

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

General Description of EUT	
EUT Name:	Bird Feeder Camera
Model:	N021
Sample ID:	HC-C-202603-0280-01-01-2#
Test Standard:	FCC Part 15.247
Environmental Conditions	
Ambient Temperature:	25°C
Ambient Humidity:	45%RH
Test Power Supply:	DC 3.6V
Test Engineer:	Gold. Zhang
Note: For a more detailed features description, please refer to the report TBR-C-202603-0280-55	

Contents

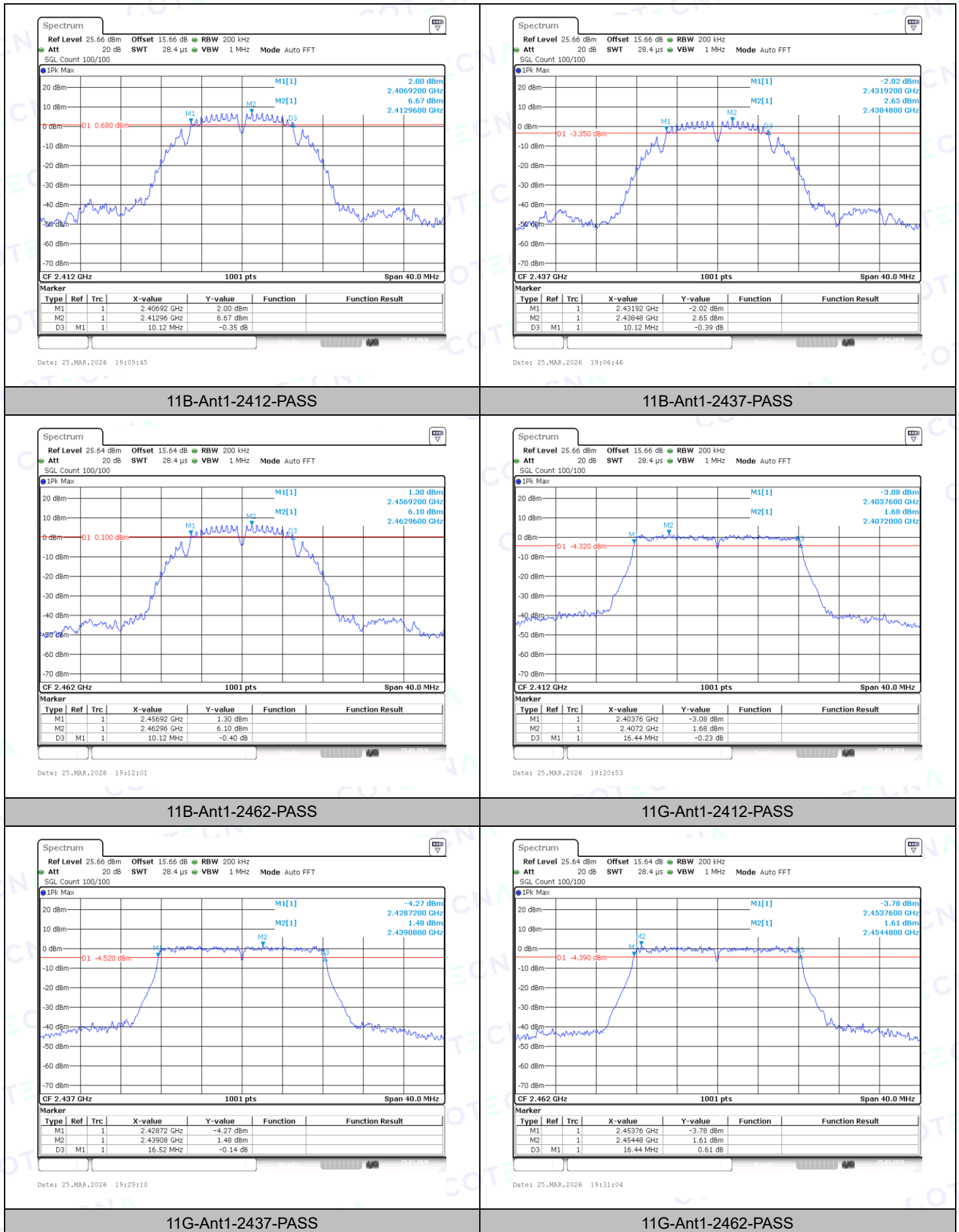
1: DTS Bandwidth.....	3
1.1 Test Result	3
1.2 Test Graphs	4
2: Occupied Channel Bandwidth.....	6
2.1 Test Result	6
2.2 Test Graphs	7
3: Maximum conducted output power	9
3.1 Test Result Average.....	9
4: Maximum power spectral density	10
4.1 Test Result	10
4.2 Test Graphs	11
5: Band edge measurements	13
5.1 Test Result	13
5.2 Test Graphs	14
6: Conducted Spurious Emission.....	15
6.1 Test Result	15
6.2 Test Graphs	16
7: Duty Cycle	21
7.1 Test Result	21
7.2 Test Graphs	22
8: Emissions in Restricted Bands.....	23
8.1 Test Result	23
8.2 Test Graphs	24

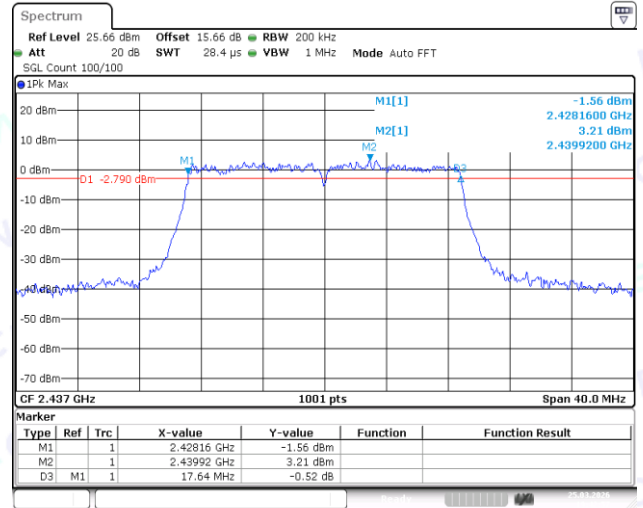
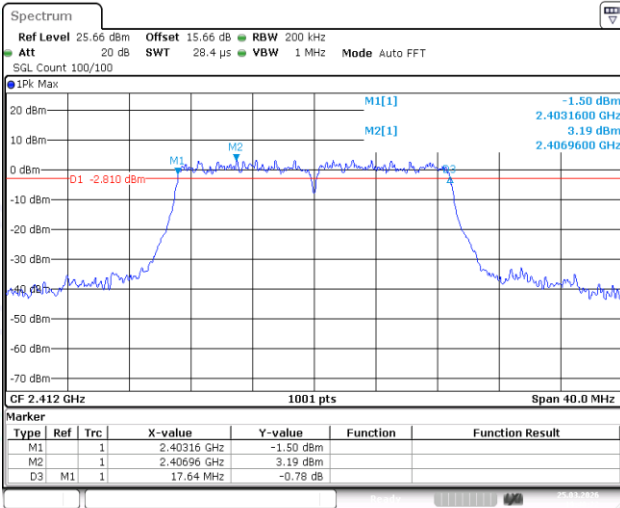
1: DTS Bandwidth

1.1 Test Result

TestMode	Ant.	Frequency [MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.12	2406.92	2417.04	0.5	PASS
11B	Ant1	2437	10.12	2431.92	2442.04	0.5	PASS
11B	Ant1	2462	10.12	2456.92	2467.04	0.5	PASS
11G	Ant1	2412	16.44	2403.76	2420.20	0.5	PASS
11G	Ant1	2437	16.52	2428.72	2445.24	0.5	PASS
11G	Ant1	2462	16.44	2453.76	2470.20	0.5	PASS
11N20SISO	Ant1	2412	17.64	2403.16	2420.80	0.5	PASS
11N20SISO	Ant1	2437	17.64	2428.16	2445.80	0.5	PASS
11N20SISO	Ant1	2462	17.64	2453.16	2470.80	0.5	PASS

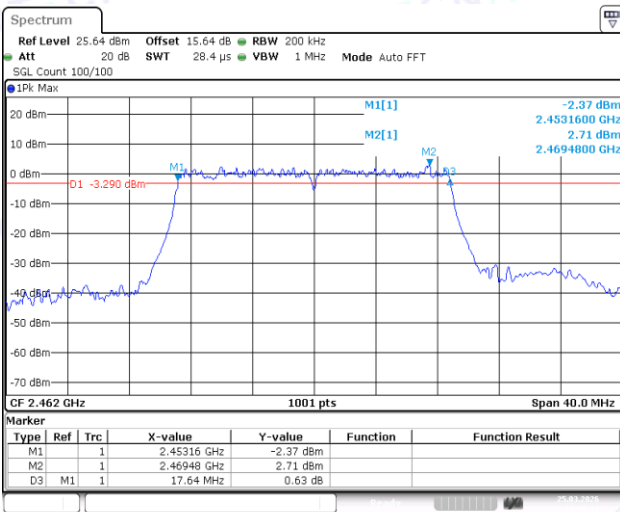
1.2 Test Graphs





11N20SISO-Ant1-2412-PASS

11N20SISO-Ant1-2437-PASS



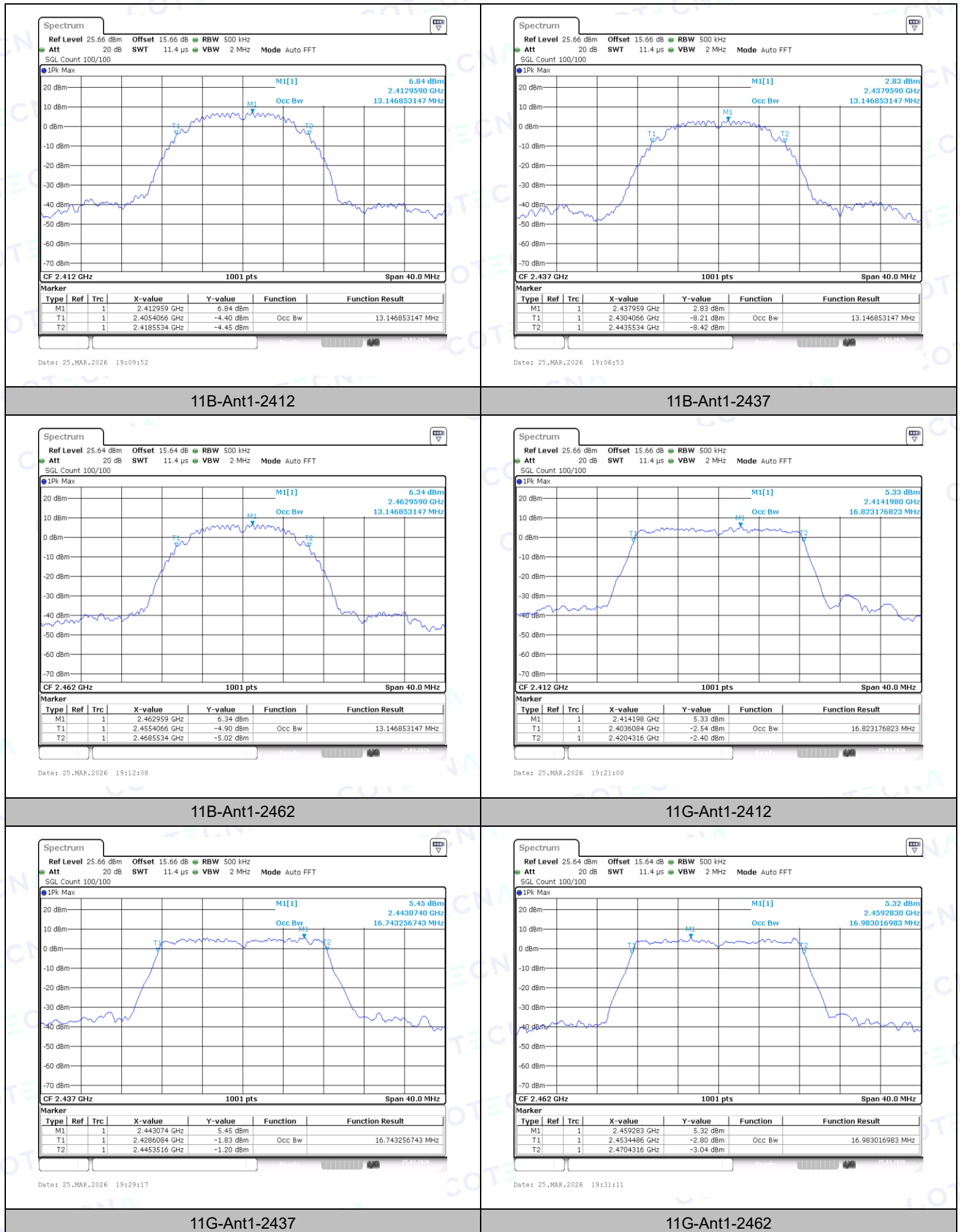
11N20SISO-Ant1-2462-PASS

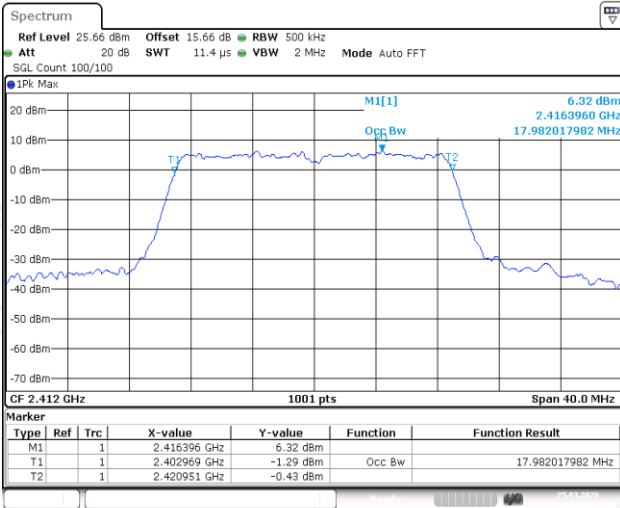
2: Occupied Channel Bandwidth

2.1 Test Result

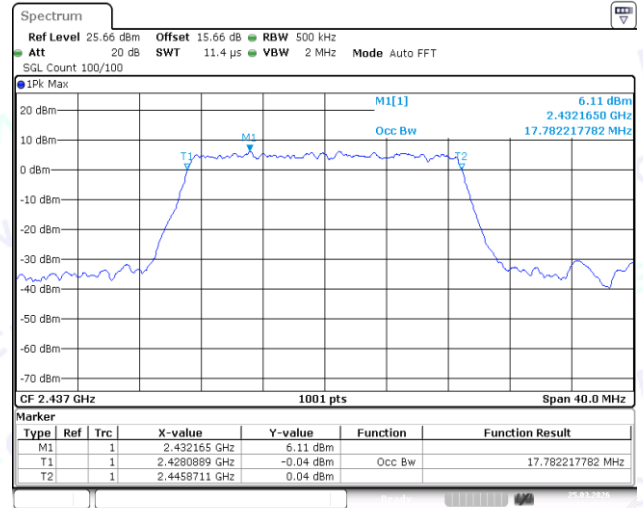
TestMode	Ant.	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.147	2405.4066	2418.5534	---	---
11B	Ant1	2437	13.147	2430.4066	2443.5534	---	---
11B	Ant1	2462	13.147	2455.4066	2468.5534	---	---
11G	Ant1	2412	16.823	2403.6084	2420.4316	---	---
11G	Ant1	2437	16.743	2428.6084	2445.3516	---	---
11G	Ant1	2462	16.983	2453.4486	2470.4316	---	---
11N20SISO	Ant1	2412	17.982	2402.9690	2420.9510	---	---
11N20SISO	Ant1	2437	17.782	2428.0889	2445.8711	---	---
11N20SISO	Ant1	2462	17.782	2453.0889	2470.8711	---	---

2.2 Test Graphs

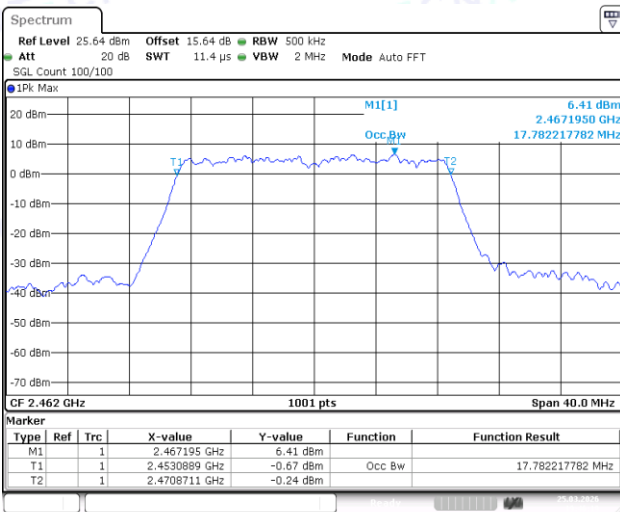




11N20SISO-Ant1-2412



11N20SISO-Ant1-2437



11N20SISO-Ant1-2462

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	14.75	0.01	14.76	≤30.00	PASS
11B	Ant1	2437	14.54	0.01	14.55	≤30.00	PASS
11B	Ant1	2462	14.20	0.01	14.21	≤30.00	PASS
11G	Ant1	2412	14.07	0.08	14.15	≤30.00	PASS
11G	Ant1	2437	13.60	0.08	13.68	≤30.00	PASS
11G	Ant1	2462	13.41	0.08	13.49	≤30.00	PASS
11N20SISO	Ant1	2412	14.70	0.07	14.77	≤30.00	PASS
11N20SISO	Ant1	2437	14.71	0.07	14.78	≤30.00	PASS
11N20SISO	Ant1	2462	14.44	0.07	14.51	≤30.00	PASS

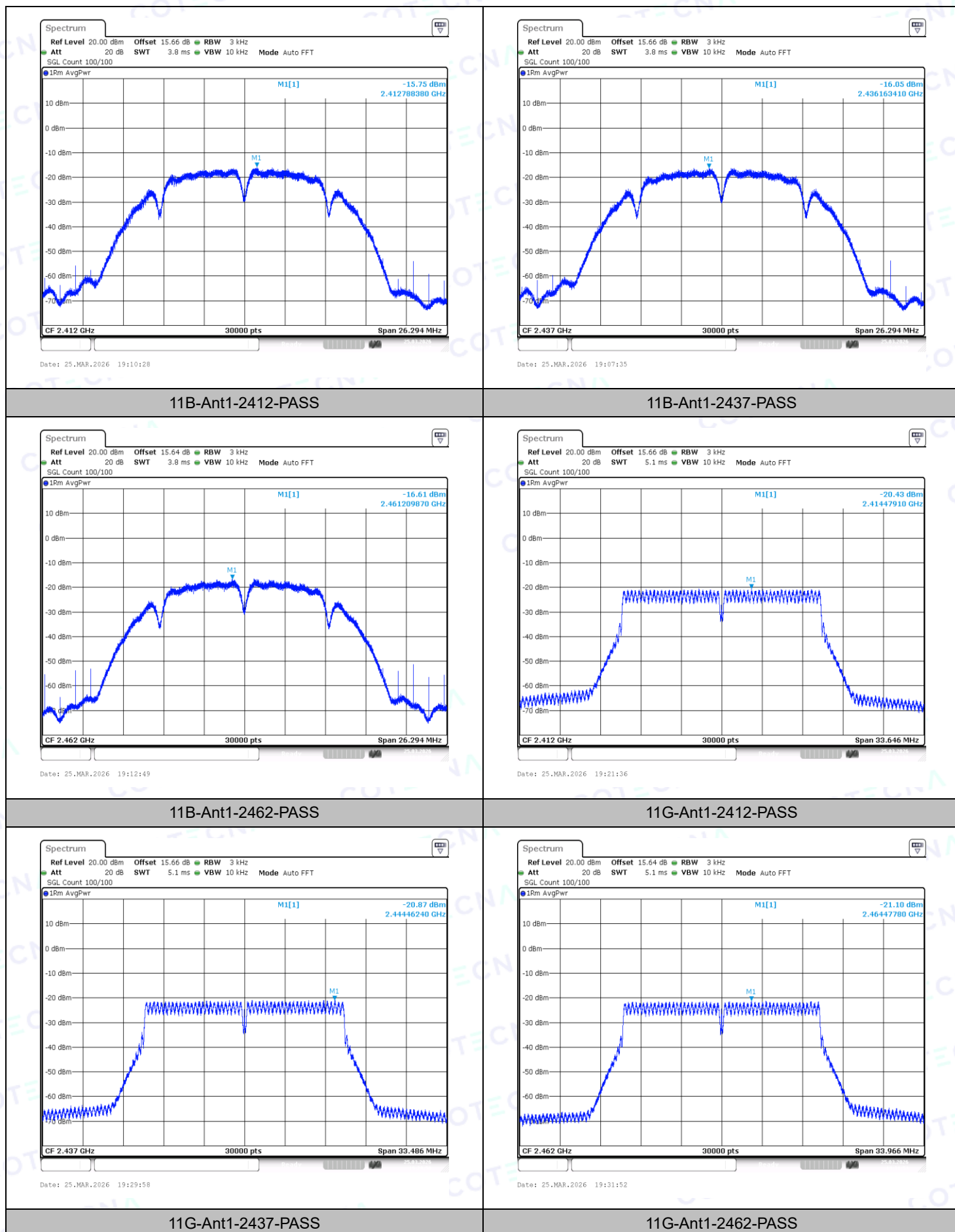
4: Maximum power spectral density

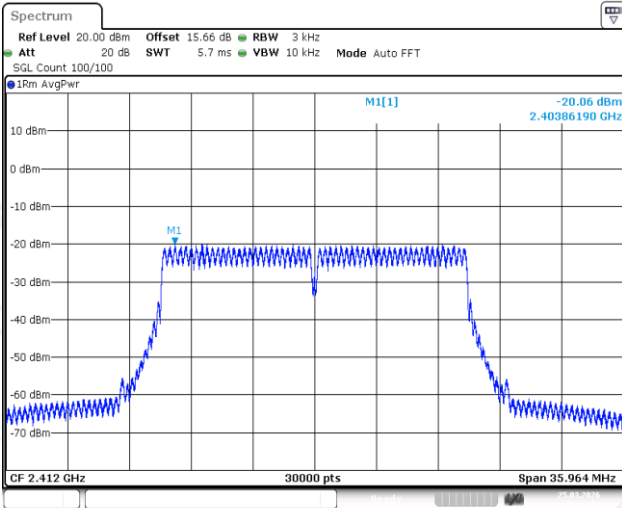
4.1 Test Result

TestMode	Ant.	Frequency[MHz]	RawData [dBm/3kHz]	DC Factor	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-15.75	0.01	-15.74	≤8.00	PASS
11B	Ant1	2437	-16.05	0.01	-16.04	≤8.00	PASS
11B	Ant1	2462	-16.61	0.01	-16.60	≤8.00	PASS
11G	Ant1	2412	-20.43	0.08	-20.35	≤8.00	PASS
11G	Ant1	2437	-20.87	0.08	-20.79	≤8.00	PASS
11G	Ant1	2462	-21.1	0.08	-21.02	≤8.00	PASS
11N20SISO	Ant1	2412	-20.06	0.07	-19.99	≤8.00	PASS
11N20SISO	Ant1	2437	-19.91	0.07	-19.84	≤8.00	PASS
11N20SISO	Ant1	2462	-20.54	0.07	-20.47	≤8.00	PASS

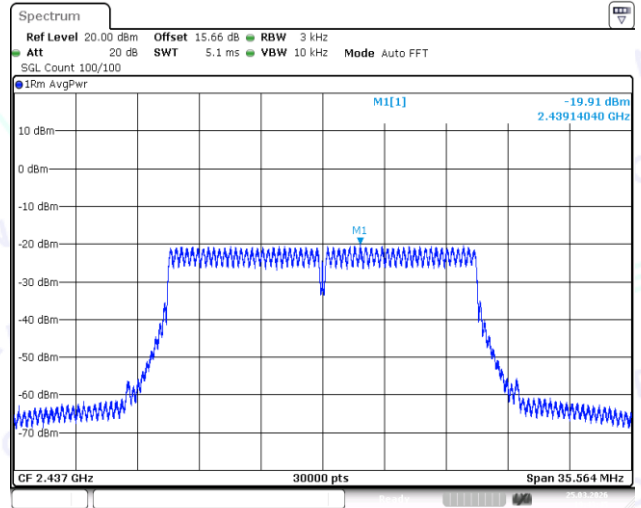
Note: RF Conducted test Offset= cable loss+ Attenuator

4.2 Test Graphs

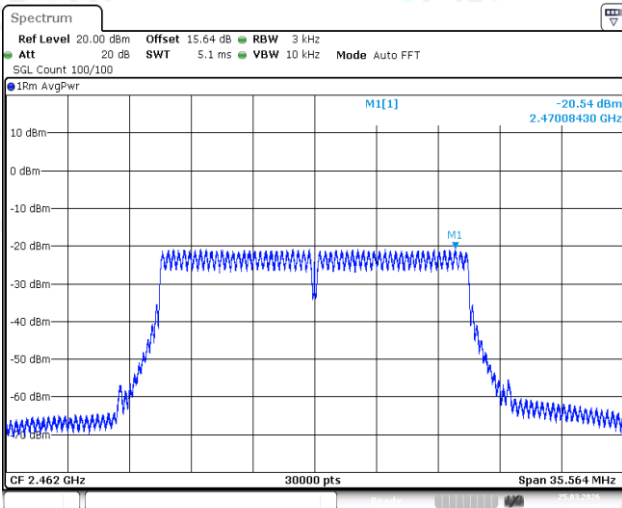




11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2437-PASS



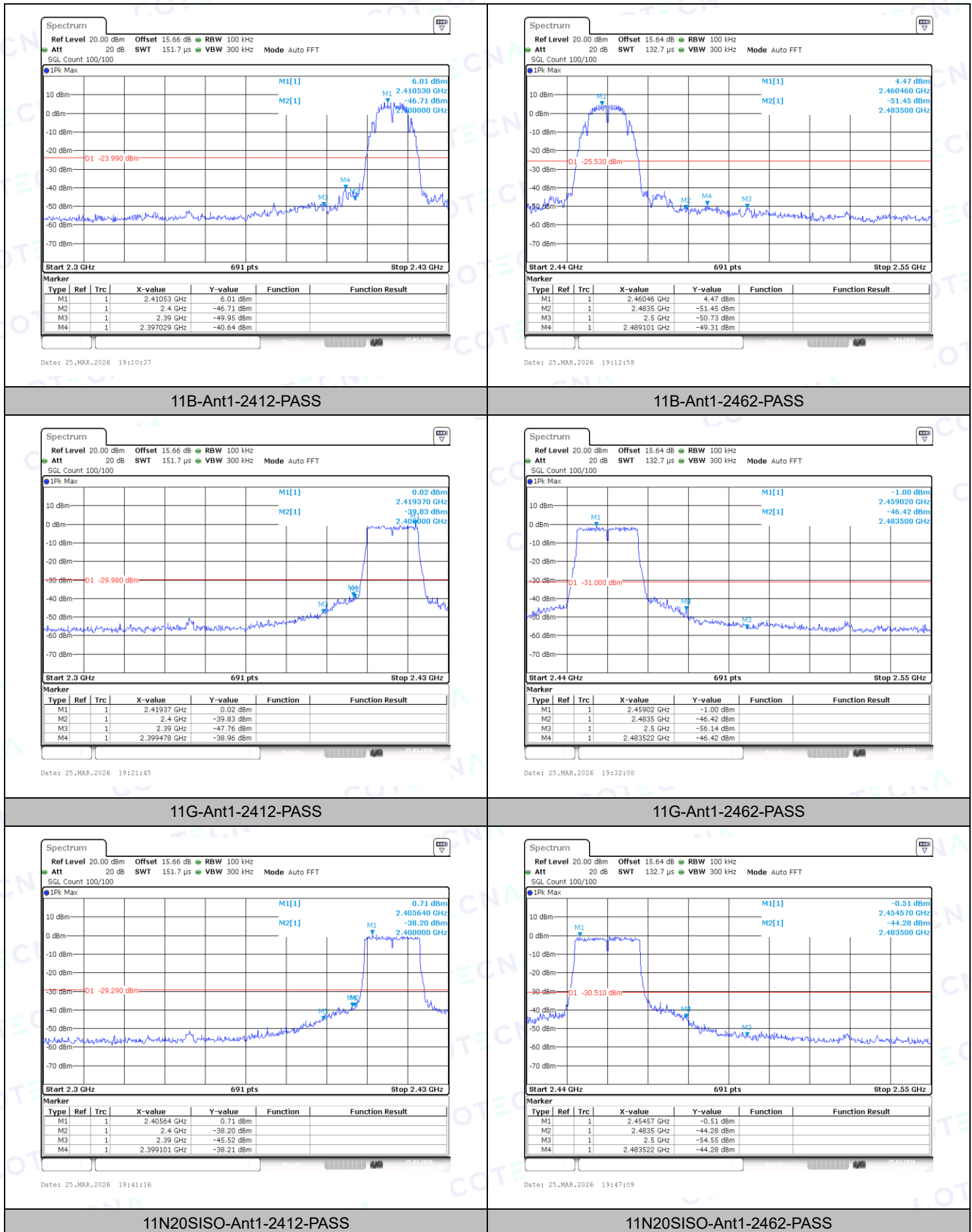
11N20SISO-Ant1-2462-PASS

5: Band edge measurements

5.1 Test Result

TestMode	Ant.	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	6.01	-40.64	≤-23.99	PASS
11B	Ant1	High	2462	4.47	-49.31	≤-25.53	PASS
11G	Ant1	Low	2412	0.02	-38.96	≤-29.98	PASS
11G	Ant1	High	2462	-1.00	-46.42	≤-31	PASS
11N20SISO	Ant1	Low	2412	0.71	-38.21	≤-29.29	PASS
11N20SISO	Ant1	High	2462	-0.51	-44.28	≤-30.51	PASS

5.2 Test Graphs

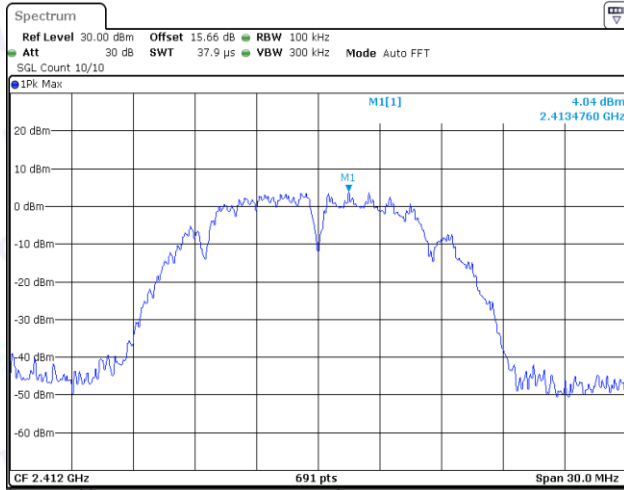


6: Conducted Spurious Emission

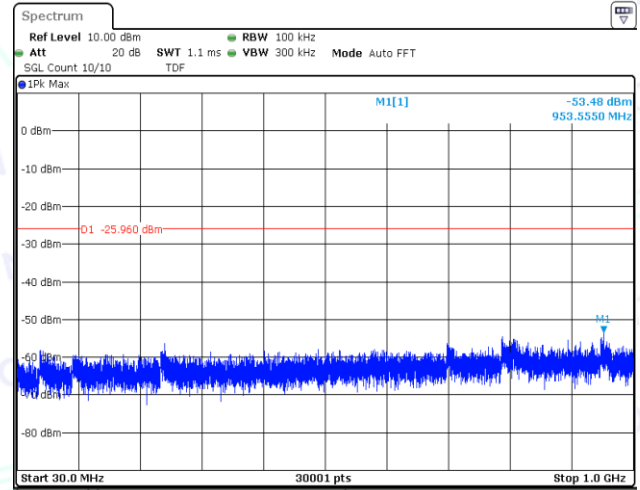
6.1 Test Result

TestMode	Ant.	Frequency [MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	0~Reference	4.04	4.04	---	PASS
11B	Ant1	2412	30~1000	4.04	-53.48	≤-25.96	PASS
11B	Ant1	2412	1000~26500	4.04	-37.87	≤-25.96	PASS
11B	Ant1	2437	0~Reference	5.13	5.13	---	PASS
11B	Ant1	2437	30~1000	5.13	-53.72	≤-24.87	PASS
11B	Ant1	2437	1000~26500	5.13	-36.59	≤-24.87	PASS
11B	Ant1	2462	0~Reference	3.99	3.99	---	PASS
11B	Ant1	2462	30~1000	3.99	-53.65	≤-26.01	PASS
11B	Ant1	2462	1000~26500	3.99	-36.9	≤-26.01	PASS
11G	Ant1	2412	0~Reference	-0.98	-0.98	---	PASS
11G	Ant1	2412	30~1000	-0.98	-55.08	≤-30.98	PASS
11G	Ant1	2412	1000~26500	-0.98	-37.44	≤-30.98	PASS
11G	Ant1	2437	0~Reference	-1.36	-1.36	---	PASS
11G	Ant1	2437	30~1000	-1.36	-54.03	≤-31.36	PASS
11G	Ant1	2437	1000~26500	-1.36	-37.43	≤-31.36	PASS
11G	Ant1	2462	0~Reference	-1.49	-1.49	---	PASS
11G	Ant1	2462	30~1000	-1.49	-52.9	≤-31.49	PASS
11G	Ant1	2462	1000~26500	-1.49	-37.41	≤-31.49	PASS
11N20SISO	Ant1	2412	0~Reference	-0.97	-0.97	---	PASS
11N20SISO	Ant1	2412	30~1000	-0.97	-51.18	≤-30.97	PASS
11N20SISO	Ant1	2412	1000~26500	-0.97	-36.56	≤-30.97	PASS
11N20SISO	Ant1	2437	0~Reference	-0.86	-0.86	---	PASS
11N20SISO	Ant1	2437	30~1000	-0.86	-53.65	≤-30.86	PASS
11N20SISO	Ant1	2437	1000~26500	-0.86	-37.43	≤-30.86	PASS
11N20SISO	Ant1	2462	0~Reference	-0.82	-0.82	---	PASS
11N20SISO	Ant1	2462	30~1000	-0.82	-53.75	≤-30.82	PASS
11N20SISO	Ant1	2462	1000~26500	-0.82	-37.81	≤-30.82	PASS

6.2 Test Graphs



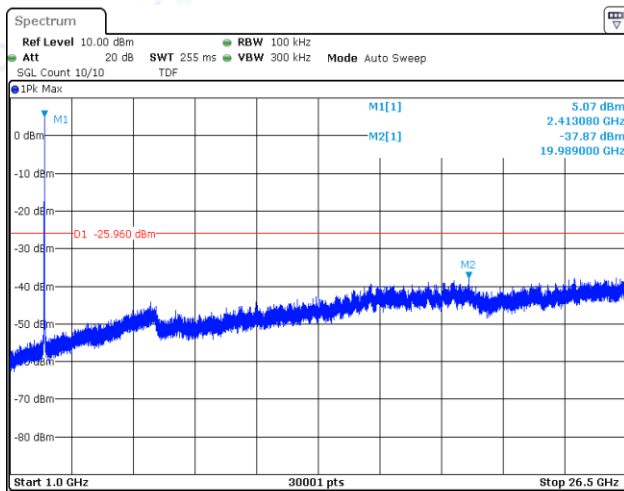
Date: 25.MAR.2026 19:11:04



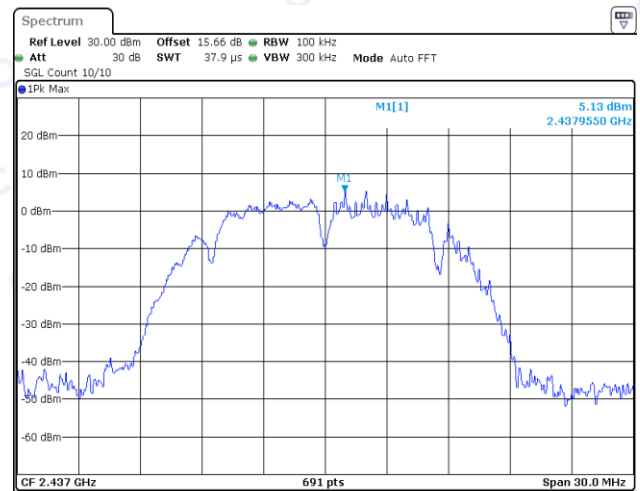
Date: 25.MAR.2026 19:11:11

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

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



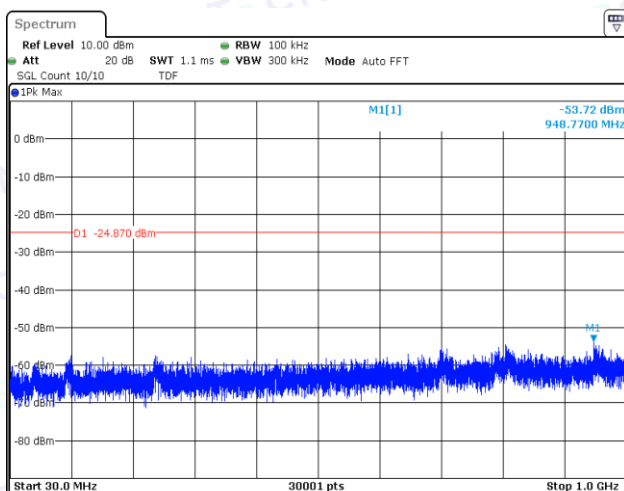
Date: 25.MAR.2026 19:11:29



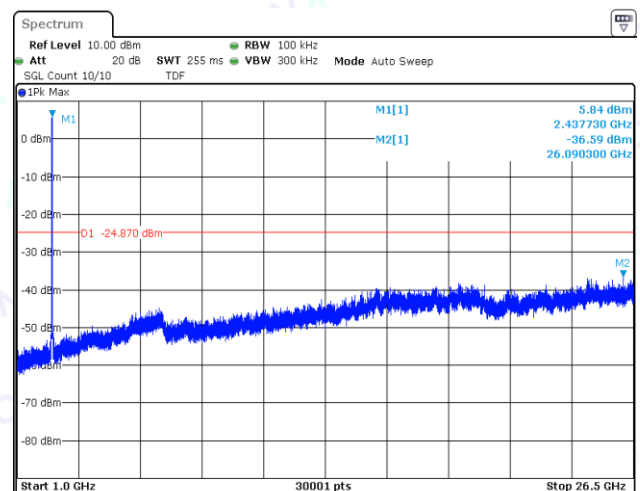
Date: 25.MAR.2026 19:07:39

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

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



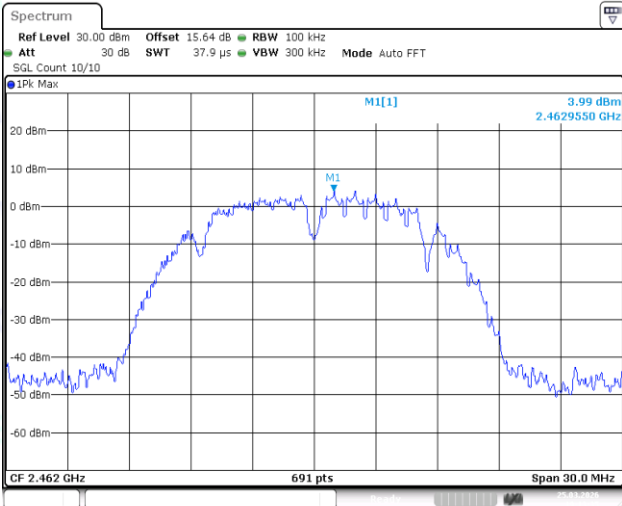
Date: 25.MAR.2026 19:07:47



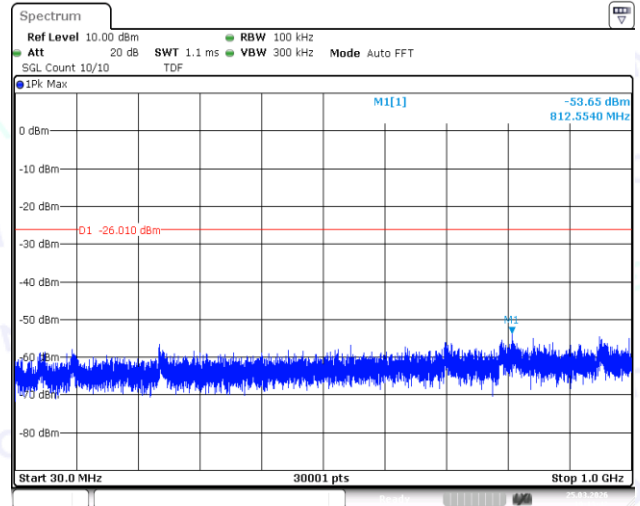
Date: 25.MAR.2026 19:08:04

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

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



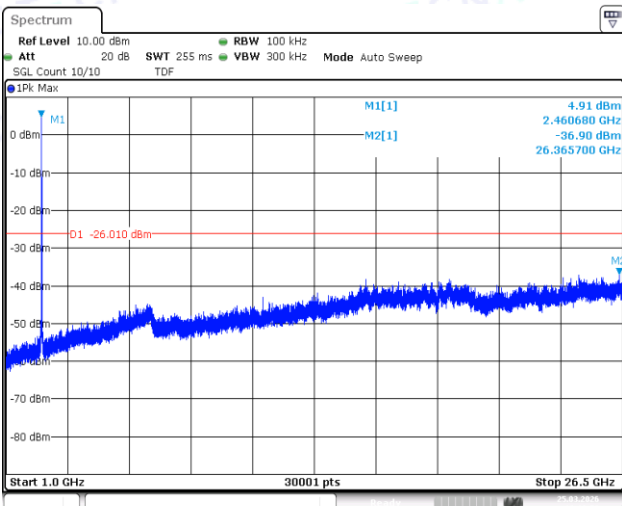
Date: 25.MAR.2026 19:13:34



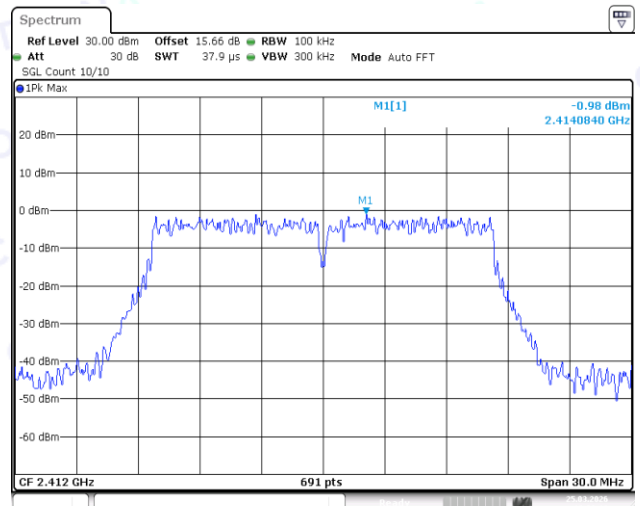
Date: 25.MAR.2026 19:13:42

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

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



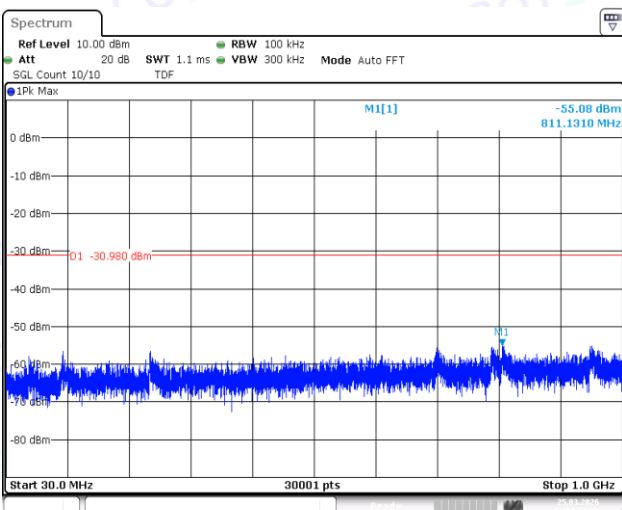
Date: 25.MAR.2026 19:13:59



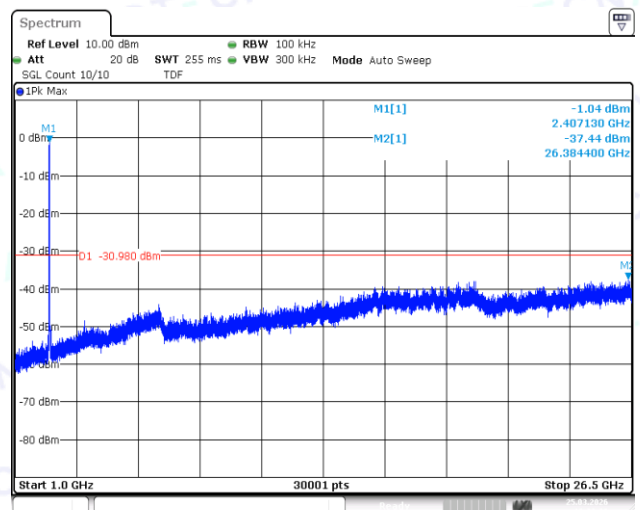
Date: 25.MAR.2026 19:22:12

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

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



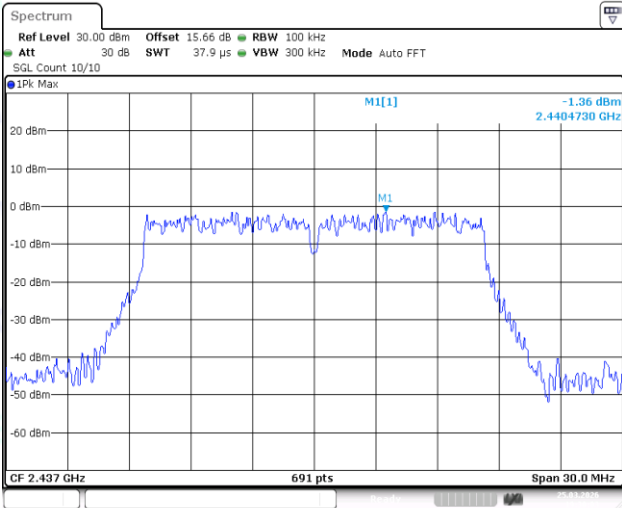
Date: 25.MAR.2026 19:22:20



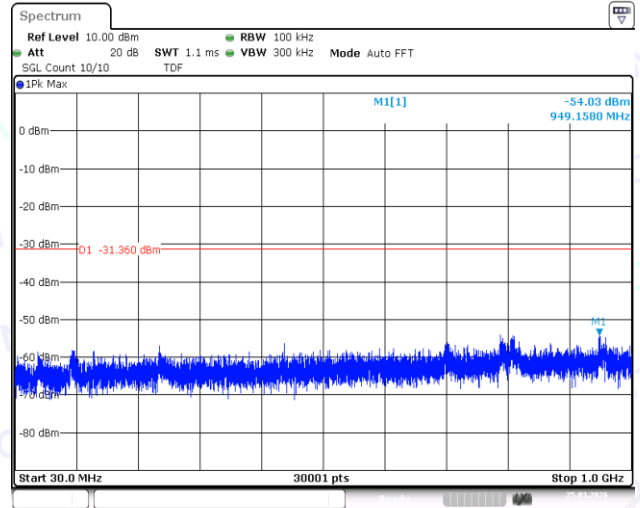
Date: 25.MAR.2026 19:22:37

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

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



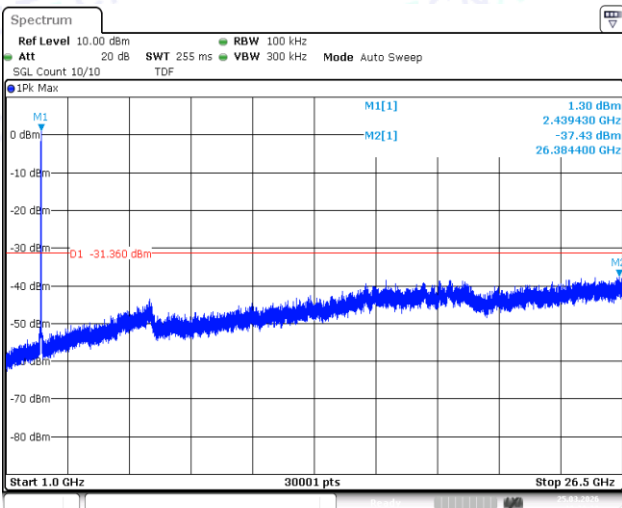
Date: 25.MAR.2026 19:30:03



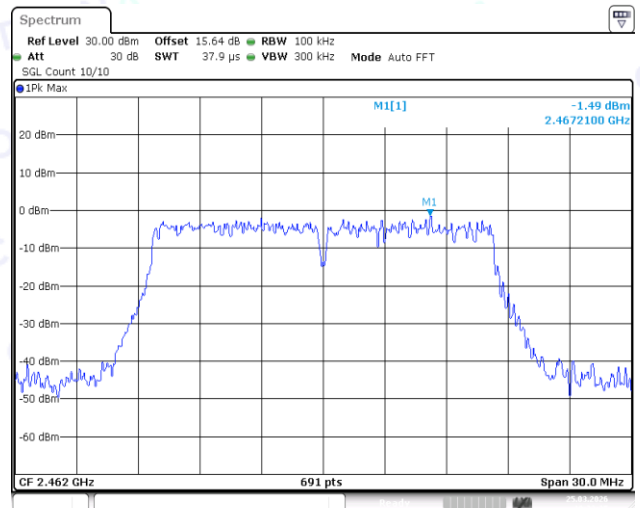
Date: 25.MAR.2026 19:30:10

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

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



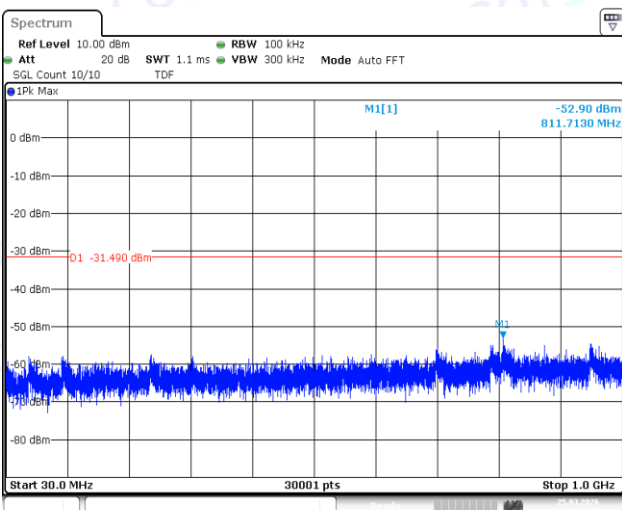
Date: 25.MAR.2026 19:30:28



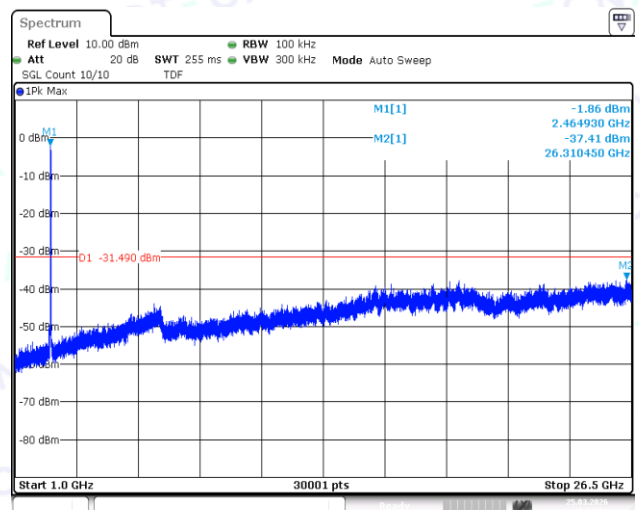
Date: 25.MAR.2026 19:32:35

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

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



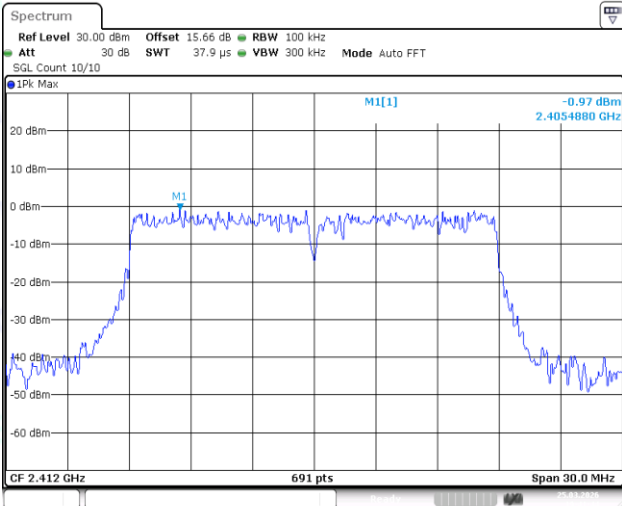
Date: 25.MAR.2026 19:32:43



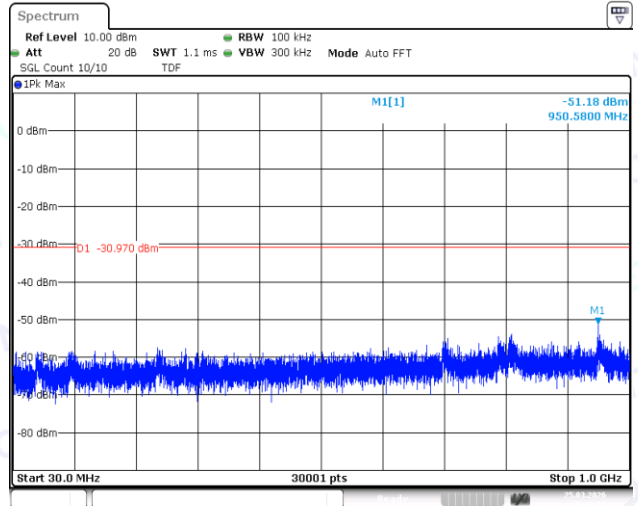
Date: 25.MAR.2026 19:33:00

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

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

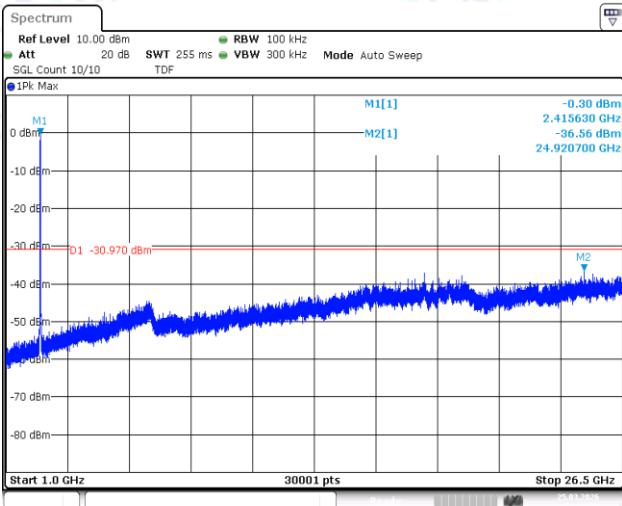


Date: 25.MAR.2026 19:41:44

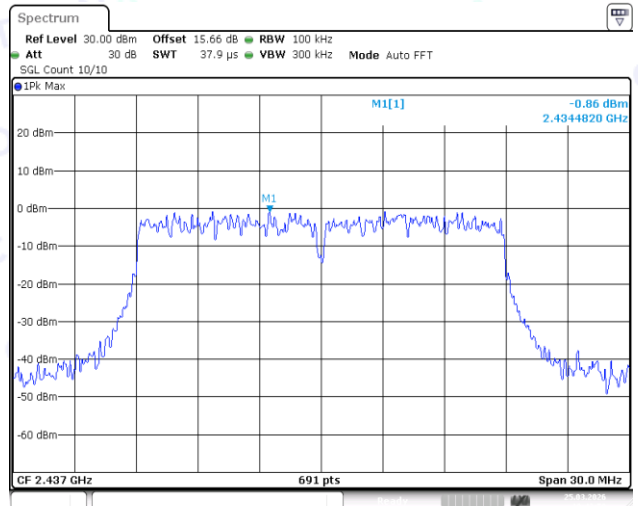


Date: 25.MAR.2026 19:41:51

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

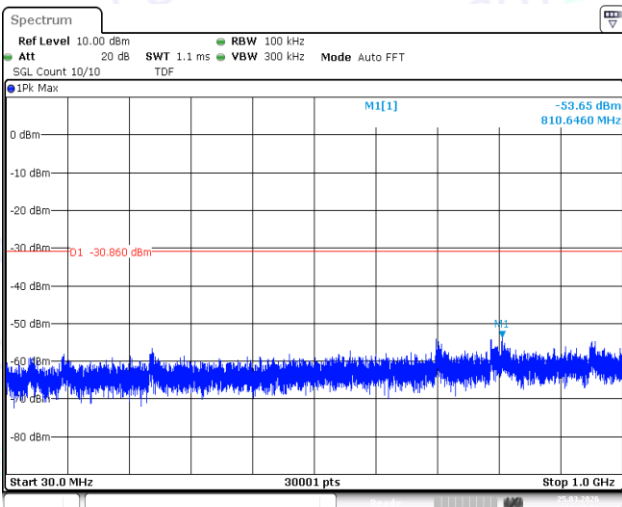


Date: 25.MAR.2026 19:42:09

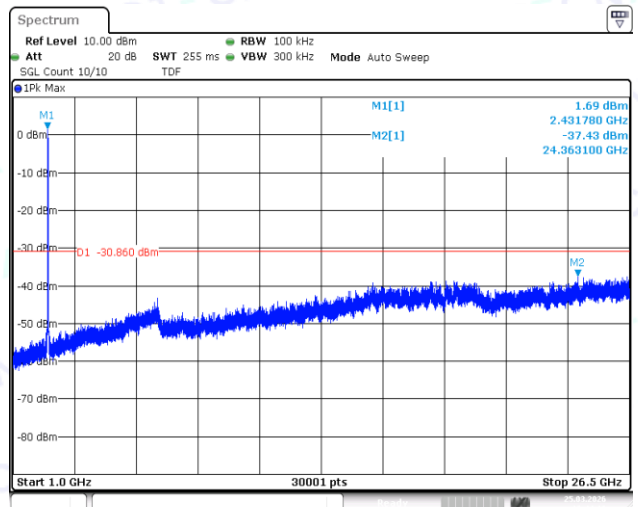


Date: 25.MAR.2026 19:43:50

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



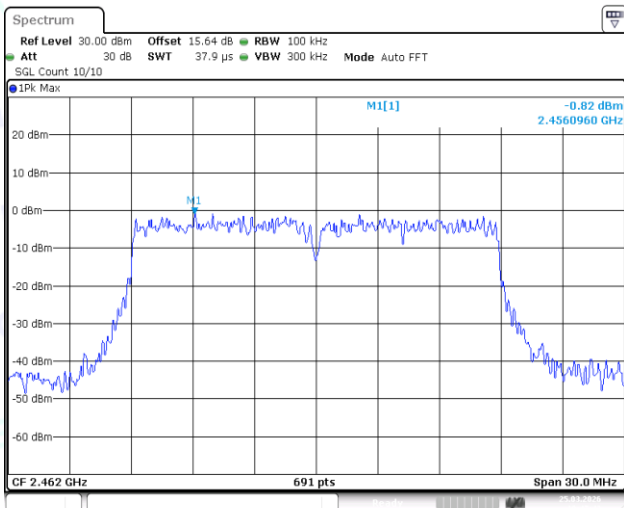
Date: 25.MAR.2026 19:43:58



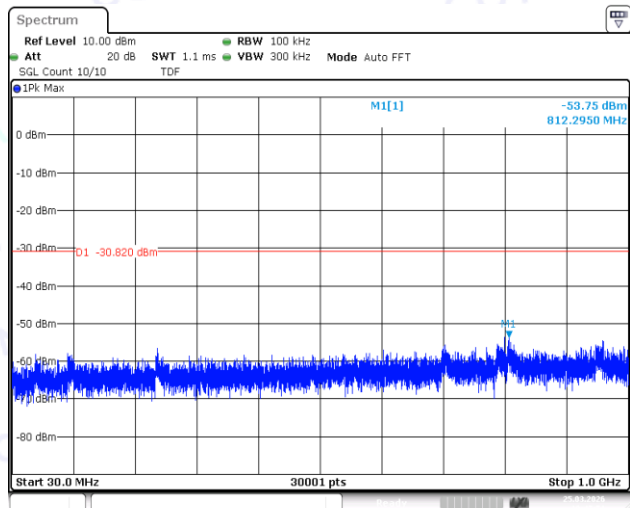
Date: 25.MAR.2026 19:44:15

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

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

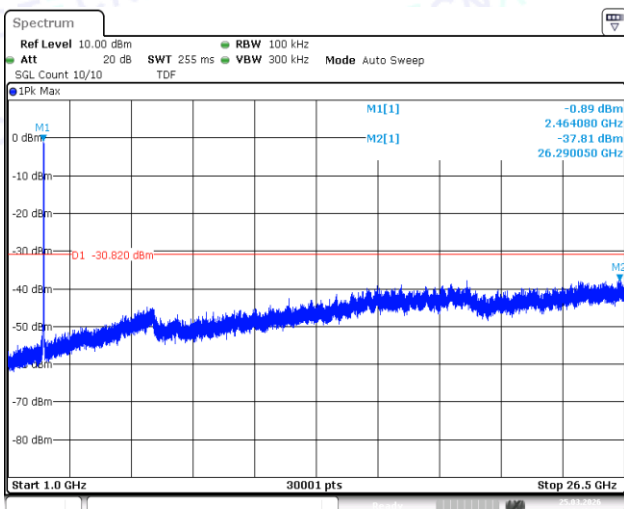


Date: 25.MAR.2026 19:47:44



Date: 25.MAR.2026 19:47:51

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



Date: 25.MAR.2026 19:48:08

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

11N20SISO-Ant1-2462-30~1000-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	16.44	16.48	99.76	0.01	0.06
11G	Ant1	2412	2.72	2.77	98.19	0.08	0.37
11N20SISO	Ant1	2412	2.53	2.57	98.44	0.07	0.40

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

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

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

7.2 Test Graphs



8: Emissions in Restricted Bands

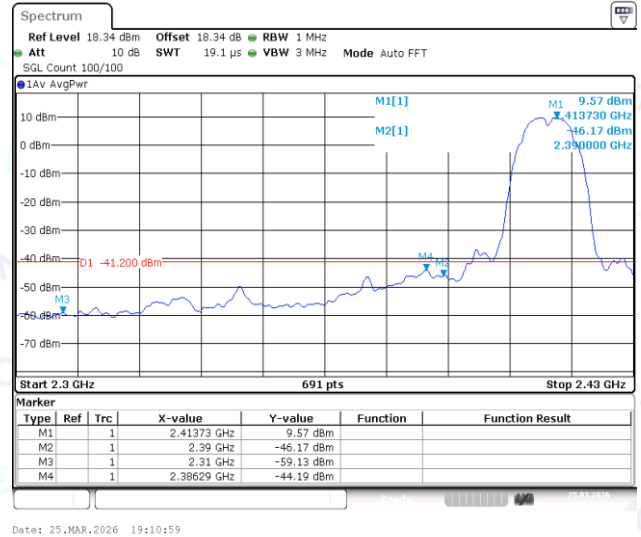
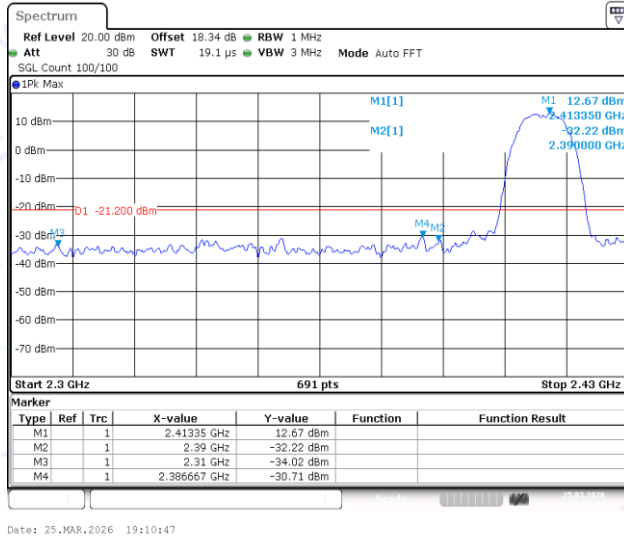
8.1 Test Result

TestMode	Ant.	ChName	Freq. [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	Peak	2390.000	-32.22	≤-21.20	62.98	≤74	PASS
11B	Ant1	Low	2412	Peak	2310.000	-34.02	≤-21.20	61.18	≤74	PASS
11B	Ant1	Low	2412	Peak	2386.667	-30.71	≤-21.20	64.49	≤74	PASS
11B	Ant1	Low	2412	AV	2390.000	-46.17	≤-41.20	49.03	≤54	PASS
11B	Ant1	Low	2412	AV	2310.000	-59.13	≤-41.20	36.07	≤54	PASS
11B	Ant1	Low	2412	AV	2386.290	-44.19	≤-41.20	51.01	≤54	PASS
11B	Ant1	High	2462	Peak	2483.500	-34.24	≤-21.20	60.96	≤74	PASS
11B	Ant1	High	2462	Peak	2500.000	-34.04	≤-21.20	61.16	≤74	PASS
11B	Ant1	High	2462	Peak	2488.145	-32.47	≤-21.20	62.73	≤74	PASS
11B	Ant1	High	2462	AV	2483.500	-46.98	≤-41.20	48.22	≤54	PASS
11B	Ant1	High	2462	AV	2500.000	-48.11	≤-41.20	47.09	≤54	PASS
11B	Ant1	High	2462	AV	2484.000	-46.78	≤-41.20	48.42	≤54	PASS
11G	Ant1	Low	2412	Peak	2390.000	-32.19	≤-21.20	63.01	≤74	PASS
11G	Ant1	Low	2412	Peak	2310.000	-36.46	≤-21.20	58.74	≤74	PASS
11G	Ant1	Low	2412	Peak	2340.319	-31.88	≤-21.20	63.32	≤74	PASS
11G	Ant1	Low	2412	AV	2390.000	-43.43	≤-41.20	51.77	≤54	PASS
11G	Ant1	Low	2412	AV	2310.000	-60.34	≤-41.20	34.86	≤54	PASS
11G	Ant1	Low	2412	AV	2389.870	-43.58	≤-41.20	51.62	≤54	PASS
11G	Ant1	High	2462	Peak	2483.500	-35.63	≤-21.20	59.57	≤74	PASS
11G	Ant1	High	2462	Peak	2500.000	-35.05	≤-21.20	60.15	≤74	PASS
11G	Ant1	High	2462	Peak	2492.290	-31.34	≤-21.20	63.86	≤74	PASS
11G	Ant1	High	2462	AV	2483.500	-46.64	≤-41.20	48.56	≤54	PASS
11G	Ant1	High	2462	AV	2500.000	-54.4	≤-41.20	40.80	≤54	PASS
11G	Ant1	High	2462	AV	2483.522	-46.64	≤-41.20	48.56	≤54	PASS
11N20SISO	Ant1	Low	2412	Peak	2390.000	-26.81	≤-21.20	68.39	≤74	PASS
11N20SISO	Ant1	Low	2412	Peak	2310.000	-35.99	≤-21.20	59.21	≤74	PASS
11N20SISO	Ant1	Low	2412	Peak	2389.870	-26.97	≤-21.20	68.23	≤74	PASS
11N20SISO	Ant1	Low	2412	AV	2390.000	-41.56	≤-41.20	53.64	≤54	PASS
11N20SISO	Ant1	Low	2412	AV	2310.000	-60.07	≤-41.20	35.13	≤54	PASS
11N20SISO	Ant1	Low	2412	AV	2389.870	-41.93	≤-41.20	53.27	≤54	PASS
11N20SISO	Ant1	High	2462	Peak	2483.500	-29.21	≤-21.20	65.99	≤74	PASS
11N20SISO	Ant1	High	2462	Peak	2500.000	-35.92	≤-21.20	59.28	≤74	PASS
11N20SISO	Ant1	High	2462	Peak	2483.522	-29.21	≤-21.20	65.99	≤74	PASS
11N20SISO	Ant1	High	2462	AV	2483.500	-42.85	≤-41.20	52.35	≤54	PASS
11N20SISO	Ant1	High	2462	AV	2500.000	-53.16	≤-41.20	42.04	≤54	PASS
11N20SISO	Ant1	High	2462	AV	2483.522	-42.85	≤-41.20	52.35	≤54	PASS

Note:

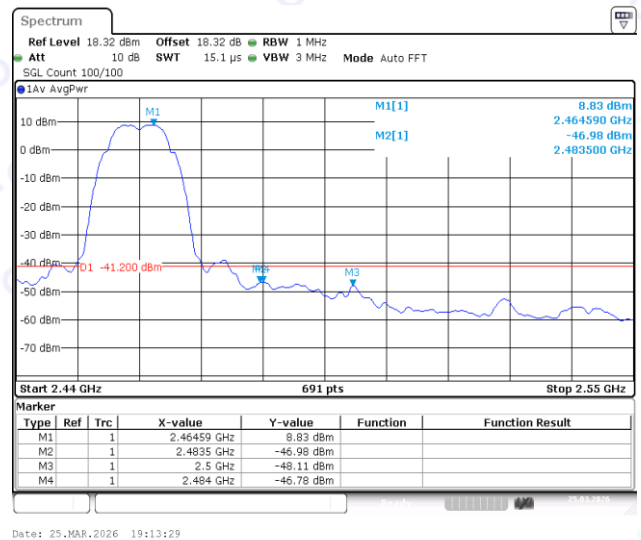
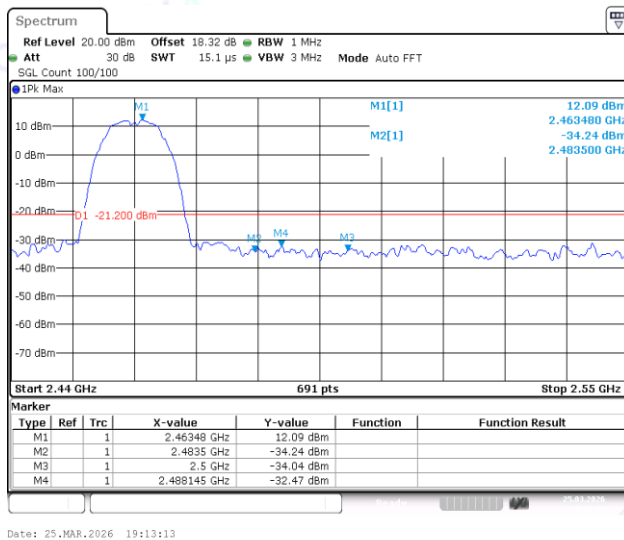
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a), The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

8.2 Test Graphs



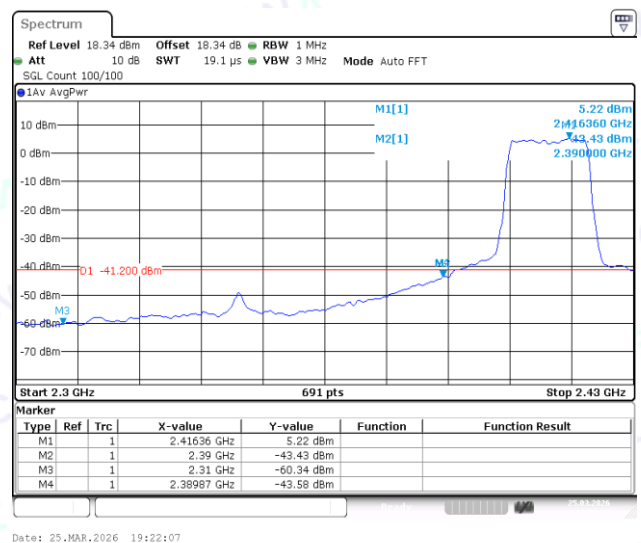
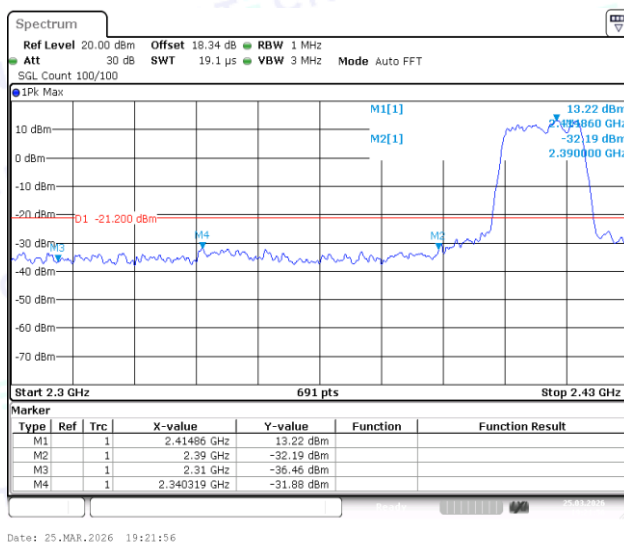
11B-Ant1-2412-PASS

11B-Ant1-2412-PASS



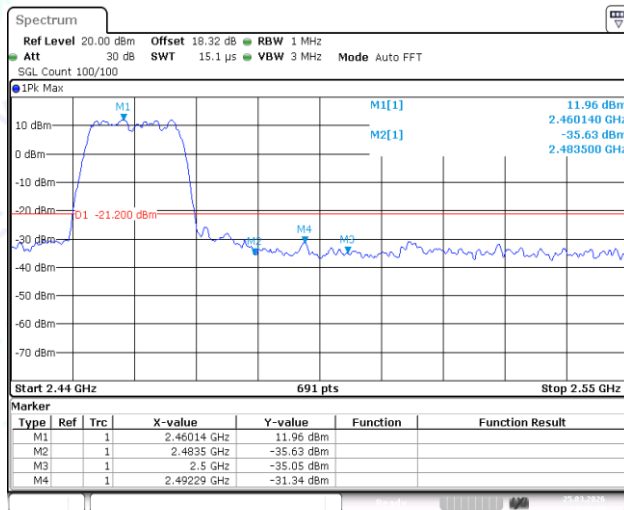
11B-Ant1-2462-PASS

11B-Ant1-2462-PASS

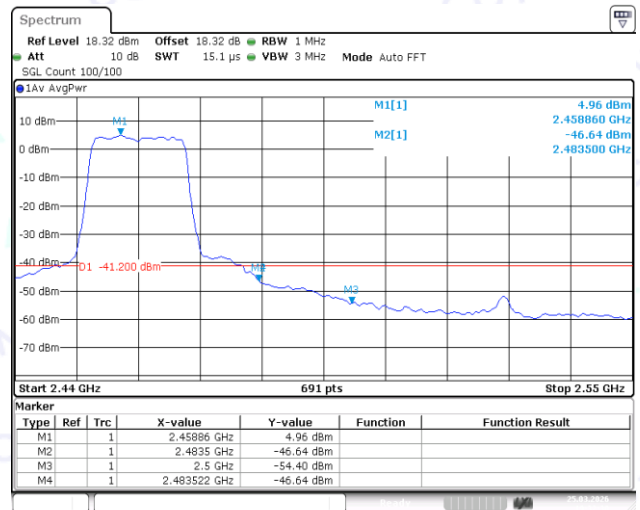


11G-Ant1-2412-PASS

11G-Ant1-2412-PASS



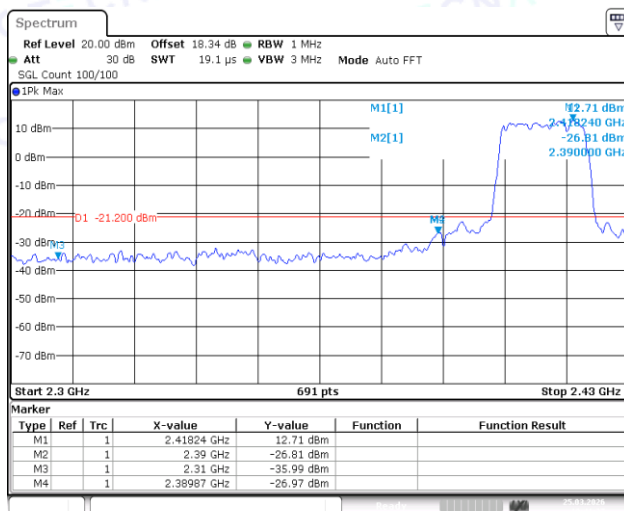
Date: 25.MAR.2026 19:32:15



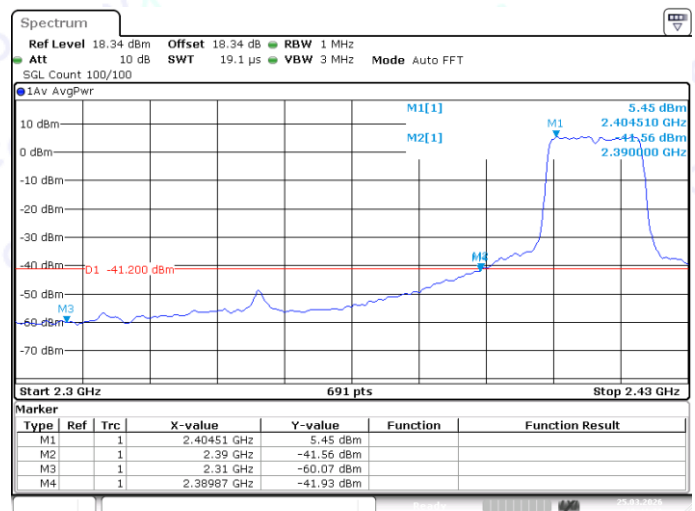
Date: 25.MAR.2026 19:32:30

11G-Ant1-2462-PASS

11G-Ant1-2462-PASS



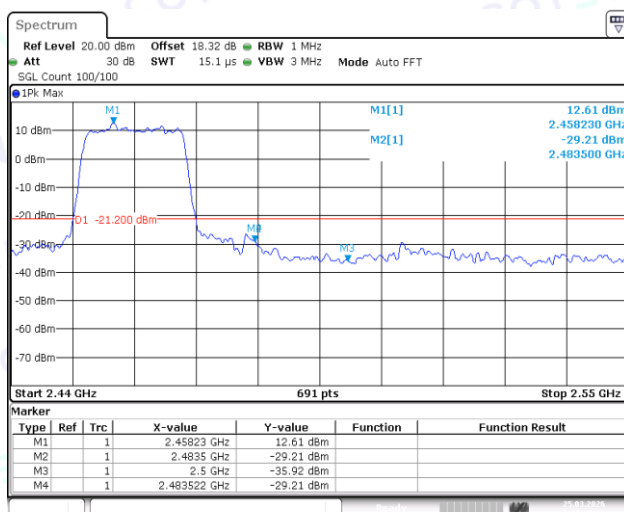
Date: 25.MAR.2026 19:41:27



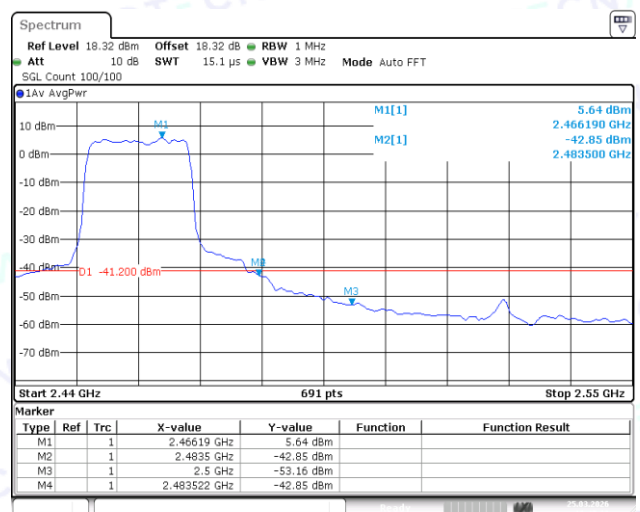
Date: 25.MAR.2026 19:41:39

11N20SISO-Ant1-2412-PASS

11N20SISO-Ant1-2412-PASS



Date: 25.MAR.2026 19:47:23



Date: 25.MAR.2026 19:47:38

11N20SISO-Ant1-2462-PASS

11N20SISO-Ant1-2462-PASS

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