

RF Test Data for 2.4G Wi-Fi (Conducted Measurements)

General Description of EUT	
EUT Name:	Touch Inquiry Machine
Model:	MWE-CS3209
Sample ID:	HC-C-202510-0082-01-01-2#
Test Standard:	FCC Part 15.247
Environmental Conditions	
Ambient Temperature:	25°C
Ambient Humidity:	45%RH
Test Power Supply:	AC 120V/60Hz
Test Engineer:	Gold. zhang
Note: For a more detailed features description, please refer to the report TBR-C-202510-0082-32	

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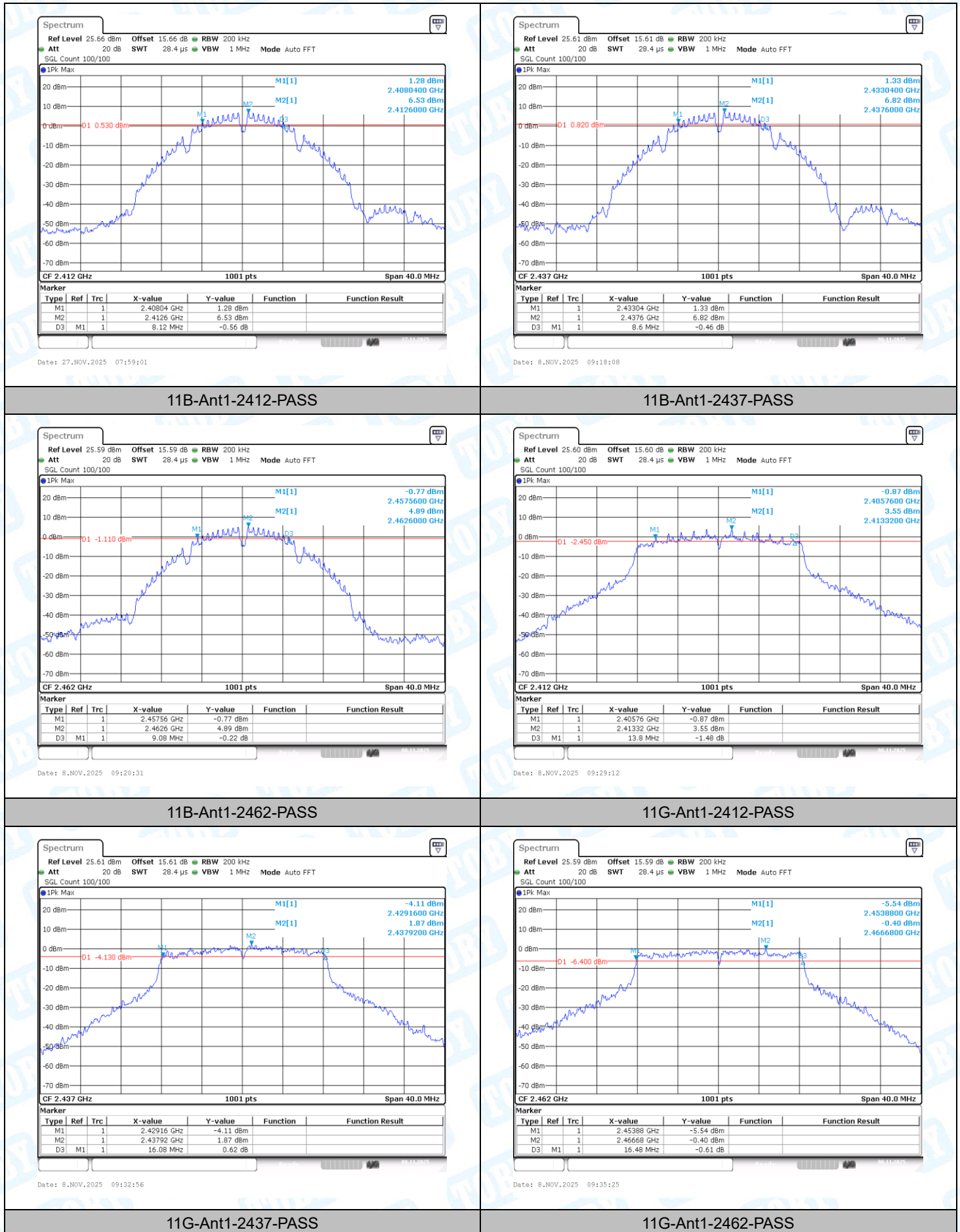
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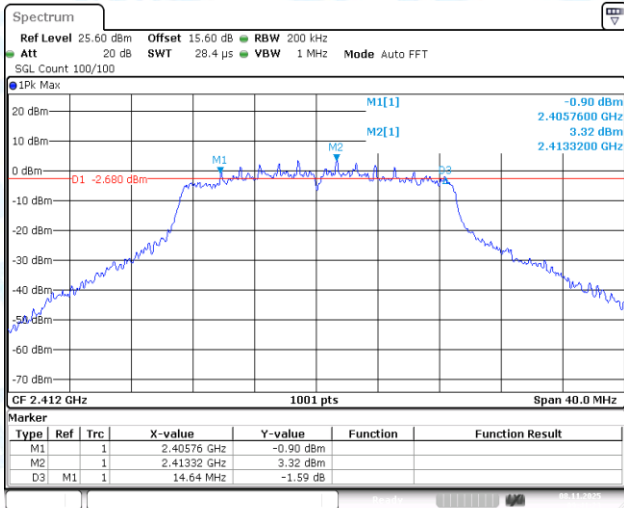
1: DTS Bandwidth

1.1 Test Result

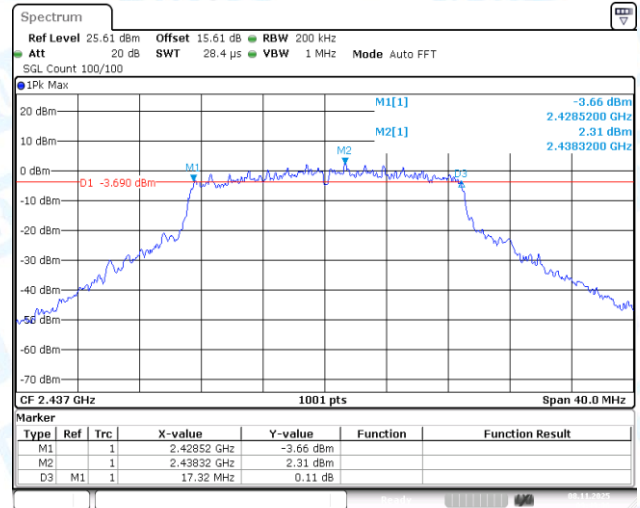
TestMode	Ant.	Frequency [MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.12	2408.04	2416.16	0.5	PASS
11B	Ant1	2437	8.60	2433.04	2441.64	0.5	PASS
11B	Ant1	2462	9.08	2457.56	2466.64	0.5	PASS
11G	Ant1	2412	13.80	2405.76	2419.56	0.5	PASS
11G	Ant1	2437	16.08	2429.16	2445.24	0.5	PASS
11G	Ant1	2462	16.48	2453.88	2470.36	0.5	PASS
11N20SISO	Ant1	2412	14.64	2405.76	2420.40	0.5	PASS
11N20SISO	Ant1	2437	17.32	2428.52	2445.84	0.5	PASS
11N20SISO	Ant1	2462	17.32	2453.56	2470.88	0.5	PASS
11N40SISO	Ant1	2422	33.84	2406.56	2440.40	0.5	PASS
11N40SISO	Ant1	2437	35.68	2419.24	2454.92	0.5	PASS
11N40SISO	Ant1	2452	36.00	2434.08	2470.08	0.5	PASS

1.2 Test Graphs





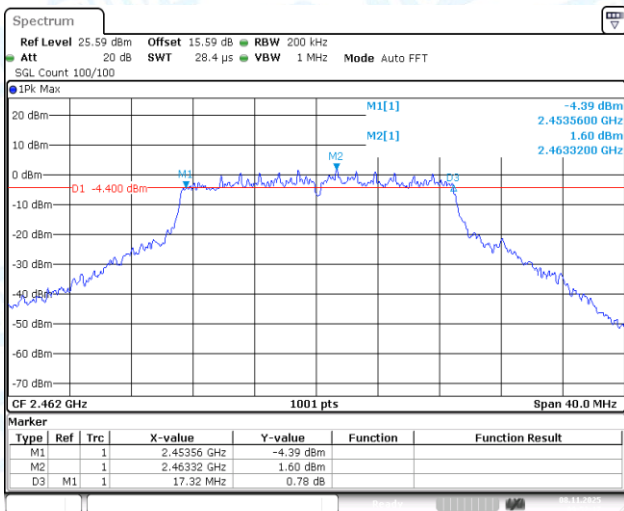
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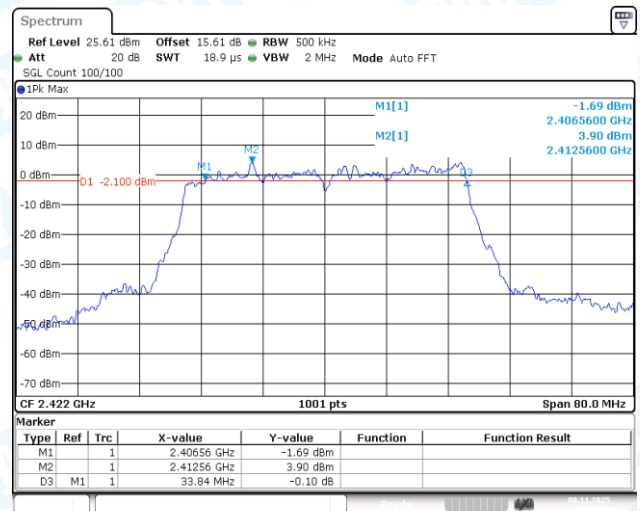
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11N20SISO-Ant1-2412-PASS

11N20SISO-Ant1-2437-PASS



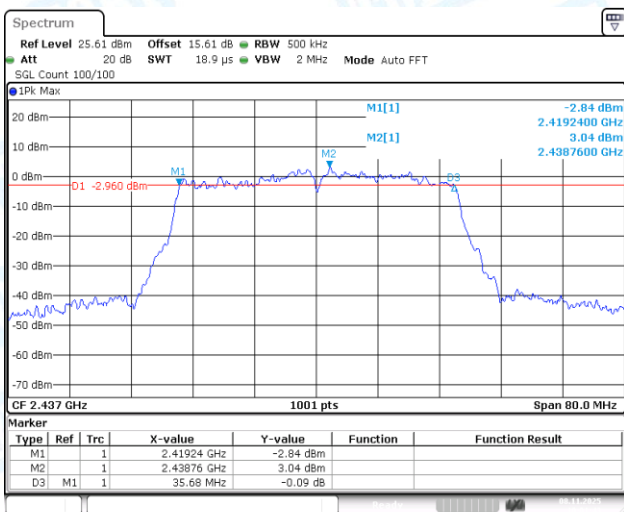
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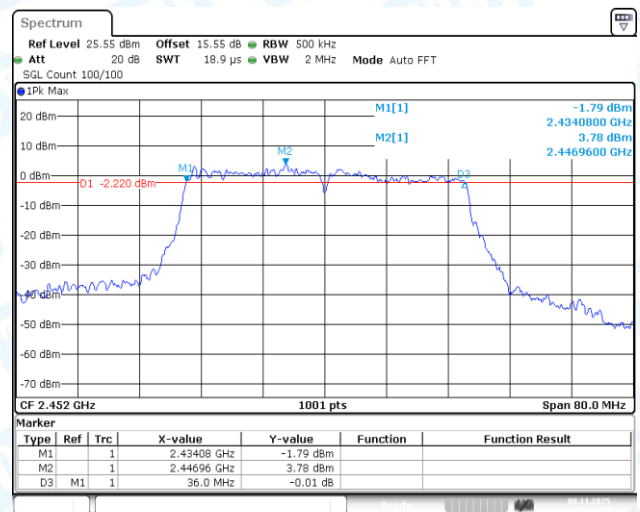
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11N20SISO-Ant1-2462-PASS

11N40SISO-Ant1-2422-PASS



Date: 8.NOV.2025 10:01:43



Date: 8.NOV.2025 10:10:35

11N40SISO-Ant1-2437-PASS

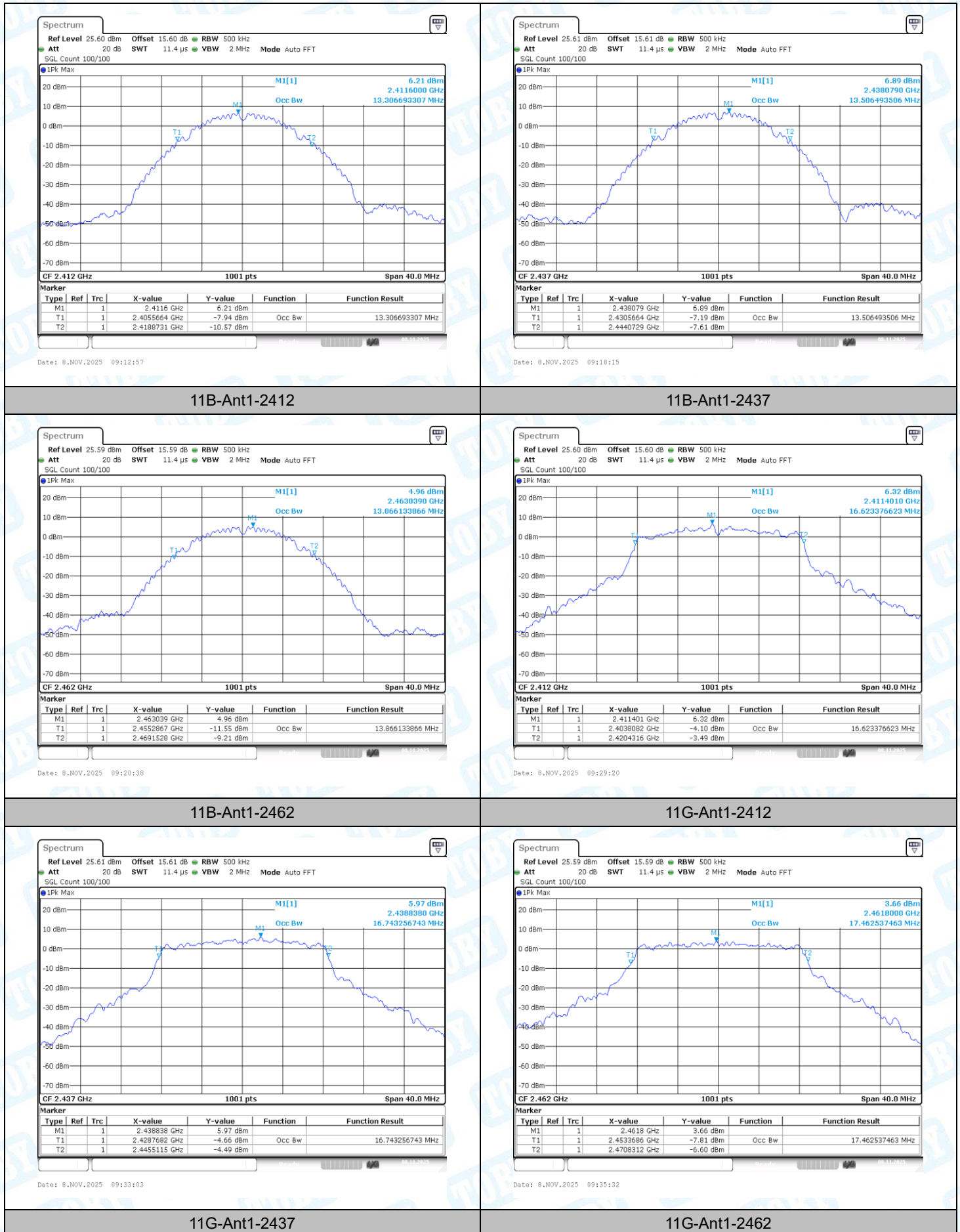
11N40SISO-Ant1-2452-PASS

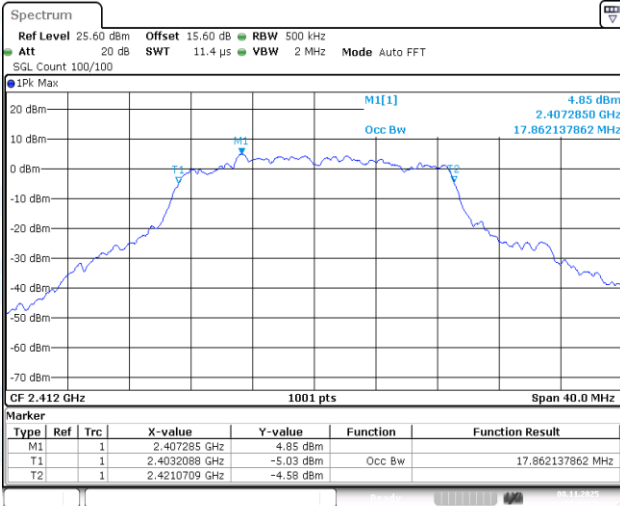
2: Occupied Channel Bandwidth

2.1 Test Result

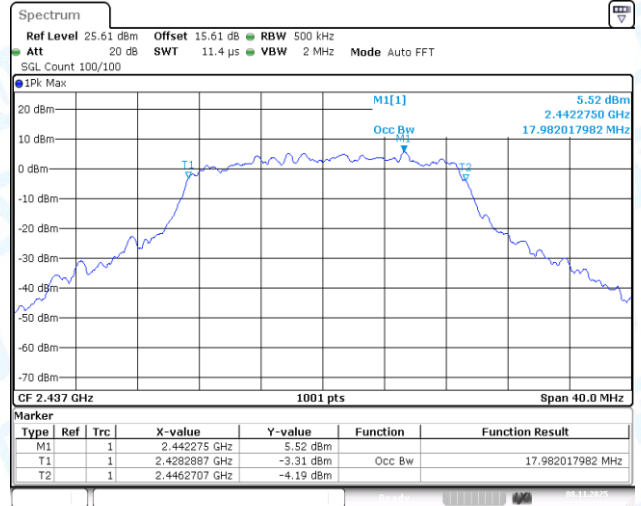
TestMode	Ant.	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.307	2405.5664	2418.8731	---	---
11B	Ant1	2437	13.506	2430.5664	2444.0729	---	---
11B	Ant1	2462	13.866	2455.2867	2469.1528	---	---
11G	Ant1	2412	16.623	2403.8082	2420.4316	---	---
11G	Ant1	2437	16.743	2428.7682	2445.5115	---	---
11G	Ant1	2462	17.463	2453.3686	2470.8312	---	---
11N20SISO	Ant1	2412	17.862	2403.2088	2421.0709	---	---
11N20SISO	Ant1	2437	17.982	2428.2887	2446.2707	---	---
11N20SISO	Ant1	2462	18.062	2453.0490	2471.1109	---	---
11N40SISO	Ant1	2422	36.364	2404.0979	2440.4615	---	---
11N40SISO	Ant1	2437	36.364	2418.8581	2455.2218	---	---
11N40SISO	Ant1	2452	36.523	2433.8581	2470.3816	---	---

2.2 Test Graphs

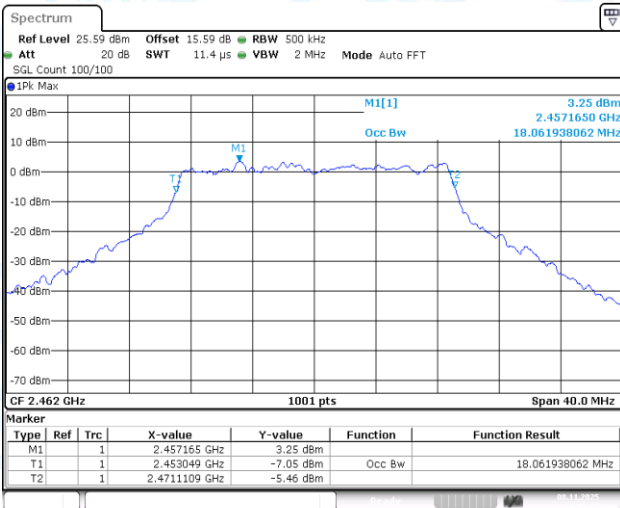




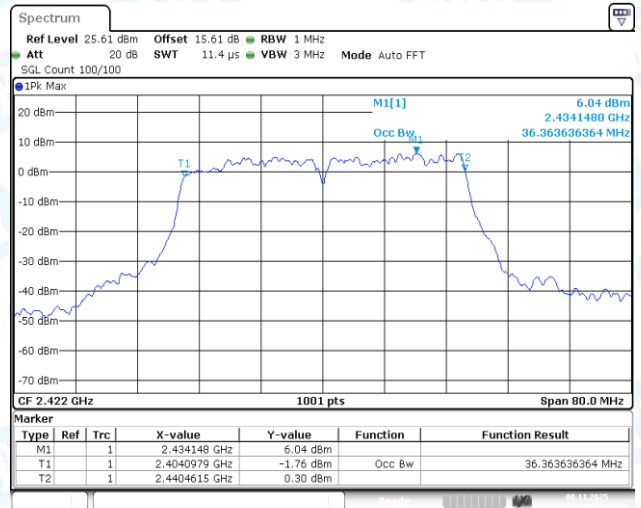
11N20SISO-Ant1-2412



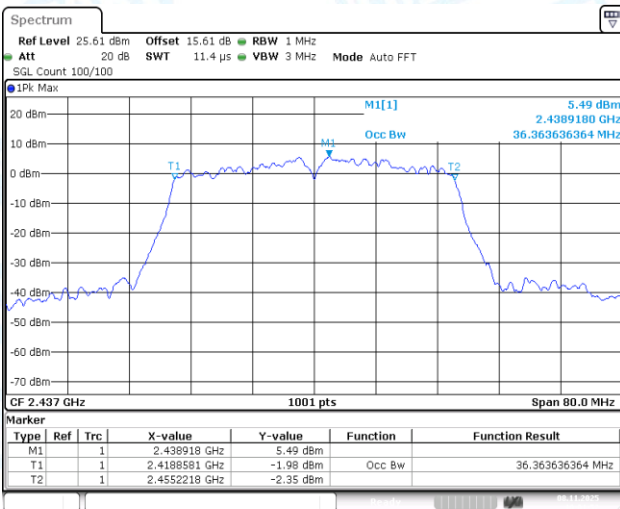
11N20SISO-Ant1-2437



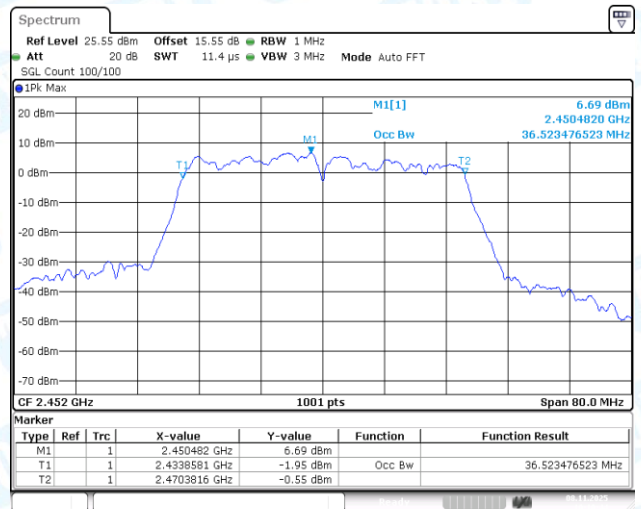
11N20SISO-Ant1-2462



11N40SISO-Ant1-2422



11N40SISO-Ant1-2437



11N40SISO-Ant1-2452

3: Maximum conducted output power

3.1 Test Result Average

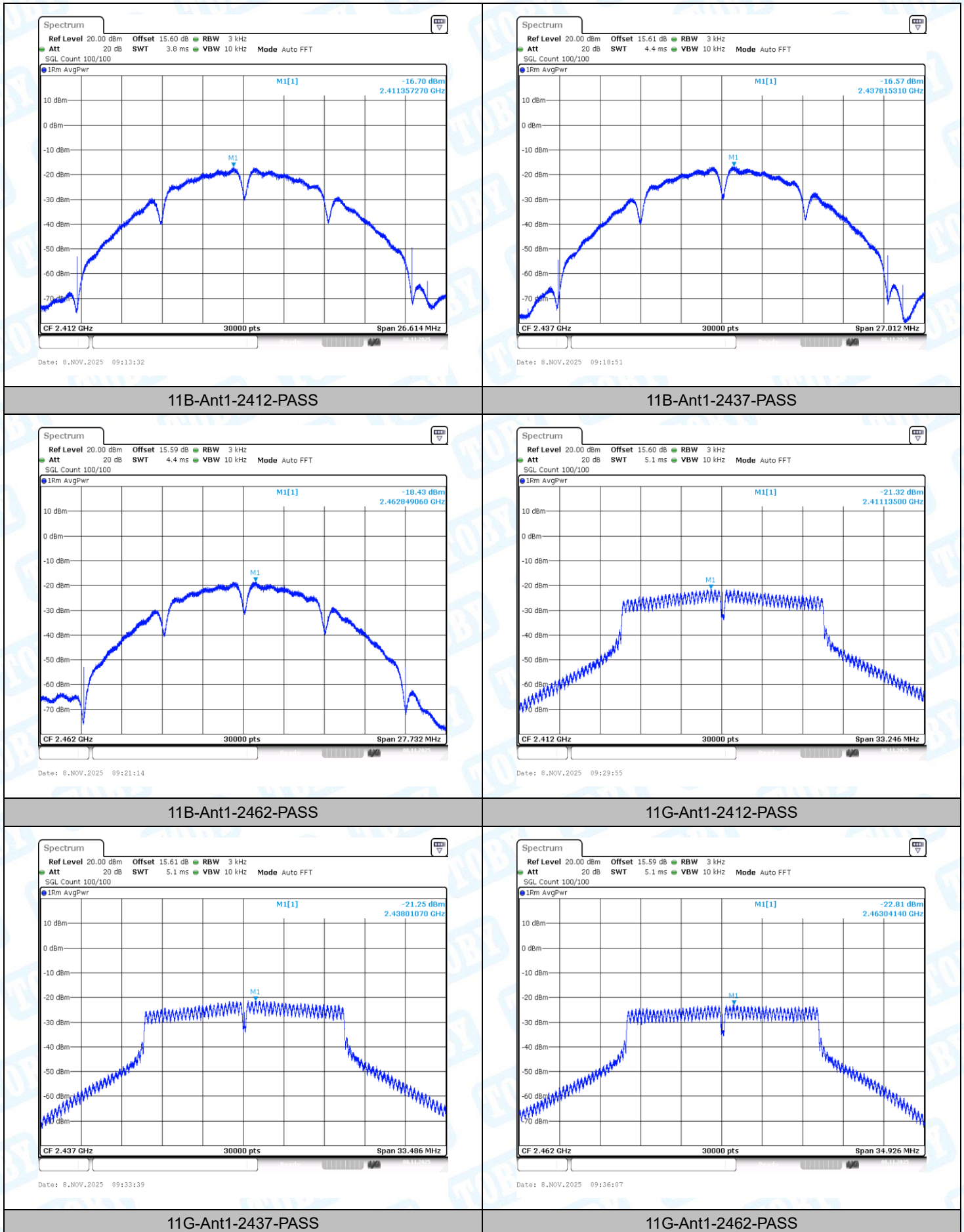
Test Mode	Ant.	Frequency [MHz]	Raw Power [dBm]	DC Factor	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	14.53	0.04	14.57	≤30.00	PASS
11B	Ant1	2437	14.98	0.04	15.02	≤30.00	PASS
11B	Ant1	2462	13.33	0.04	13.37	≤30.00	PASS
11G	Ant1	2412	12.20	0.08	12.28	≤30.00	PASS
11G	Ant1	2437	12.45	0.08	12.53	≤30.00	PASS
11G	Ant1	2462	11.35	0.06	11.41	≤30.00	PASS
11N20SISO	Ant1	2412	11.99	0.10	12.09	≤30.00	PASS
11N20SISO	Ant1	2437	12.26	0.10	12.36	≤30.00	PASS
11N20SISO	Ant1	2462	11.22	0.08	11.30	≤30.00	PASS
11N40SISO	Ant1	2422	13.01	0.25	13.26	≤30.00	PASS
11N40SISO	Ant1	2437	12.02	0.30	12.32	≤30.00	PASS
11N40SISO	Ant1	2452	13.05	0.25	13.30	≤30.00	PASS

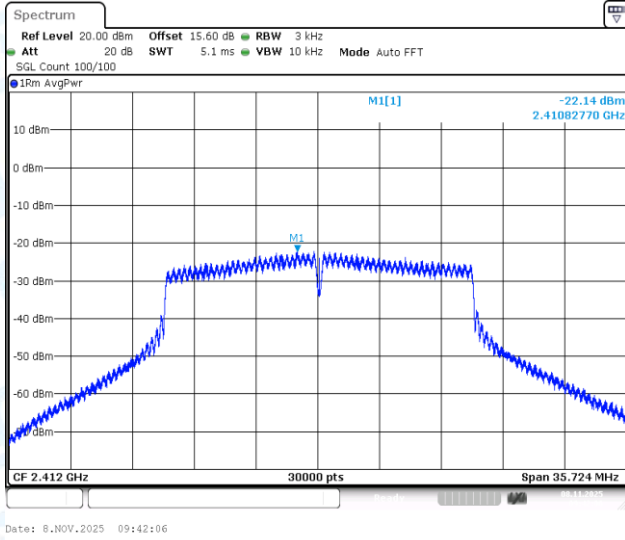
4: Maximum power spectral density

4.1 Test Result

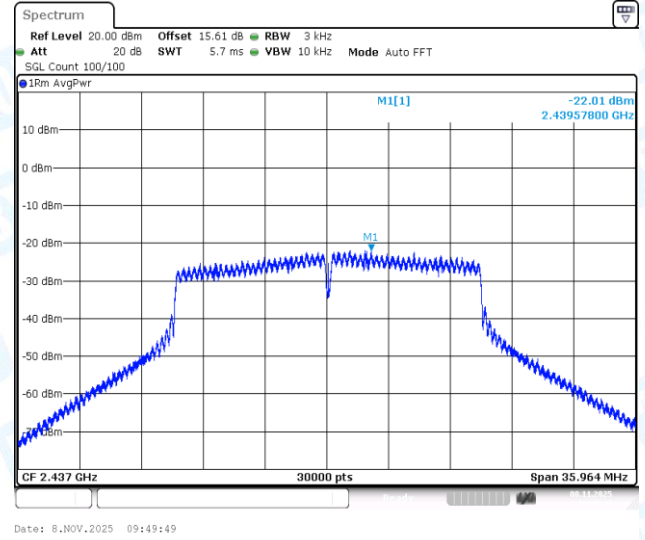
Test Mode	Ant.	Frequency[MHz]	RawData [dBm/3kHz]	DC Factor	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-16.7	0.04	-16.66	≤8.00	PASS
11B	Ant1	2437	-16.57	0.04	-16.53	≤8.00	PASS
11B	Ant1	2462	-18.43	0.04	-18.39	≤8.00	PASS
11G	Ant1	2412	-21.32	0.08	-21.24	≤8.00	PASS
11G	Ant1	2437	-21.25	0.08	-21.17	≤8.00	PASS
11G	Ant1	2462	-22.81	0.06	-22.75	≤8.00	PASS
11N20SISO	Ant1	2412	-22.14	0.10	-22.04	≤8.00	PASS
11N20SISO	Ant1	2437	-22.01	0.10	-21.91	≤8.00	PASS
11N20SISO	Ant1	2462	-23.64	0.08	-23.56	≤8.00	PASS
11N40SISO	Ant1	2422	-23.19	0.25	-22.94	≤8.00	PASS
11N40SISO	Ant1	2437	-23.74	0.30	-23.44	≤8.00	PASS
11N40SISO	Ant1	2452	-23.27	0.25	-23.02	≤8.00	PASS

4.2 Test Graphs

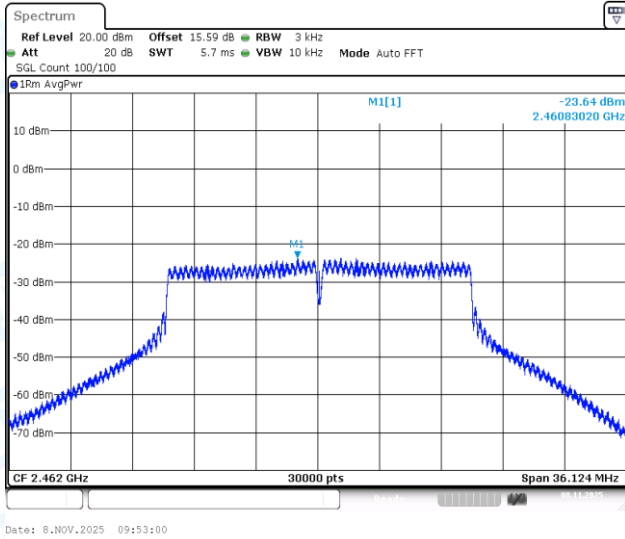




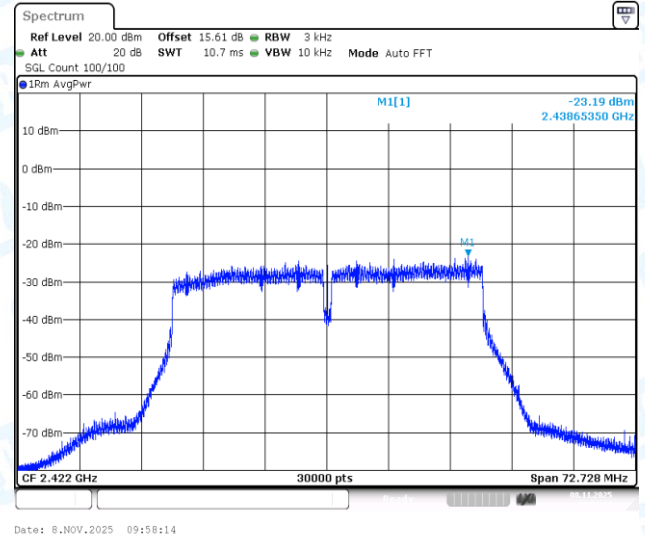
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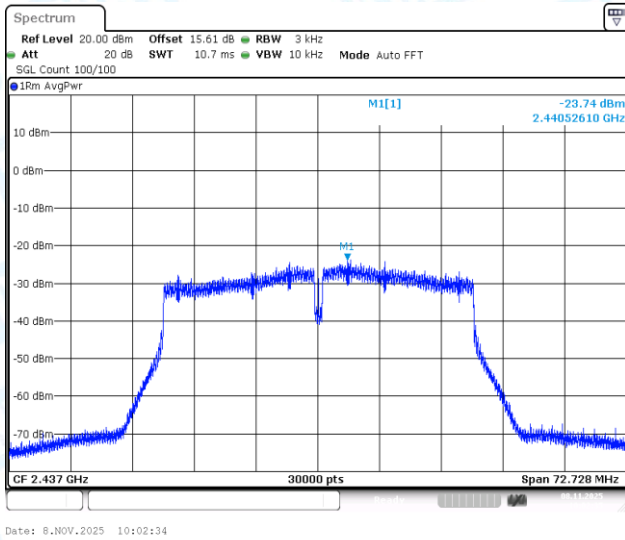
11N20SISO-Ant1-2437-PASS



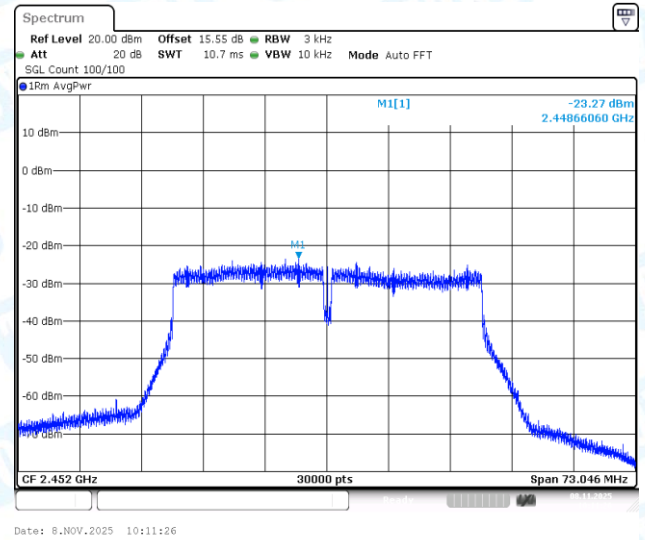
11N20SISO-Ant1-2462-PASS



11N40SISO-Ant1-2422-PASS



11N40SISO-Ant1-2437-PASS



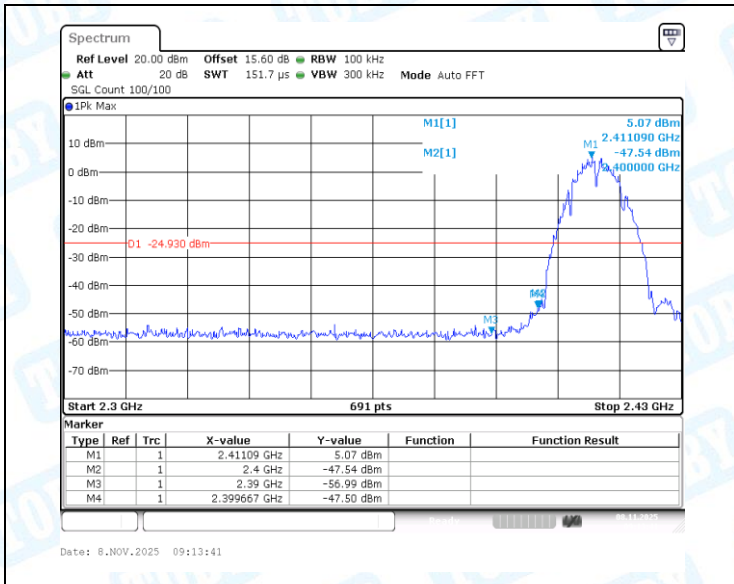
11N40SISO-Ant1-2452-PASS

5: Band edge measurements

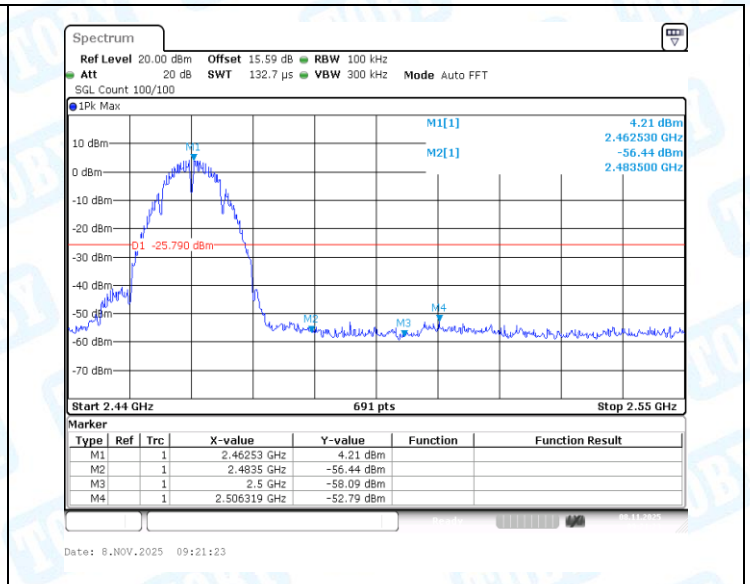
5.1 Test Result

TestMode	Ant.	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	5.07	-47.5	≤-24.93	PASS
11B	Ant1	High	2462	4.21	-52.79	≤-25.79	PASS
11G	Ant1	Low	2412	-1.19	-31.6	≤-31.19	PASS
11G	Ant1	High	2462	-2.28	-52.7	≤-32.28	PASS
11N20SISO	Ant1	Low	2412	2.40	-32.3	≤-27.6	PASS
11N20SISO	Ant1	High	2462	-0.96	-53.23	≤-30.96	PASS
11N40SISO	Ant1	Low	2422	-1.03	-40.51	≤-31.03	PASS
11N40SISO	Ant1	High	2452	-3.13	-50.21	≤-33.13	PASS

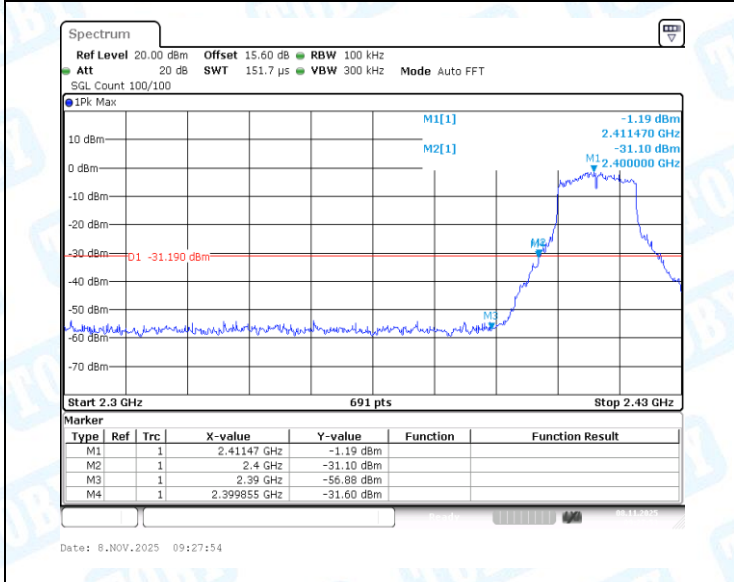
5.2 Test Graphs



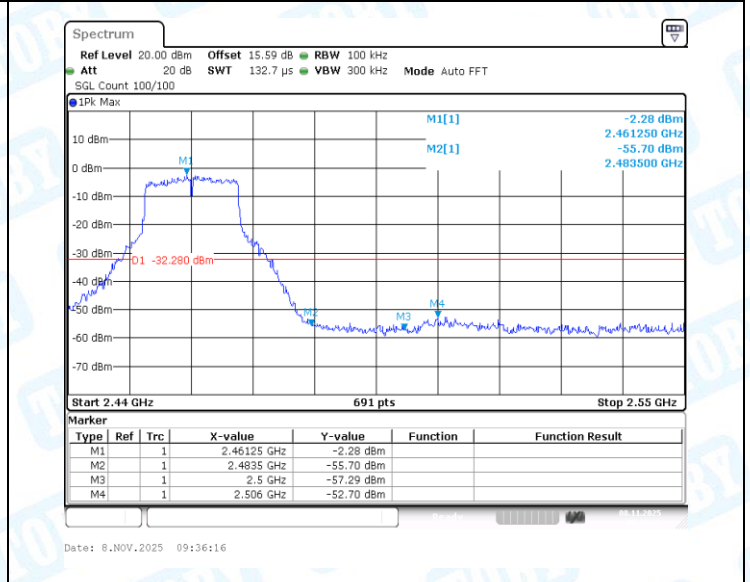
11B-Ant1-2412-PASS



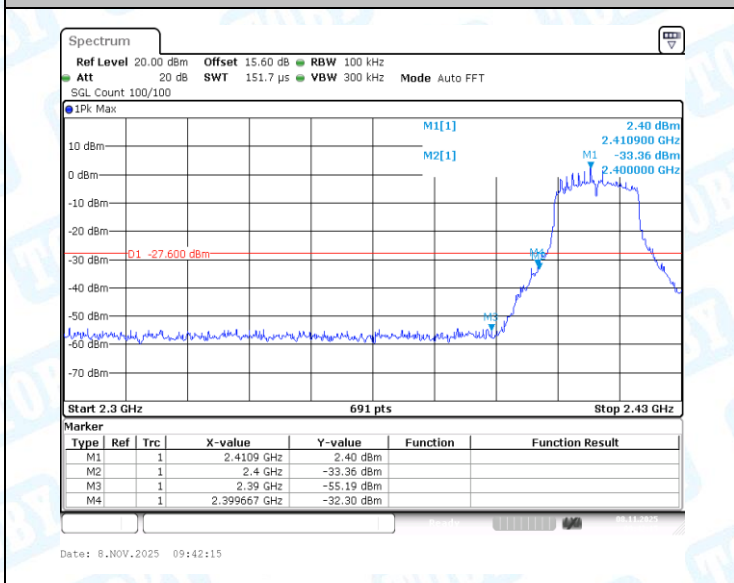
11B-Ant1-2462-PASS



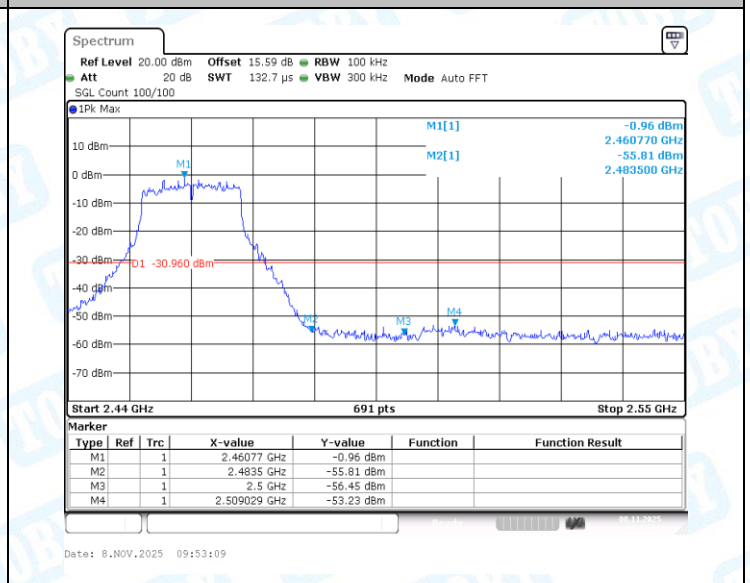
11G-Ant1-2412-PASS



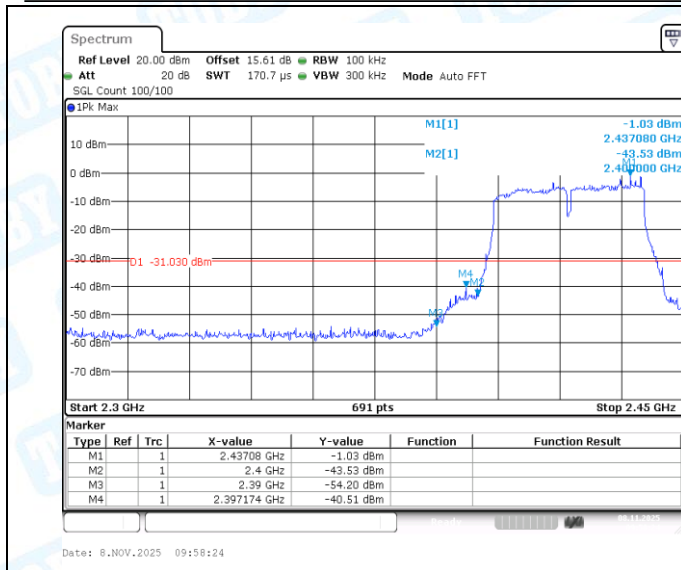
11G-Ant1-2462-PASS



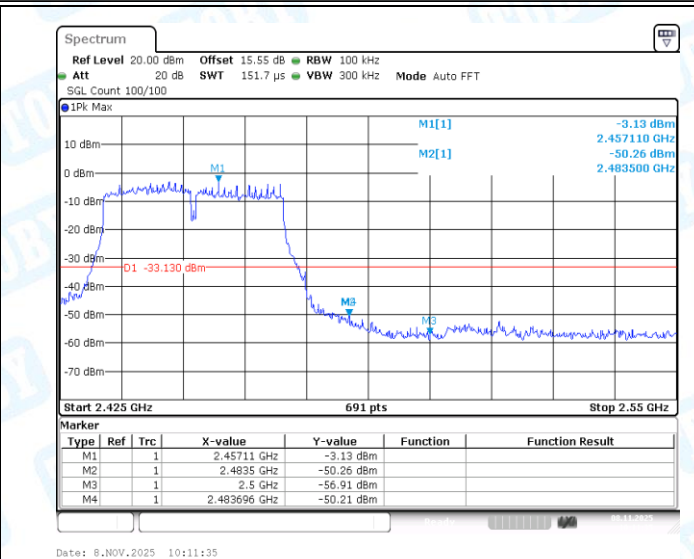
11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2462-PASS



11N40SISO-Ant1-2422-PASS



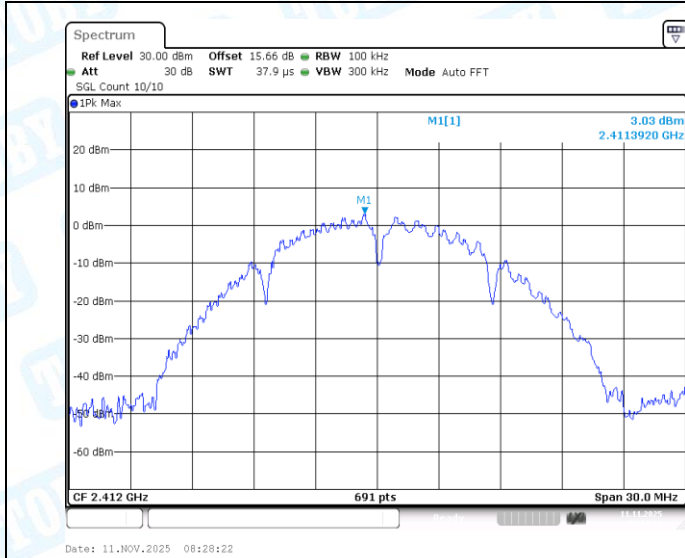
11N40SISO-Ant1-2452-PASS

6: Conducted Spurious Emission

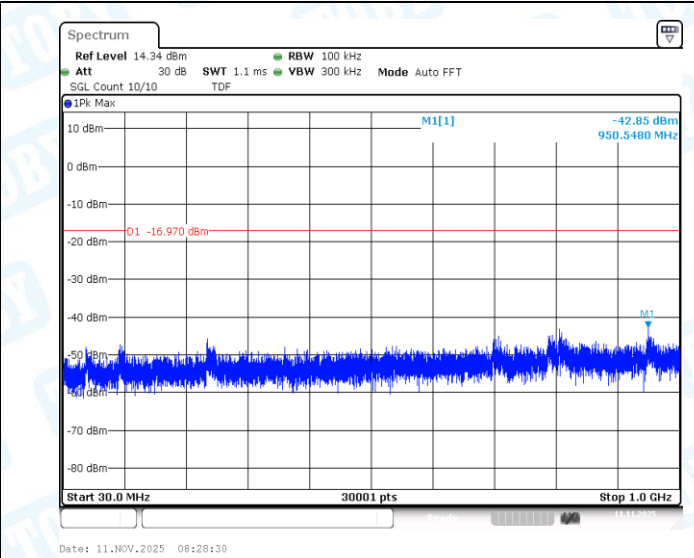
6.1 Test Result

TestMode	Ant.	Frequency [MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	0~Reference	3.03	3.03	---	PASS
11B	Ant1	2412	30~1000	3.03	-42.85	≤-16.97	PASS
11B	Ant1	2412	1000~26500	3.03	-27.68	≤-16.97	PASS
11B	Ant1	2437	0~Reference	4.57	4.57	---	PASS
11B	Ant1	2437	30~1000	4.57	-43.78	≤-15.43	PASS
11B	Ant1	2437	1000~26500	4.57	-27.25	≤-15.43	PASS
11B	Ant1	2462	0~Reference	1.84	1.84	---	PASS
11B	Ant1	2462	30~1000	1.84	-43.55	≤-18.16	PASS
11B	Ant1	2462	1000~26500	1.84	-27.79	≤-18.16	PASS
11G	Ant1	2412	0~Reference	-1.81	-1.81	---	PASS
11G	Ant1	2412	30~1000	-1.81	-43.9	≤-21.81	PASS
11G	Ant1	2412	1000~26500	-1.81	-27.92	≤-21.81	PASS
11G	Ant1	2437	0~Reference	-1.55	-1.55	---	PASS
11G	Ant1	2437	30~1000	-1.55	-43.3	≤-21.55	PASS
11G	Ant1	2437	1000~26500	-1.55	-28.2	≤-21.55	PASS
11G	Ant1	2462	0~Reference	-3.43	-3.43	---	PASS
11G	Ant1	2462	30~1000	-3.43	-43.47	≤-23.43	PASS
11G	Ant1	2462	1000~26500	-3.43	-26.73	≤-23.43	PASS
11N20SISO	Ant1	2412	0~Reference	-1.92	-1.92	---	PASS
11N20SISO	Ant1	2412	30~1000	-1.92	-43.83	≤-21.92	PASS
11N20SISO	Ant1	2412	1000~26500	-1.92	-27.5	≤-21.92	PASS
11N20SISO	Ant1	2437	0~Reference	-1.44	-1.44	---	PASS
11N20SISO	Ant1	2437	30~1000	-1.44	-43.39	≤-21.44	PASS
11N20SISO	Ant1	2437	1000~26500	-1.44	-27.24	≤-21.44	PASS
11N20SISO	Ant1	2462	0~Reference	-3.23	-3.23	---	PASS
11N20SISO	Ant1	2462	30~1000	-3.23	-43.31	≤-23.23	PASS
11N20SISO	Ant1	2462	1000~26500	-3.23	-26.68	≤-23.23	PASS
11N40SISO	Ant1	2422	0~Reference	-1.74	-1.74	---	PASS
11N40SISO	Ant1	2422	30~1000	-1.74	-43.94	≤-21.74	PASS
11N40SISO	Ant1	2422	1000~26500	-1.74	-27.9	≤-21.74	PASS
11N40SISO	Ant1	2437	0~Reference	-4.17	-4.17	---	PASS
11N40SISO	Ant1	2437	30~1000	-4.17	-43.72	≤-24.17	PASS
11N40SISO	Ant1	2437	1000~26500	-4.17	-27.11	≤-24.17	PASS
11N40SISO	Ant1	2452	0~Reference	-4.76	-4.76	---	PASS
11N40SISO	Ant1	2452	30~1000	-4.76	-43.5	≤-24.76	PASS
11N40SISO	Ant1	2452	1000~26500	-4.76	-27.28	≤-24.76	PASS

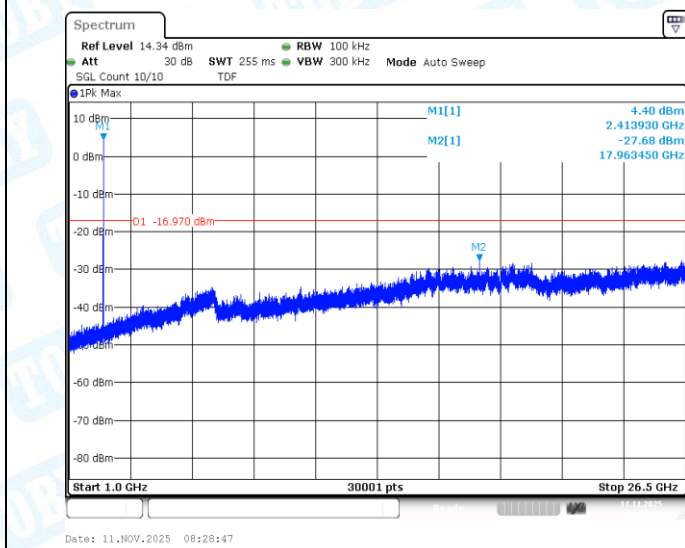
6.2 Test Graphs



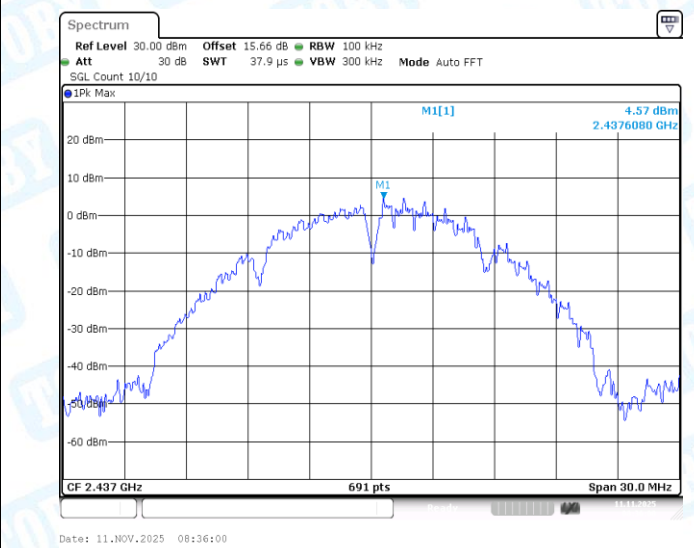
11B-Ant1-2412-0~Reference-PASS



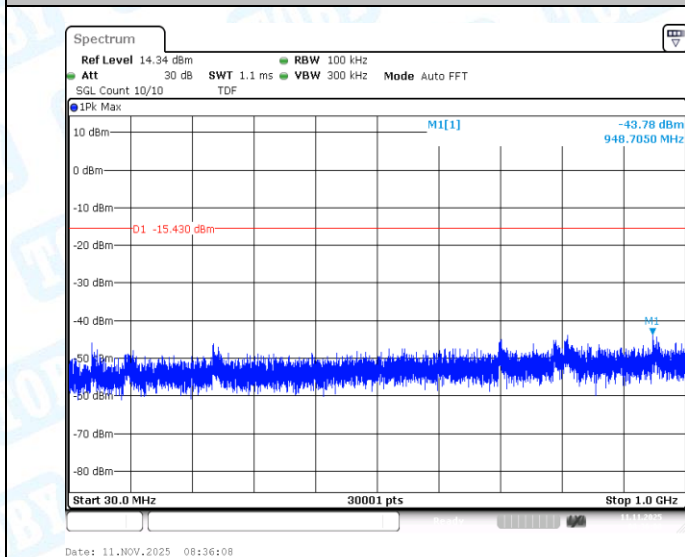
11B-Ant1-2412-30~1000-PASS



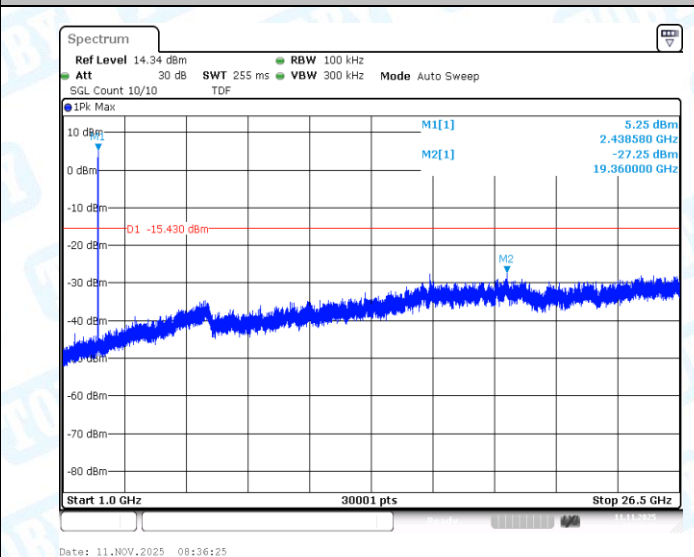
11B-Ant1-2412-1000~26500-PASS



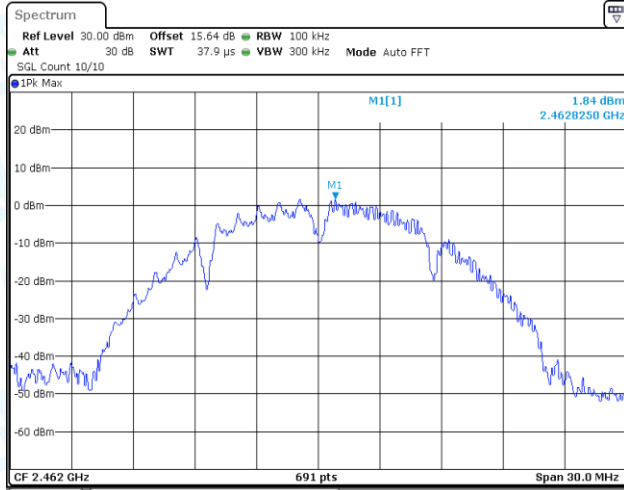
11B-Ant1-2437-0~Reference-PASS



11B-Ant1-2437-30~1000-PASS

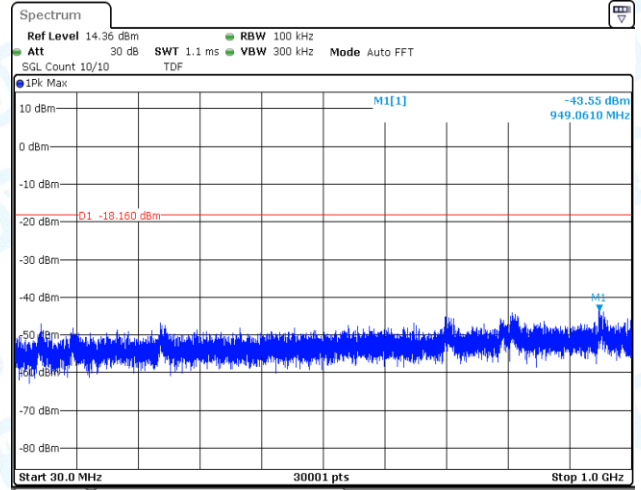


11B-Ant1-2437-1000~26500-PASS



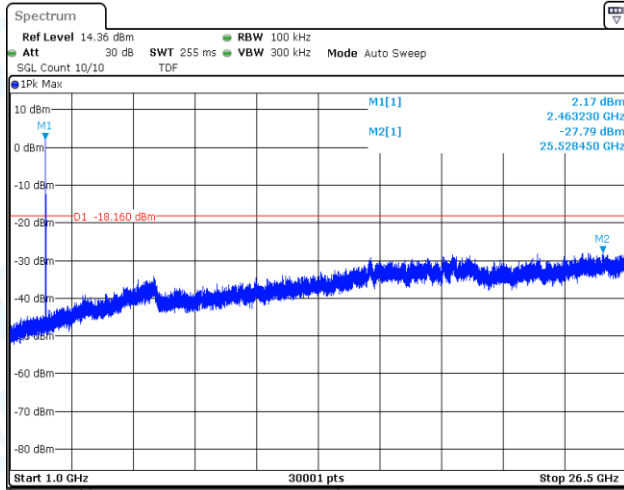
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11B-Ant1-2462-0~Reference-PASS



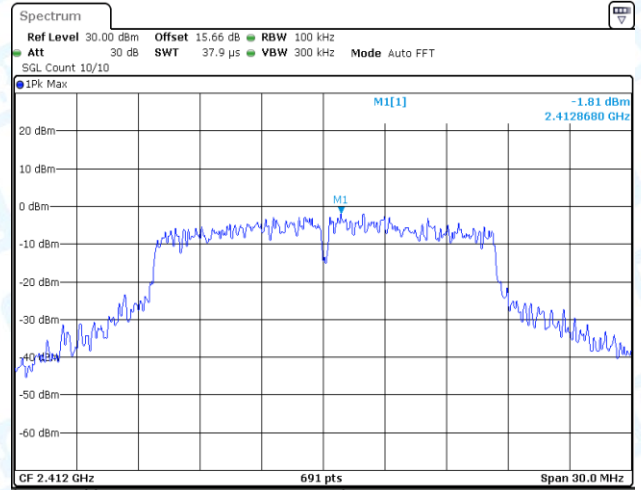
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11B-Ant1-2462-30~1000-PASS



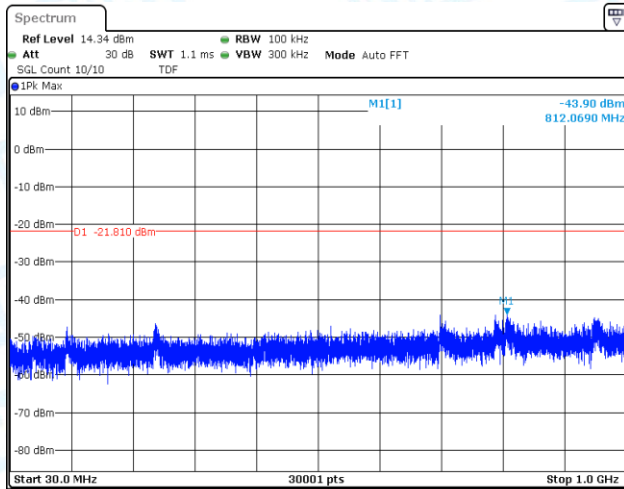
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11B-Ant1-2462-1000~26500-PASS



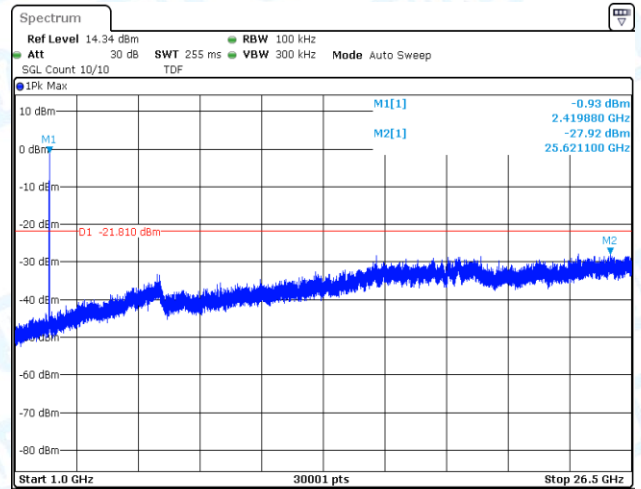
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11G-Ant1-2412-0~Reference-PASS



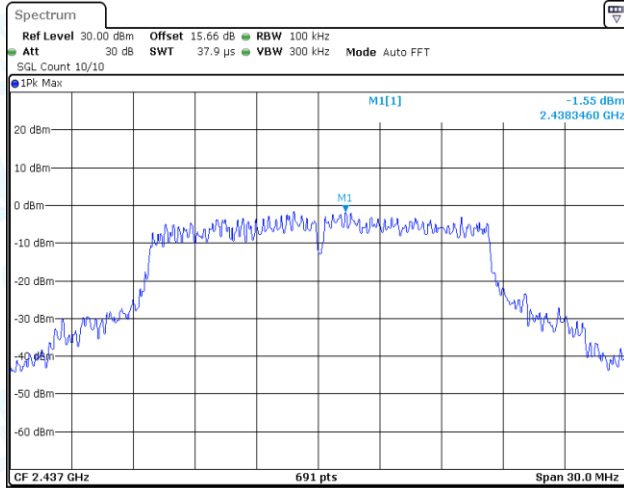
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11G-Ant1-2412-30~1000-PASS

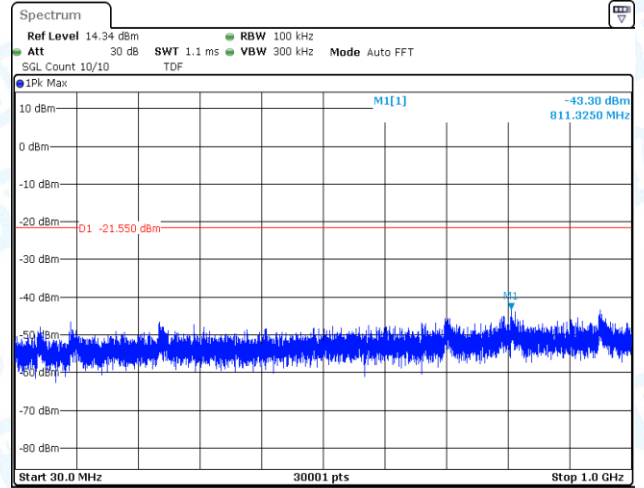


Date: 11.NOV.2025 08:41:03

11G-Ant1-2412-1000~26500-PASS



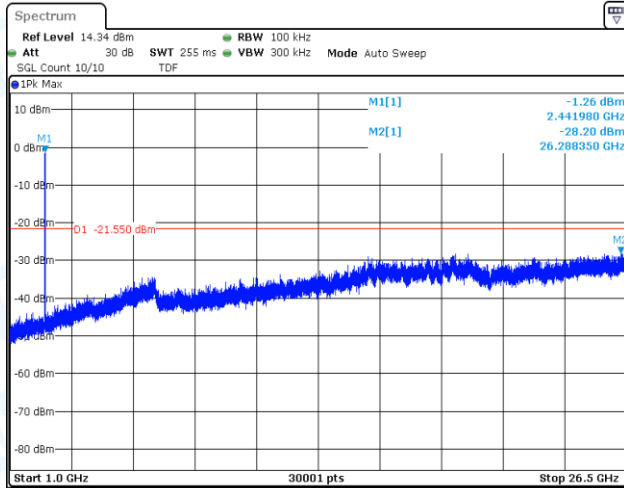
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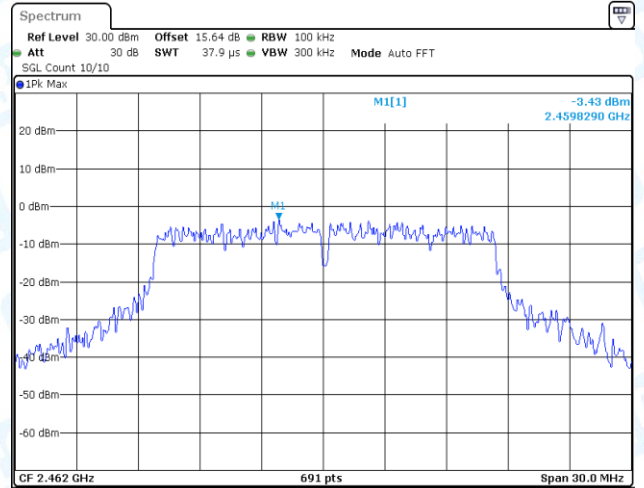
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11G-Ant1-2437-0~Reference-PASS

11G-Ant1-2437-30~1000-PASS



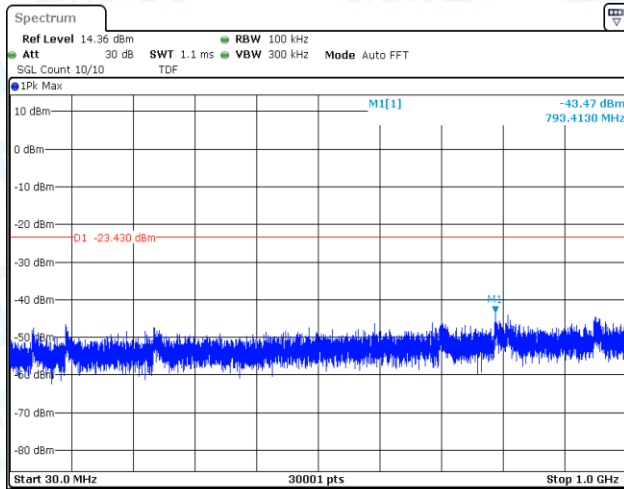
Date: 11.NOV.2025 08:41:54



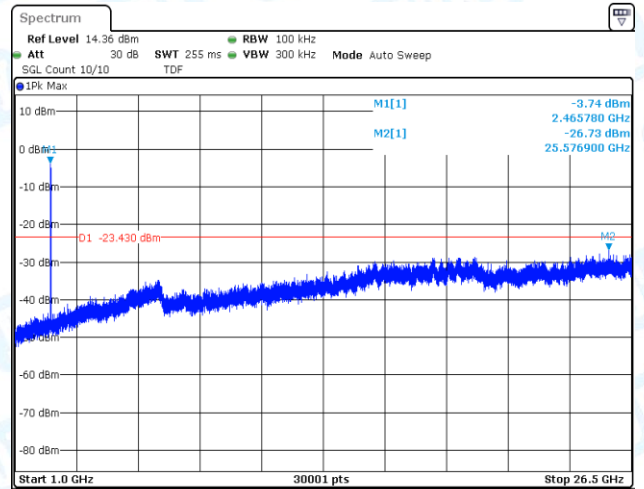
Date: 11.NOV.2025 08:42:21

11G-Ant1-2437-1000~26500-PASS

11G-Ant1-2462-0~Reference-PASS



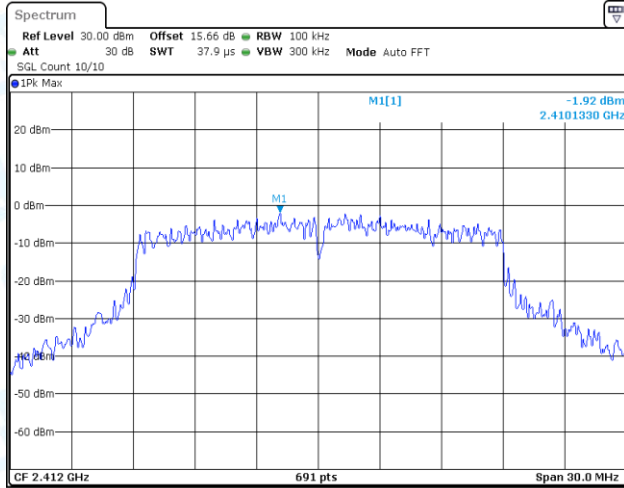
Date: 11.NOV.2025 08:42:28



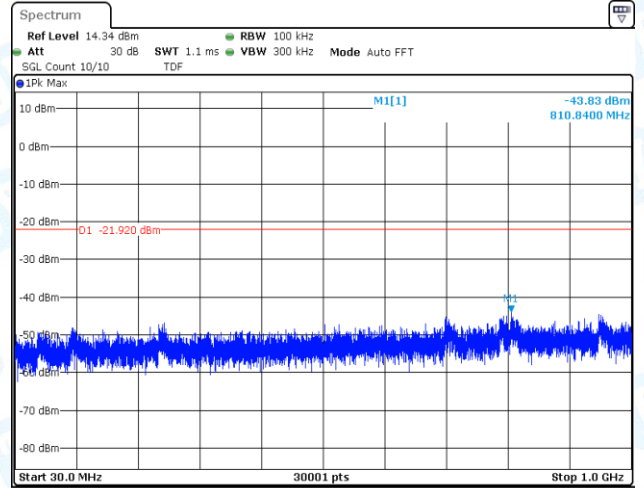
Date: 11.NOV.2025 08:42:46

11G-Ant1-2462-30~1000-PASS

11G-Ant1-2462-1000~26500-PASS



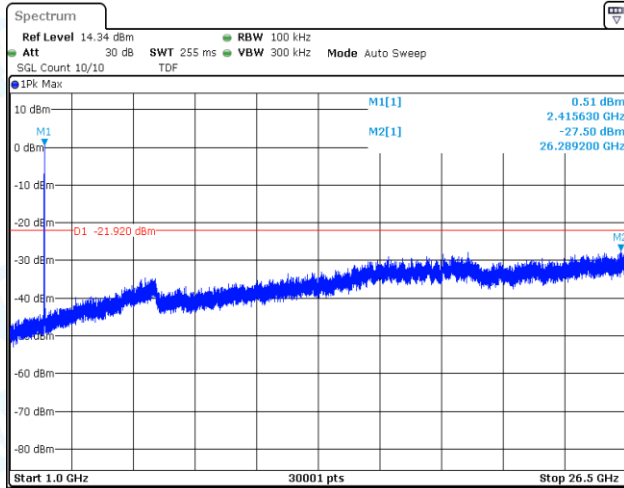
Date: 11.NOV.2025 08:43:35



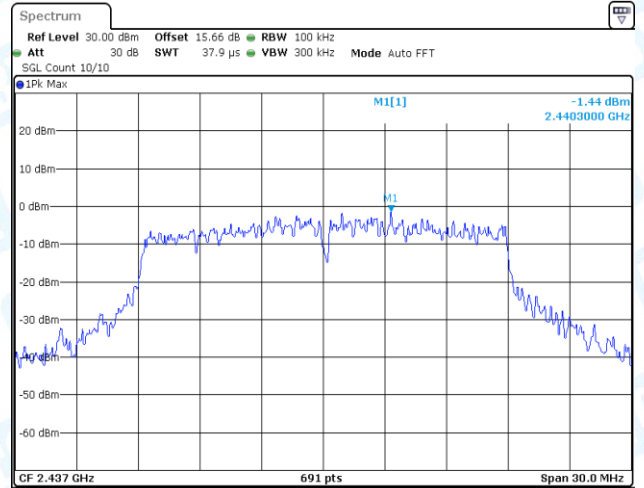
Date: 11.NOV.2025 08:43:43

11N20SISO-Ant1-2412-0~Reference-PASS

11N20SISO-Ant1-2412-30~1000-PASS



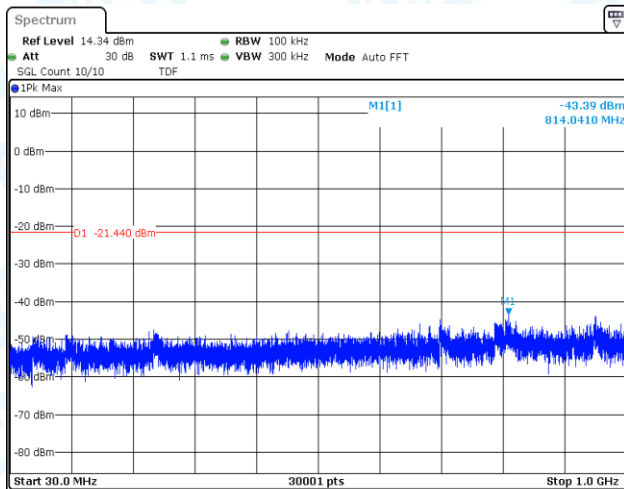
Date: 11.NOV.2025 08:44:00



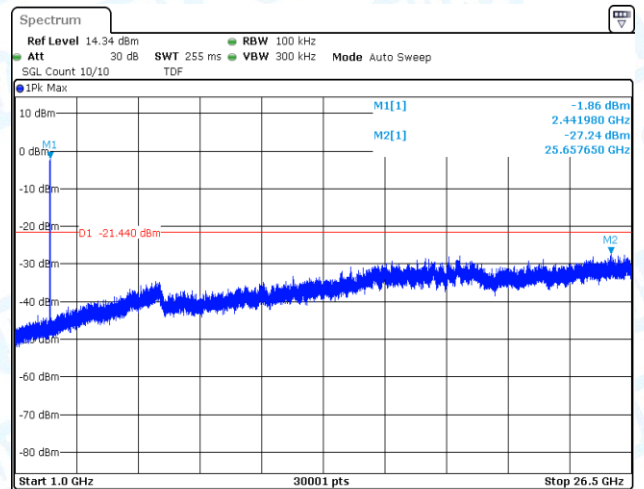
Date: 11.NOV.2025 08:44:24

11N20SISO-Ant1-2412-1000~26500-PASS

11N20SISO-Ant1-2437-0~Reference-PASS



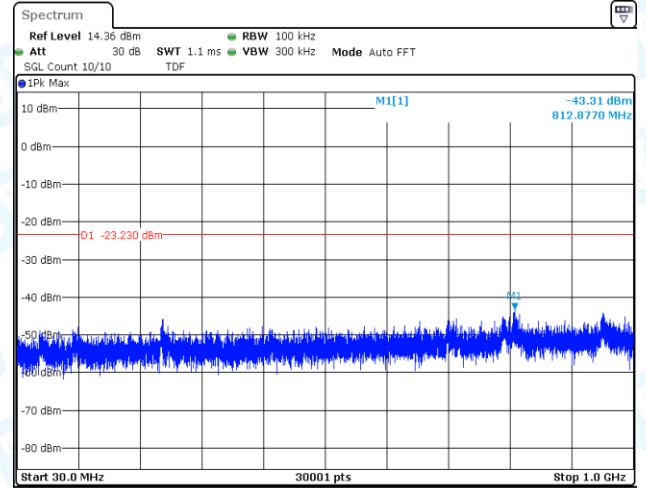
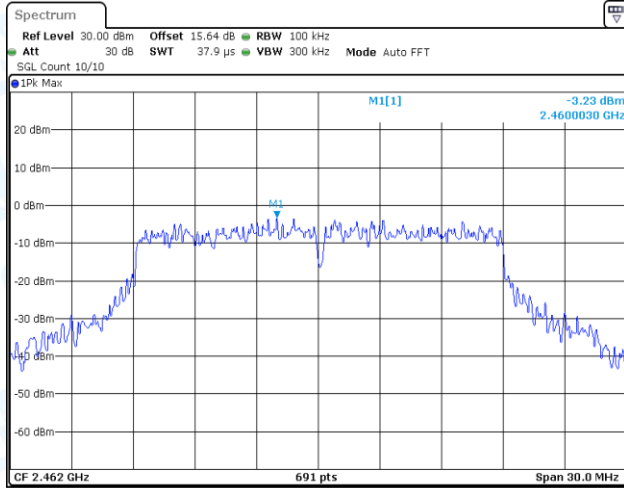
Date: 11.NOV.2025 08:44:32



Date: 11.NOV.2025 08:44:50

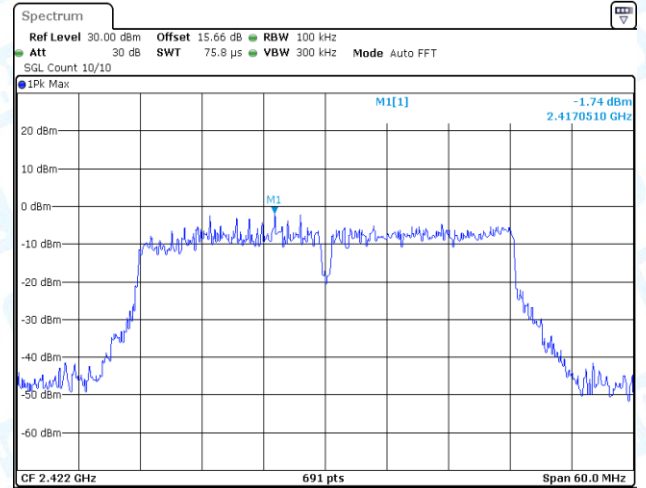
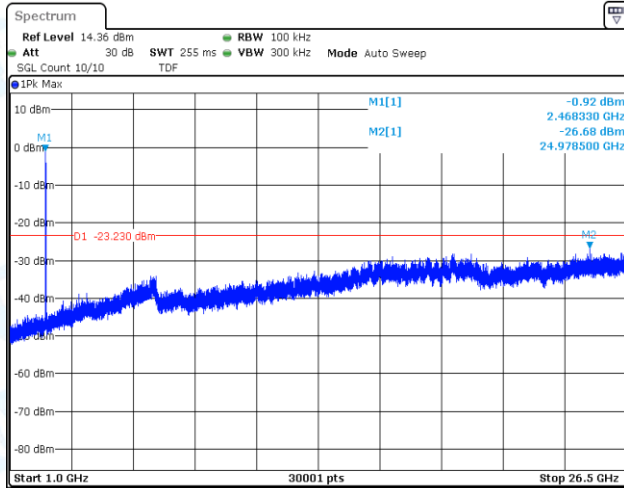
11N20SISO-Ant1-2437-30~1000-PASS

11N20SISO-Ant1-2437-1000~26500-PASS



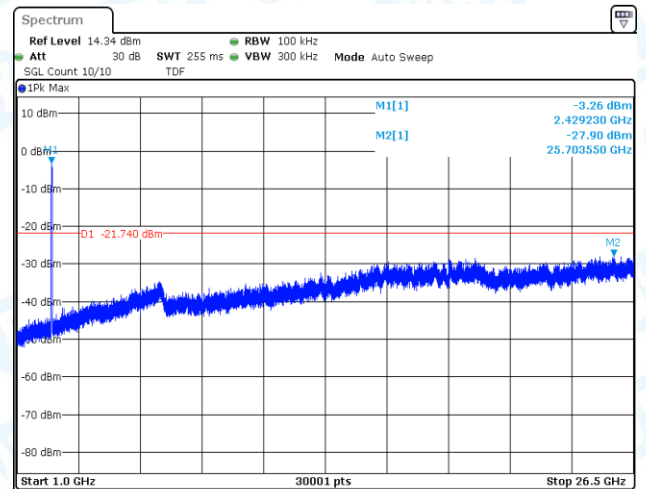
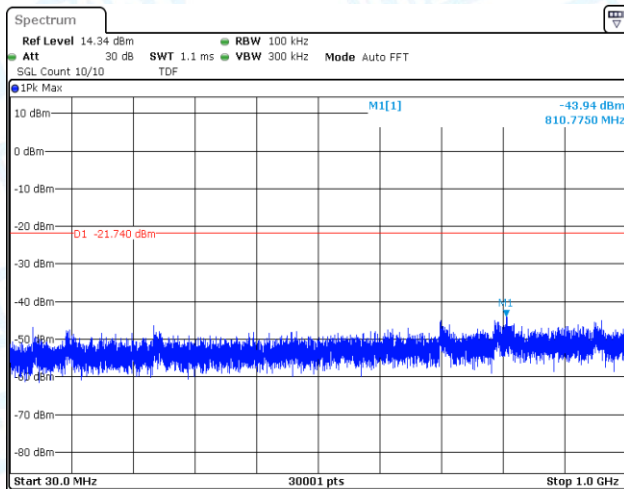
11N20SISO-Ant1-2462-0~Reference-PASS

11N20SISO-Ant1-2462-30~1000-PASS



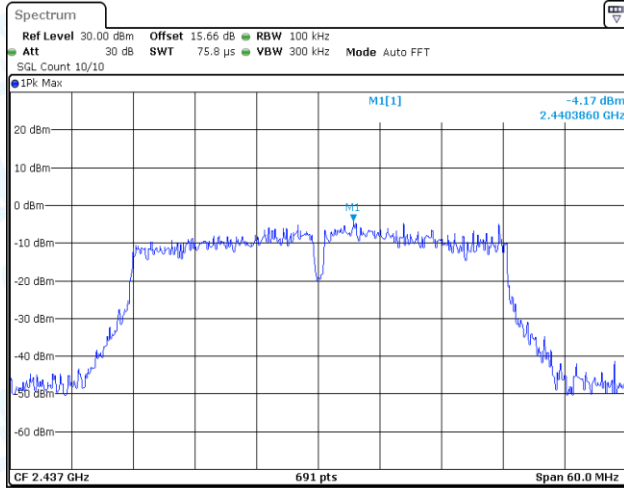
11N20SISO-Ant1-2462-1000~26500-PASS

11N40SISO-Ant1-2422-0~Reference-PASS

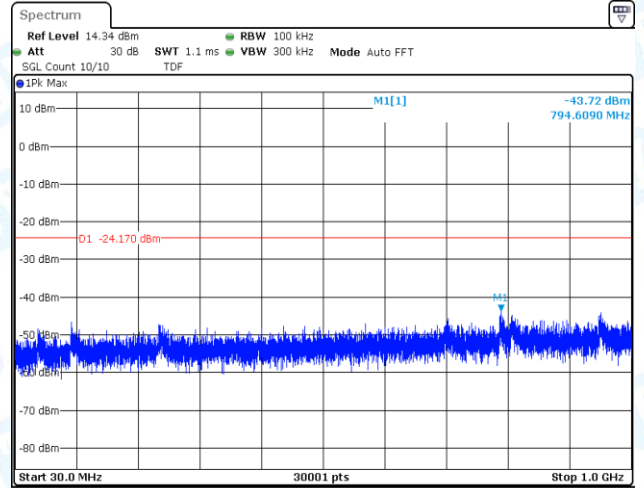


11N40SISO-Ant1-2422-30~1000-PASS

11N40SISO-Ant1-2422-1000~26500-PASS



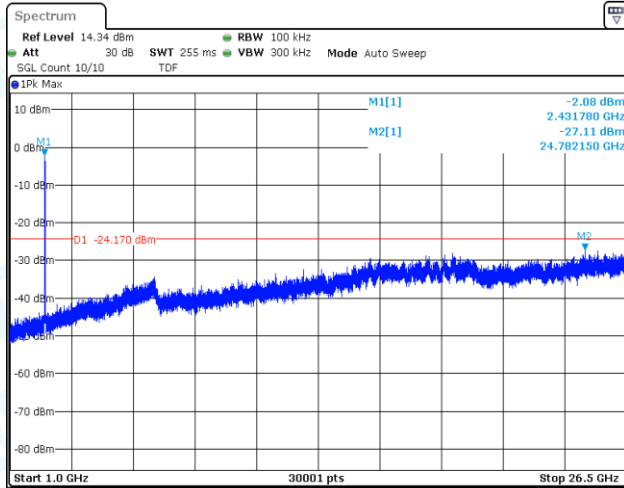
Date: 11.NOV.2025 08:47:41



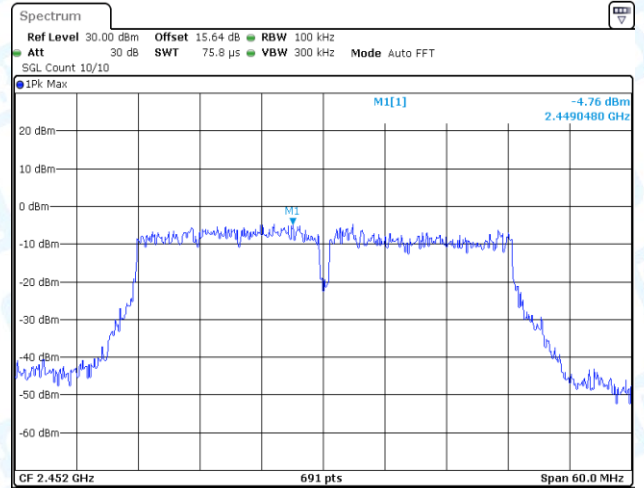
Date: 11.NOV.2025 08:47:49

11N40SISO-Ant1-2437-0~Reference-PASS

11N40SISO-Ant1-2437-30~1000-PASS



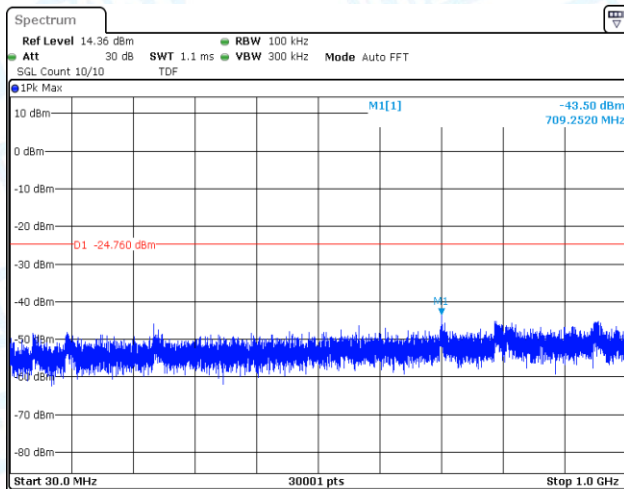
Date: 11.NOV.2025 08:48:06



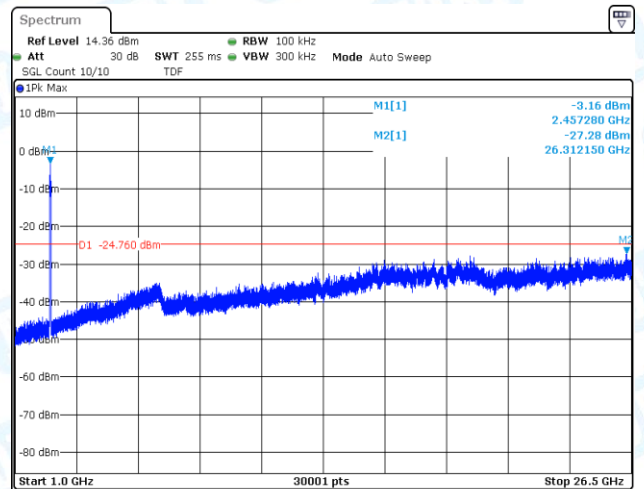
Date: 11.NOV.2025 08:48:33

11N40SISO-Ant1-2437-1000~26500-PASS

11N40SISO-Ant1-2452-0~Reference-PASS



Date: 11.NOV.2025 08:48:41



Date: 11.NOV.2025 08:48:58

11N40SISO-Ant1-2452-30~1000-PASS

11N40SISO-Ant1-2452-1000~26500-PASS

7: Duty Cycle

7.1 Test Result

TestMode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factor	1/T [kHz]
11B	Ant1	2412	12.20	12.31	99.11	0.04	0.08
11B	Ant1	2437	12.23	12.33	99.19	0.04	0.08
11B	Ant1	2462	12.22	12.32	99.19	0.04	0.08
11G	Ant1	2412	2.03	2.07	98.07	0.08	0.49
11G	Ant1	2437	2.03	2.07	98.07	0.08	0.49
11G	Ant1	2462	2.03	2.06	98.54	0.06	0.49
11N20SISO	Ant1	2412	1.70	1.74	97.70	0.10	0.59
11N20SISO	Ant1	2437	1.70	1.74	97.70	0.10	0.59
11N20SISO	Ant1	2462	1.70	1.73	98.27	0.08	0.59
11N40SISO	Ant1	2422	0.84	0.89	94.38	0.25	1.19
11N40SISO	Ant1	2437	0.83	0.89	93.26	0.30	1.20
11N40SISO	Ant1	2452	0.84	0.89	94.38	0.25	1.19

Note: 1, Duty Cycle= Transmission Duration/ Transmission Period

2, DC Factor= $10 \cdot \log_{10}(1/\text{Duty Cycle})$

3, $1/T=1/\text{Transmission Duration}$