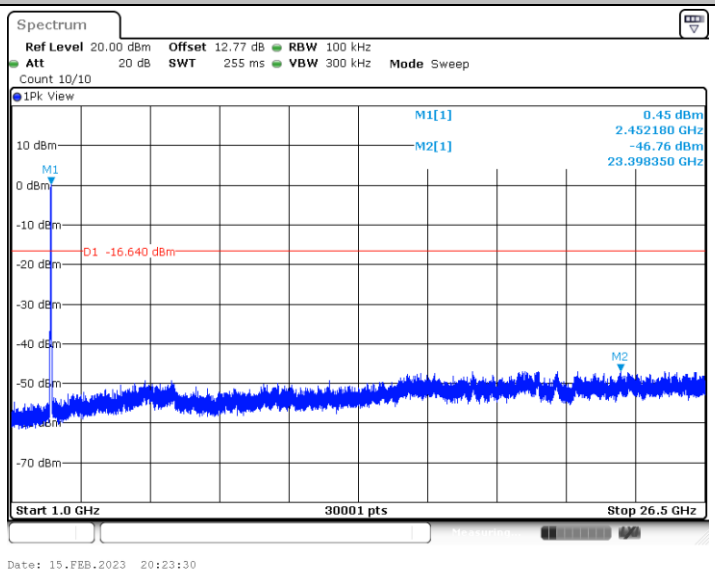
11AX40MIMO_Ant3_2422_1000~26500



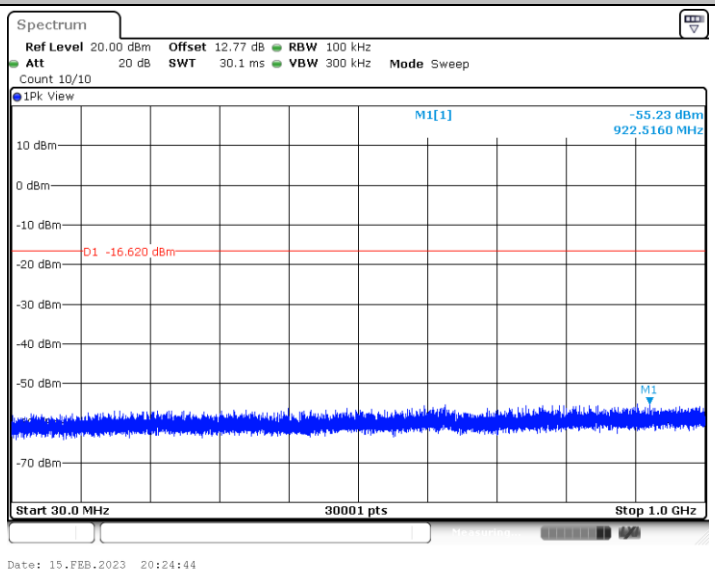
11AX40MIMO_Ant6_2437_30~1000



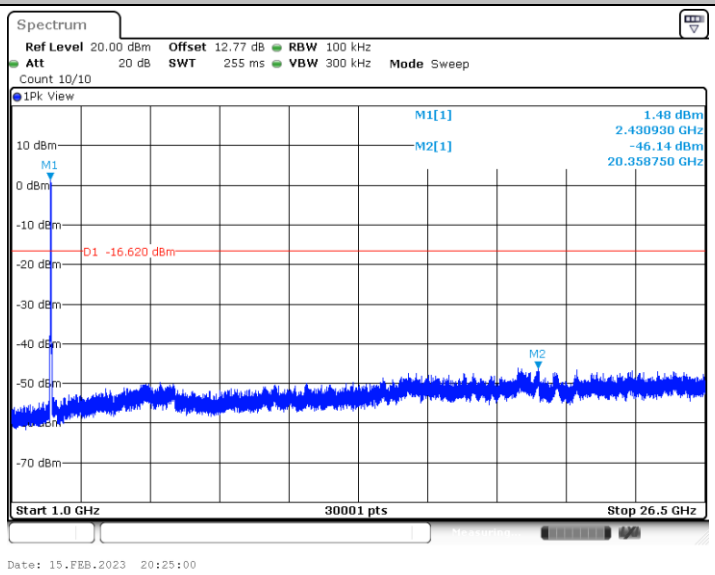
11AX40MIMO_Ant6_2437_1000~26500



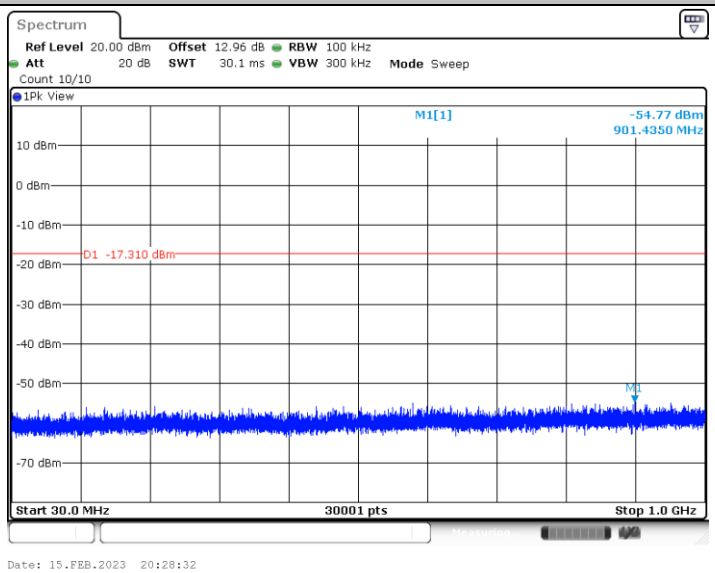
11AX40MIMO_Ant3_2437_30~1000



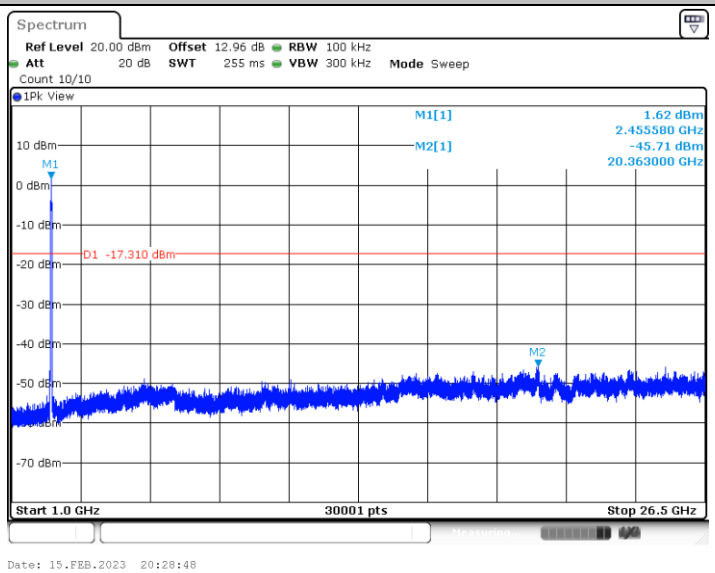
11AX40MIMO_Ant3_2437_1000~26500



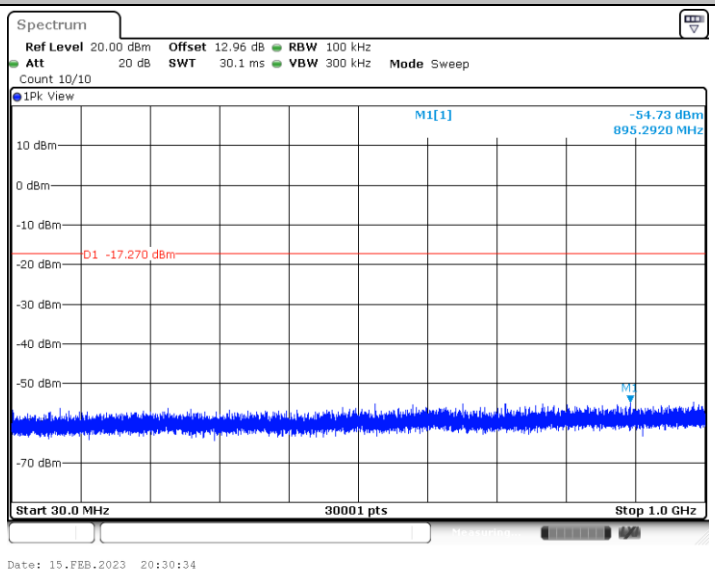
11AX40MIMO_Ant6_2452_30~1000



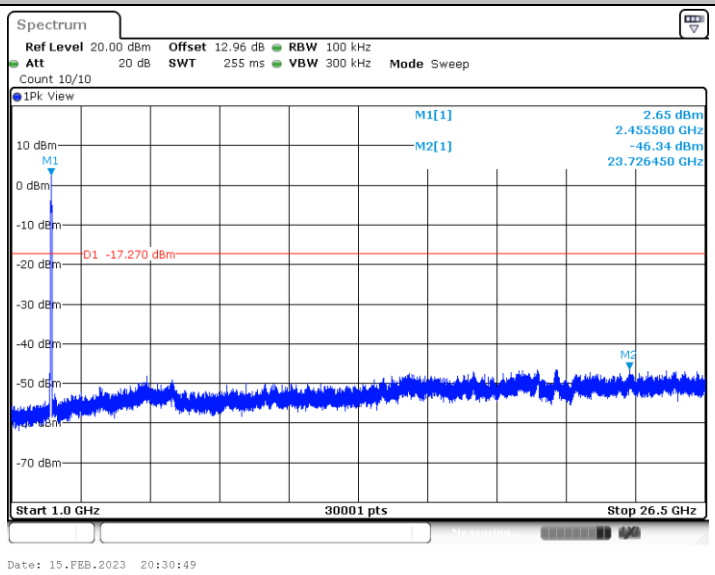
11AX40MIMO_Ant6_2452_1000~26500



11AX40MIMO_Ant3_2452_30~1000



11AX40MIMO_Ant3_2452_1000~26500



AX Partial RU WLAN

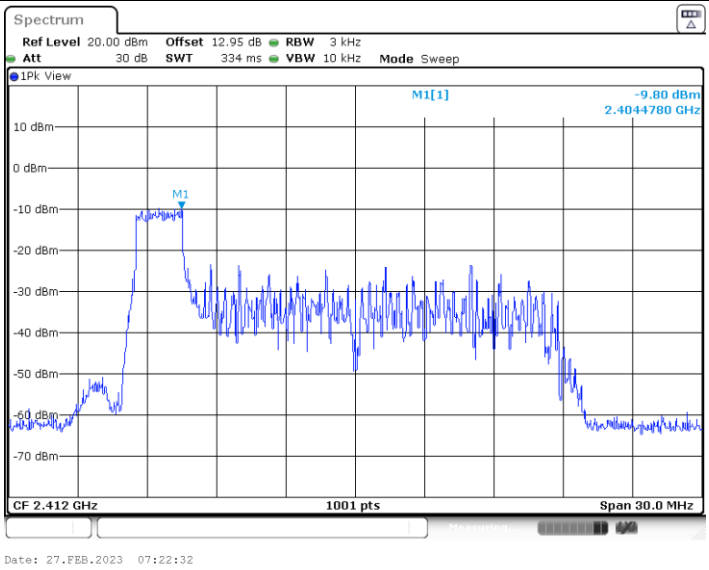
Maximum power spectral density

Test Result

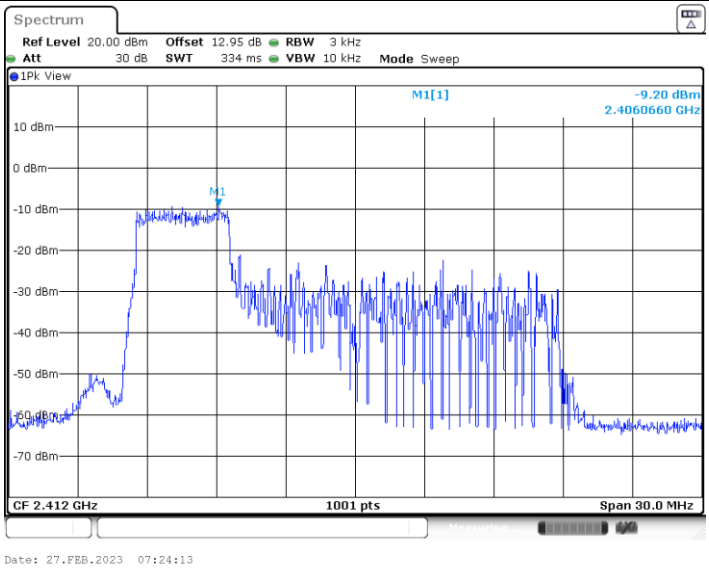
TestMode	Antenna	Freq(MHz)	RuSize	RuIndex	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11AX20MIMO	Ant6	2412	26Tone	RU0	-9.8	≤8.00	PASS
			52Tone	RU37	-9.2	≤8.00	PASS
			106Tone	RU53	-9.54	≤8.00	PASS
	Ant3	2412	26Tone	RU0	-10.97	≤8.00	PASS
			52Tone	RU37	-11.15	≤8.00	PASS
			106Tone	RU53	-11.02	≤8.00	PASS
	total	2412	26Tone	RU0	-7.34	≤8.00	PASS
			52Tone	RU37	-7.06	≤8.00	PASS
			106Tone	RU53	-7.21	≤8.00	PASS
	Ant6	2437	26Tone	RU0	-7.21	≤8.00	PASS
			52Tone	RU37	-6.97	≤8.00	PASS
			106Tone	RU53	-6.56	≤8.00	PASS
	Ant3	2437	26Tone	RU0	-7.9	≤8.00	PASS
			52Tone	RU37	-7.66	≤8.00	PASS
			106Tone	RU53	-8.62	≤8.00	PASS
	total	2437	26Tone	RU0	-4.53	≤8.00	PASS
			52Tone	RU37	-4.29	≤8.00	PASS
			106Tone	RU53	-4.46	≤8.00	PASS
	Ant6	2462	26Tone	RU8	-10.94	≤8.00	PASS
			52Tone	RU40	-10.28	≤8.00	PASS
			106Tone	RU54	-9.64	≤8.00	PASS
	Ant3	2462	26Tone	RU8	-10.19	≤8.00	PASS
			52Tone	RU40	-10.92	≤8.00	PASS
			106Tone	RU54	-11.12	≤8.00	PASS
	total	2462	26Tone	RU8	-7.54	≤8.00	PASS
			52Tone	RU40	-7.58	≤8.00	PASS
			106Tone	RU54	-7.31	≤8.00	PASS

Test Graphs

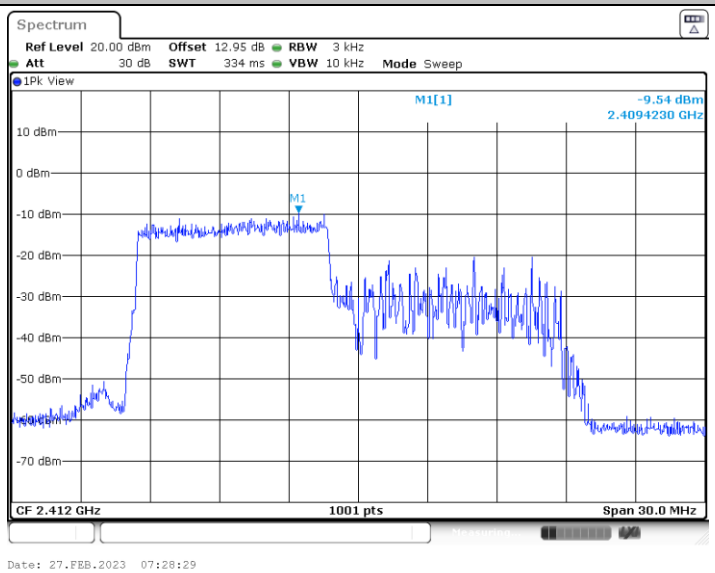
11AX20MIMO_Ant6_2412_26Tone_RU0



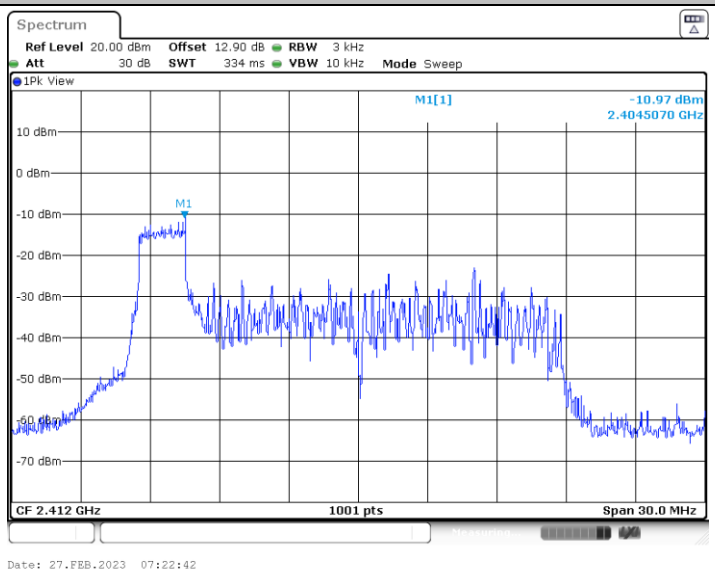
11AX20MIMO_Ant6_2412_52Tone_RU37



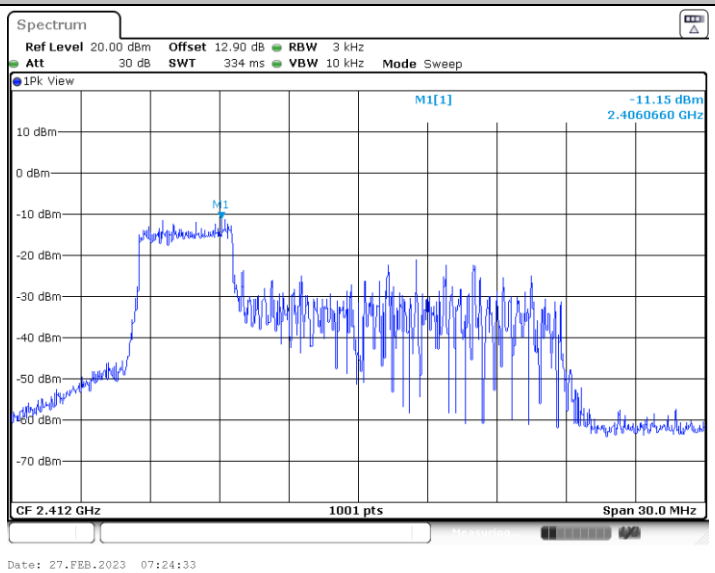
11AX20MIMO_Ant6_2412_106Tone_RU53



11AX20MIMO_Ant3_2412_26Tone_RU0



11AX20MIMO_Ant3_2412_52Tone_RU37



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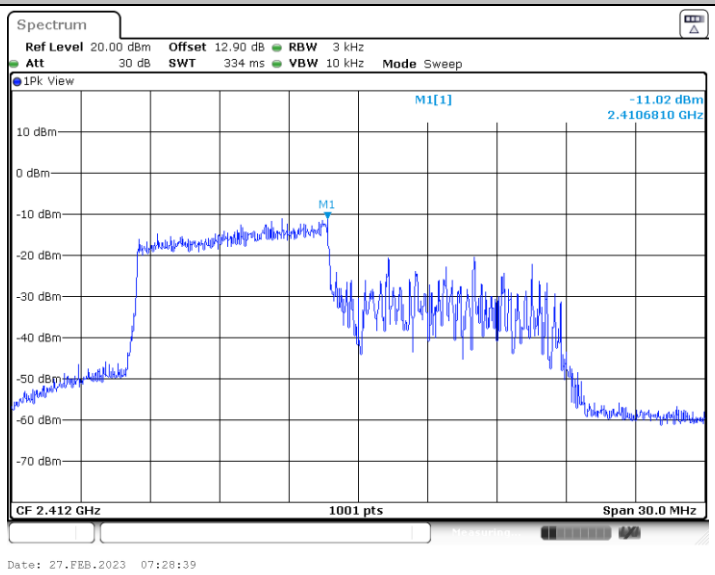

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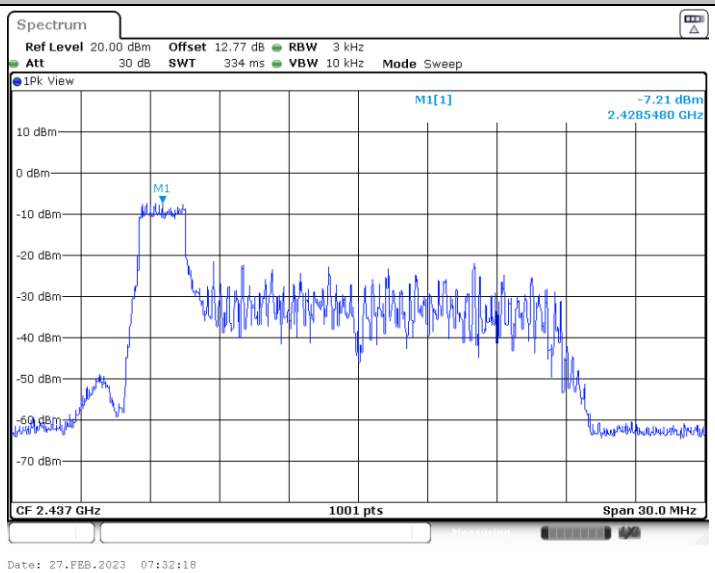

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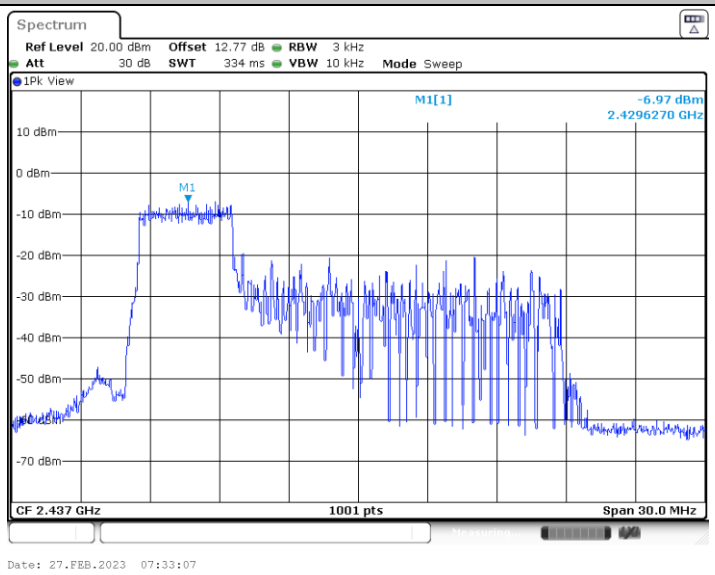

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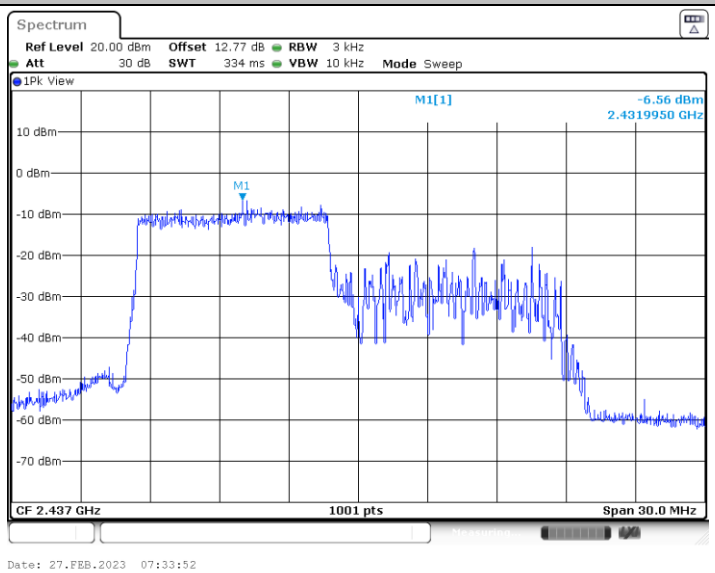

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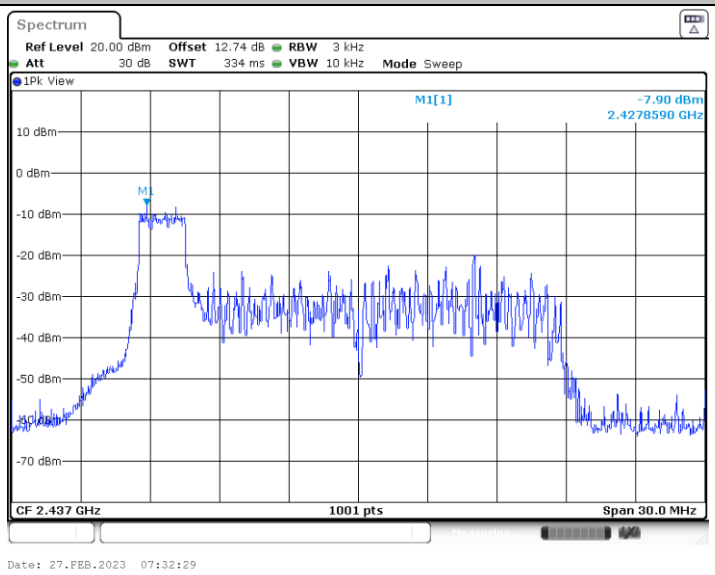

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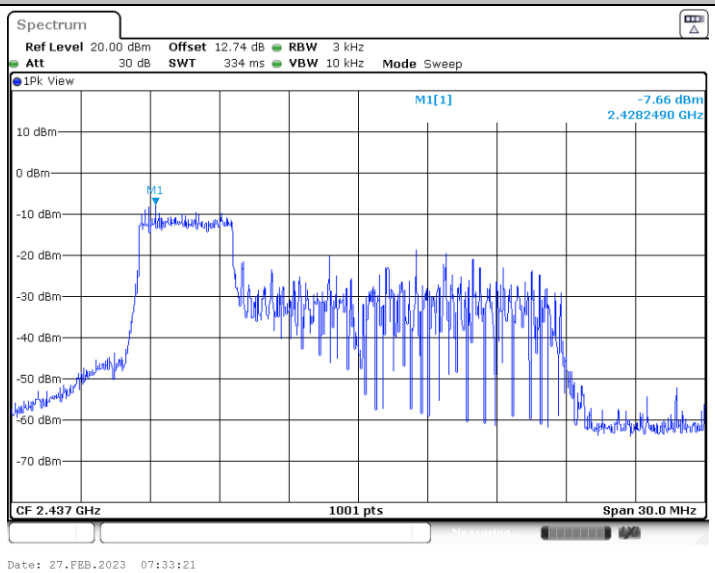

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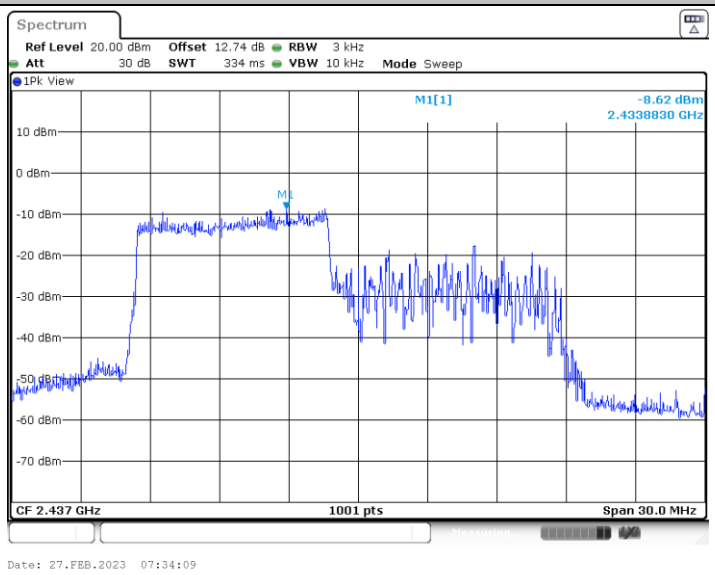

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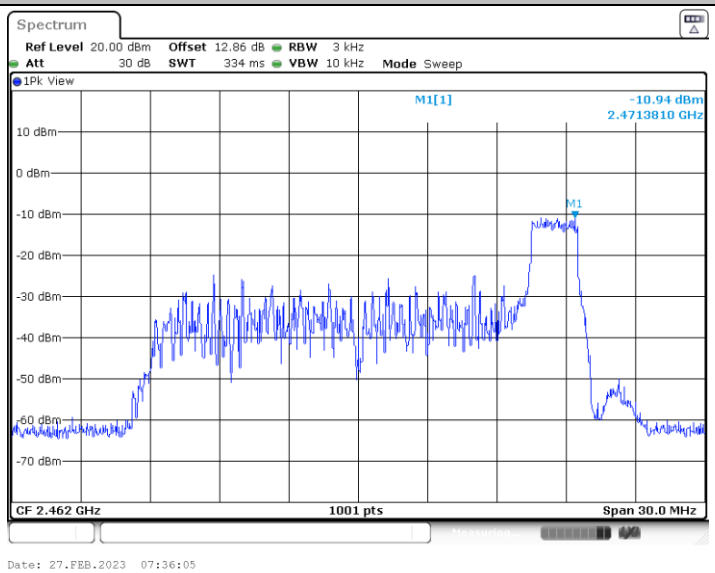

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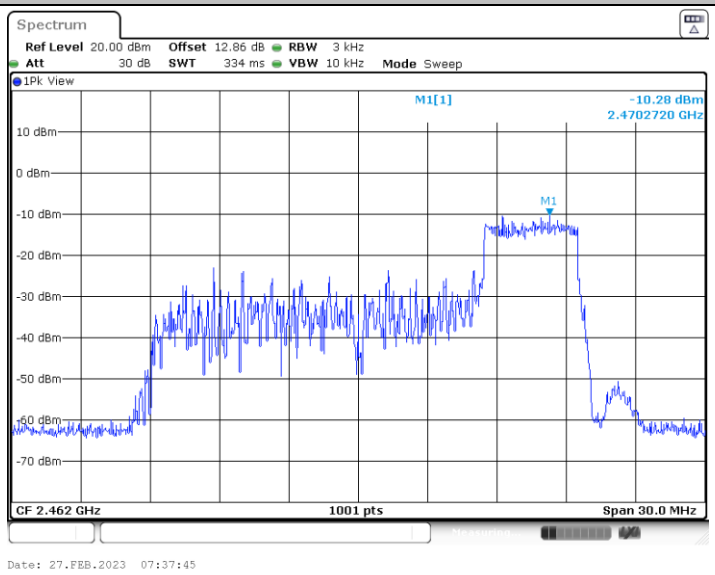

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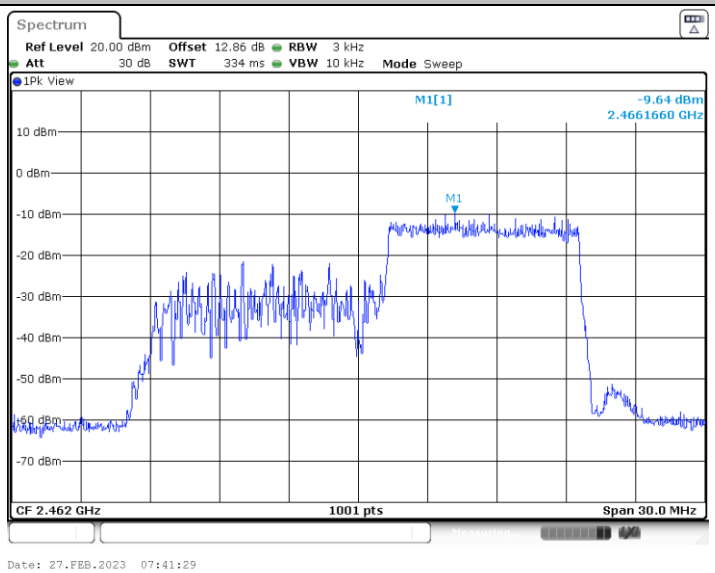
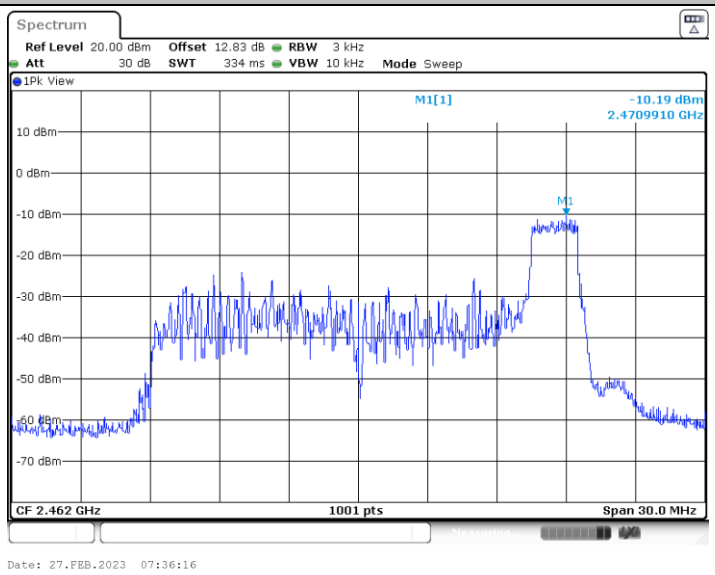


11AX20MIMO_Ant3_2462_26Tone_RU8



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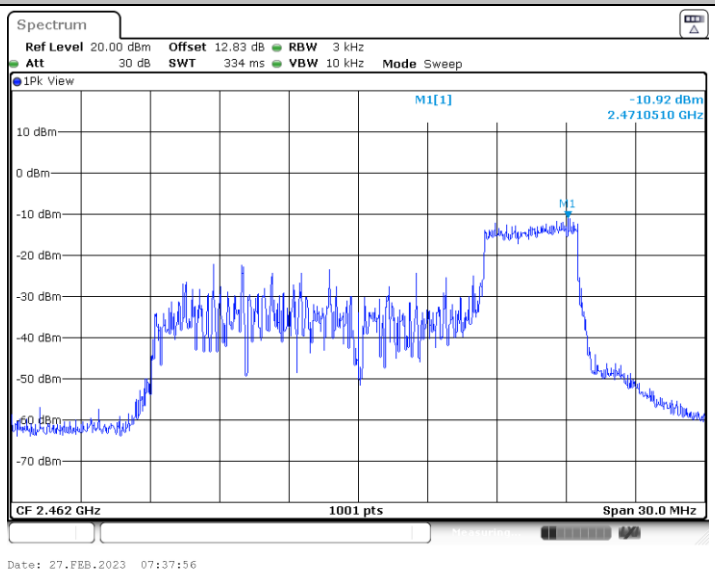

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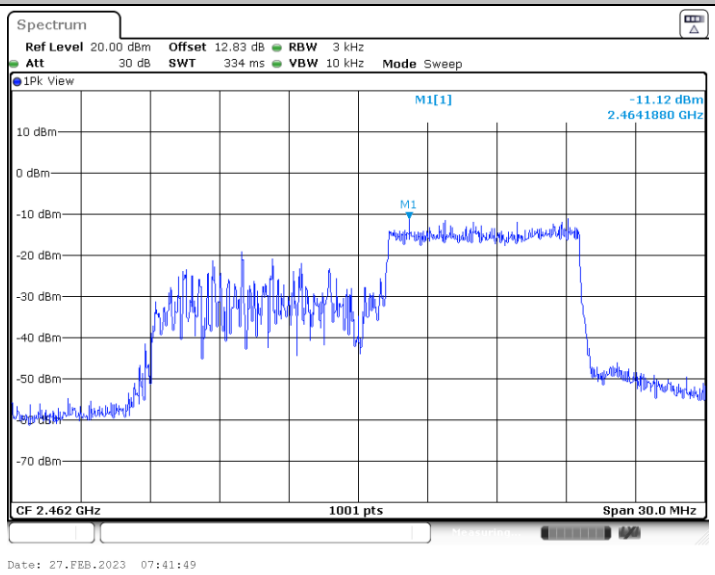
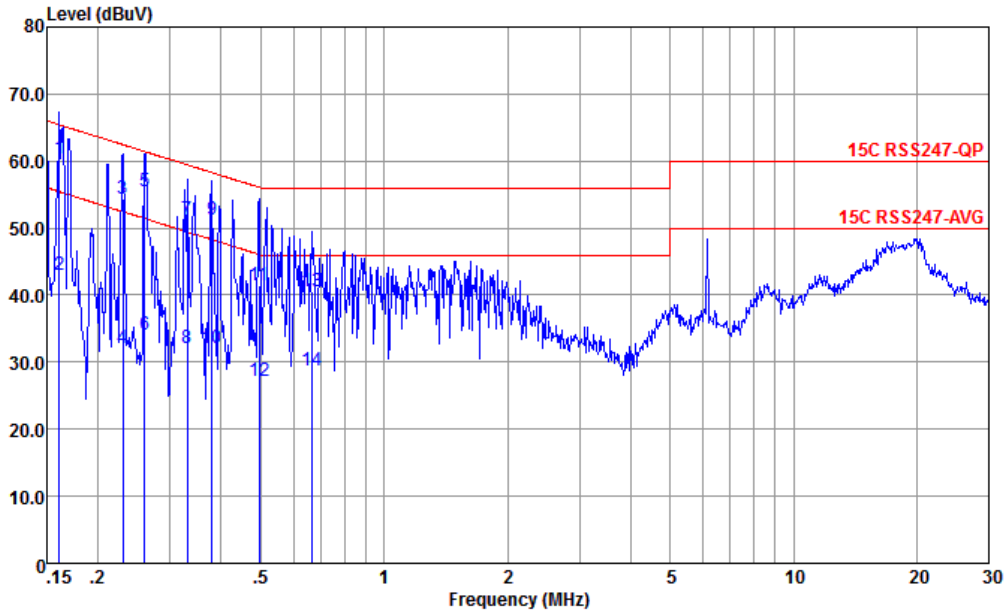


Appendix B. AC Conducted Emission Test Results

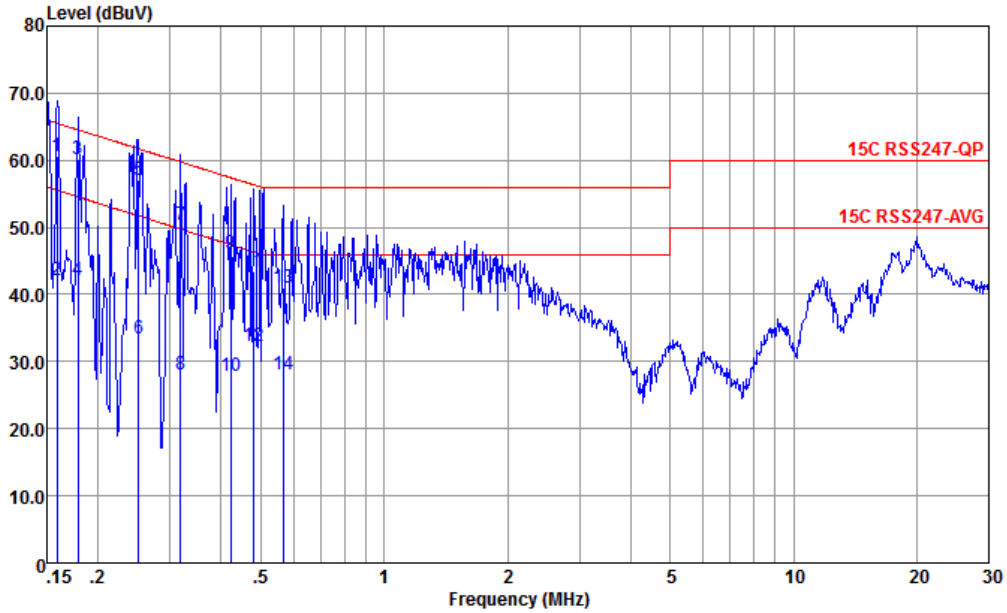
Test Engineer :	Amos Zhang	**Temperature :**	25.3~26.2℃
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
Condition : 15C RSS247-QP LISN-100334-LINE LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	*	0.161	60.37	-5.06	65.43	40.19	9.75	10.43	QP
2		0.161	43.07	-12.36	55.43	22.89	9.75	10.43	Average
3		0.230	54.45	-7.99	62.44	34.50	9.55	10.40	QP
4		0.230	32.15	-20.29	52.44	12.20	9.55	10.40	Average
5		0.260	55.50	-5.92	61.42	35.61	9.52	10.37	QP
6		0.260	34.10	-17.32	51.42	14.21	9.52	10.37	Average
7		0.330	51.16	-8.28	59.44	31.20	9.63	10.33	QP
8		0.330	32.16	-17.28	49.44	12.20	9.63	10.33	Average
9		0.379	51.17	-7.13	58.30	31.19	9.67	10.31	QP
10		0.379	32.17	-16.13	48.30	12.19	9.67	10.31	Average
11		0.494	41.45	-14.65	56.10	21.50	9.74	10.21	QP
12		0.494	27.15	-18.95	46.10	7.20	9.74	10.21	Average
13		0.668	40.49	-15.51	56.00	20.60	9.72	10.17	QP
14		0.668	28.69	-17.31	46.00	8.80	9.72	10.17	Average

Test Engineer :	Amos Zhang	**Temperature :**	25.3~26.2℃
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
Condition : 15C RSS247-QP LISN-100334-NEUTRAL NEUTRAL

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.159	60.65	-4.87	65.52	40.60	9.62	10.43	QP
2		0.159	42.15	-13.37	55.52	22.10	9.62	10.43	Average
3	*	0.179	60.21	-4.34	64.55	40.21	9.58	10.42	QP
4		0.179	42.21	-12.34	54.55	22.21	9.58	10.42	Average
5		0.251	57.00	-4.73	61.73	37.20	9.42	10.38	QP
6		0.251	33.40	-18.33	51.73	13.60	9.42	10.38	Average
7		0.318	50.30	-9.45	59.75	30.49	9.47	10.34	QP
8		0.318	28.00	-21.75	49.75	8.19	9.47	10.34	Average
9		0.421	46.04	-11.38	57.42	26.19	9.57	10.28	QP
10		0.421	27.94	-19.48	47.42	8.09	9.57	10.28	Average
11		0.481	43.43	-12.89	56.32	23.59	9.61	10.23	QP
12		0.481	32.33	-13.99	46.32	12.49	9.61	10.23	Average
13		0.567	41.03	-14.97	56.00	21.21	9.63	10.19	QP
14		0.567	28.13	-17.87	46.00	8.31	9.63	10.19	Average

Note:

1. Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
2. Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)

Appendix C. Radiated Spurious Emission Test Data

Test Engineer :	Carry Xu	**Relative Humidity :**	41 ~ 42 %
		Temperature :	22 ~ 23 ℃

Radiated Spurious Emission Test Modes

Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	DataRate	RU	Remark
Mode 1	2400-2483.5	CDD 3+6	802.11b	1	2412	1Mbps	-	-
Mode 2	2400-2483.5	CDD 3+6	802.11b	6	2437	1Mbps	-	-
Mode 3	2400-2483.5	CDD 3+6	802.11b	11	2462	1Mbps	-	-
Mode 4	2400-2483.5	CDD 3+6	802.11g	1	2412	6Mbps	-	-
Mode 5	2400-2483.5	CDD 3+6	802.11g	6	2437	6Mbps	-	-
Mode 6	2400-2483.5	CDD 3+6	802.11g	11	2462	6Mbps	-	-
Mode 7	2400-2483.5	CDD 3+6	802.11ax HE20	1	2412	MCS0	-	-
Mode 8	2400-2483.5	CDD 3+6	802.11ax HE20	6	2437	MCS0	-	-
Mode 9	2400-2483.5	CDD 3+6	802.11ax HE20	11	2462	MCS0	-	-
Mode 10	2400-2483.5	CDD 3+6	802.11ax HE20	1	2412	MCS0	RU26/0	-
Mode 11	2400-2483.5	CDD 3+6	802.11ax HE20	1	2412	MCS0	RU52/37	-
Mode 12	2400-2483.5	CDD 3+6	802.11ax HE20	1	2412	MCS0	RU106/53	-
Mode 13	2400-2483.5	CDD 3+6	802.11ax HE20	11	2462	MCS0	RU26/8	-
Mode 14	2400-2483.5	CDD 3+6	802.11ax HE20	11	2462	MCS0	RU52/40	-
Mode 15	2400-2483.5	CDD 3+6	802.11ax HE20	11	2462	MCS0	RU106/54	-
Mode 16	2400-2483.5	CDD 3+6	802.11ax HE40	3	2422	MCS0	-	-
Mode 17	2400-2483.5	CDD 3+6	802.11ax HE40	6	2437	MCS0	-	-
Mode 18	2400-2483.5	CDD 3+6	802.11ax HE40	9	2452	MCS0	-	-
Mode 19	2400-2483.5	CDD 3+6	802.11ax HE20	11	2462	MCS0		LF

Co-location

Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 20	2400-2483.5	3	802.11ax HE20	11	2462	MCS0	-	-
	2400-2483.5	6	Bluetooth-LE	39	2480	2Mbps	-	-
	Part 27M LTE-Band 41 BW=20M							
Mode 21	2400-2483.5	CDD 3+6	802.11ax HE20	11	2462	MCS0	-	-
	Part 27M LTE-Band 41 BW=20M							

Summary of each worse mode

Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	Remark
1	802.11b	1	2389.95	39.42	54.00	-14.58	V	AVERAGE	Pass	Band Edge
	802.11b	1	4824.00	44.29	74.00	-29.71	H	PEAK	Pass	Harmonic
2	802.11b	6	-	-	-	-	-	-	-	Band Edge
	802.11b	6	7311.00	46.19	54.00	-7.81	V	AVERAGE	Pass	Harmonic
3	802.11b	11	2484.88	39.21	54.00	-14.79	H	AVERAGE	Pass	Band Edge
	802.11b	11	4924.00	45.79	74.00	-28.21	H	PEAK	Pass	Harmonic
4	802.11g	1	2389.95	50.40	54.00	-3.60	H	AVERAGE	Pass	Band Edge
	802.11g	1	4824.00	43.38	74.00	-30.62	H	PEAK	Pass	Harmonic
5	802.11g	6	-	-	-	-	-	-	-	Band Edge
	802.11g	6	7311.00	45.25	74.00	-28.75	V	PEAK	Pass	Harmonic
6	802.11g	11	2483.50	49.97	54.00	-4.03	H	AVERAGE	Pass	Band Edge
	802.11g	11	7386.00	44.26	74.00	-29.74	V	PEAK	Pass	Harmonic
7	802.11ax HE20	1	2389.95	50.38	54.00	-3.62	H	AVERAGE	Pass	Band Edge
	802.11ax HE20	1	4824.00	41.36	74.00	-32.64	H	PEAK	Pass	Harmonic
8	802.11ax HE20	6	-	-	-	-	-	-	-	Band Edge
	802.11ax HE20	6	7311.00	43.65	74.00	-30.35	V	PEAK	Pass	Harmonic
9	802.11ax HE20	11	2483.74	50.78	54.00	-3.22	H	AVERAGE	Pass	Band Edge
	802.11ax HE20	11	7386.00	42.70	74.00	-31.30	V	PEAK	Pass	Harmonic
10	802.11ax HE20	1	2389.30	38.54	54.00	-15.46	H	AVERAGE	Pass	Band Edge
	802.11ax HE20	1	-	-	-	-	-	-	-	Harmonic
11	802.11ax HE20	1	2389.69	39.25	54.00	-14.75	V	AVERAGE	Pass	Band Edge
	802.11ax HE20	1	-	-	-	-	-	-	-	Harmonic
12	802.11ax HE20	1	2389.43	40.58	54.00	-13.42	V	AVERAGE	Pass	Band Edge
	802.11ax HE20	1	-	-	-	-	-	-	-	Harmonic
13	802.11ax HE20	11	2484.94	37.67	54.00	-16.33	H	AVERAGE	Pass	Band Edge
	802.11ax HE20	11	-	-	-	-	-	-	-	Harmonic
14	802.11ax HE20	11	2483.50	38.29	54.00	-15.71	H	AVERAGE	Pass	Band Edge
	802.11ax HE20	11	-	-	-	-	-	-	-	Harmonic
15	802.11ax HE20	11	2483.50	41.00	54.00	-13.00	H	AVERAGE	Pass	Band Edge
	802.11ax HE20	11	-	-	-	-	-	-	-	Harmonic
16	802.11ax HE40	3	2389.95	49.53	54.00	-4.47	H	AVERAGE	Pass	Band Edge
	802.11ax HE40	3	4844.00	43.07	74.00	-30.93	H	PEAK	Pass	Harmonic
17	802.11ax HE40	6	2389.69	49.61	54.00	-4.39	H	AVERAGE	Pass	Band Edge
	802.11ax HE40	6	7311.00	42.45	74.00	-31.55	V	PEAK	Pass	Harmonic
18	802.11ax HE40	9	2484.22	50.62	54.00	-3.38	H	Average	Pass	Band Edge
	802.11ax HE40	9	7356.00	42.21	74.00	-31.79	V	PEAK	Pass	Harmonic
19	802.11ax HE20	11	42.61	27.36	40.00	-12.64	V	PEAK	Pass	LF

Co-location

Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	Remark
20	802.11ax HE20	11	2483.50	46.35	54.00	-7.65	H	AVERAGE	Pass	Band Edge
	802.11ax HE20	11	10336.50	53.33	74.00	-20.67	V	PEAK	Pass	Harmonic
	Bluetooth-LE	39	2483.56	46.07	54.00	-7.93	V	AVERAGE	Pass	Band Edge
	Bluetooth-LE	39	10336.50	50.78	74.00	-23.22	V	PEAK	Pass	Harmonic
21	802.11ax HE20	11	2483.50	50.45	54.00	-3.55	H	Average	Pass	Band Edge
	802.11ax HE20	11	10336.50	51.85	74.00	-22.15	V	PEAK	Pass	Harmonic