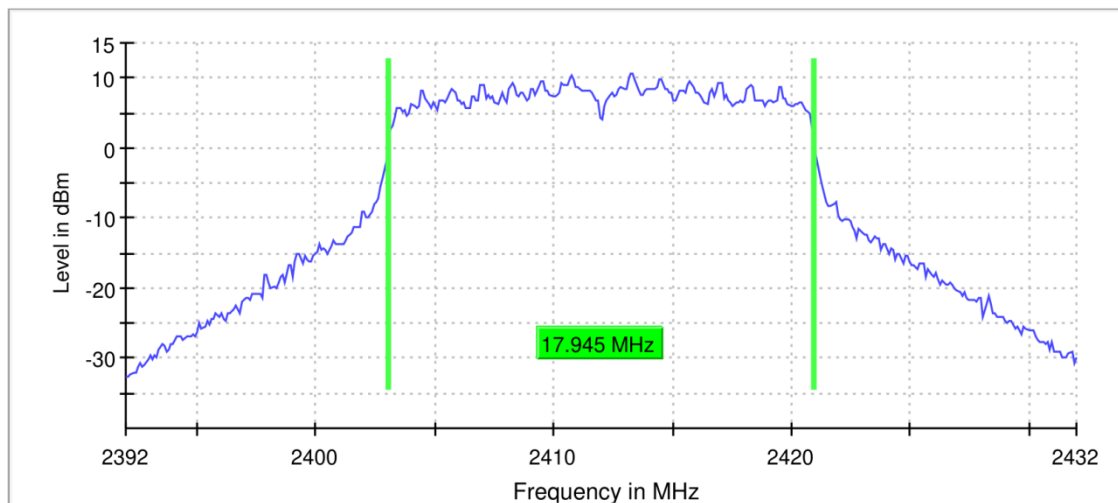


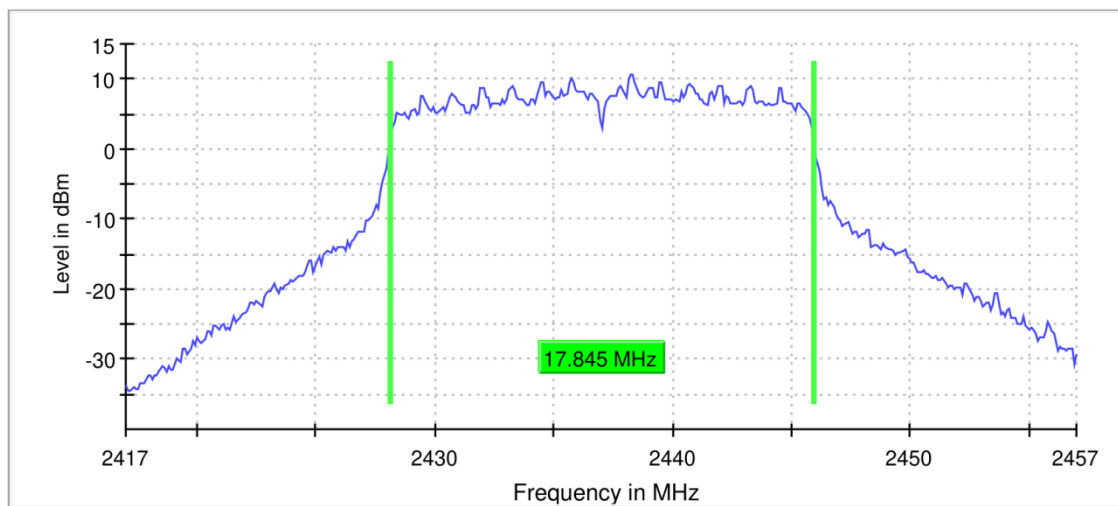


99 % Bandwidth



11N20_ANT7_2437

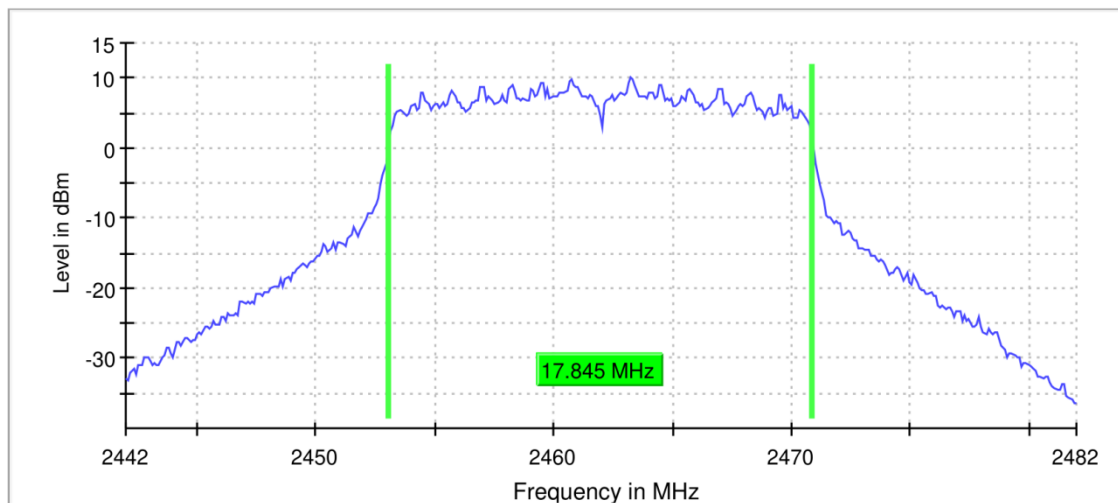
99 % Bandwidth



11N20_ANT7_2462

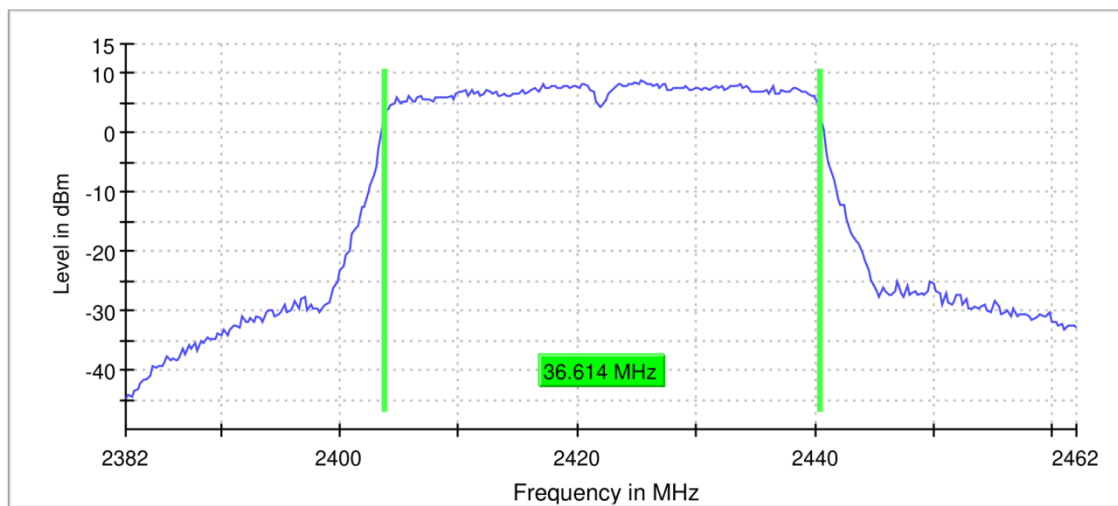


99 % Bandwidth



11N40_ANT7_2422

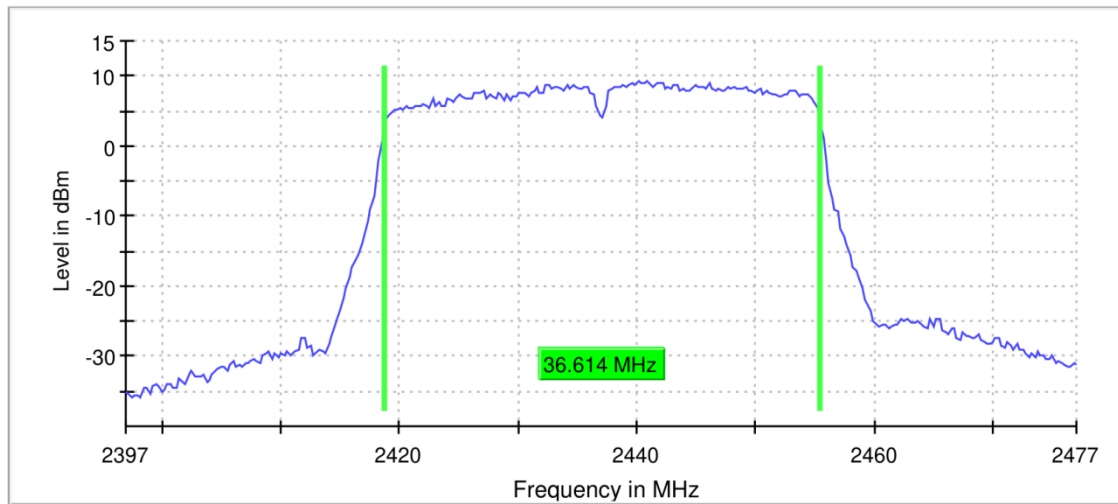
99 % Bandwidth



11N40_ANT7_2437

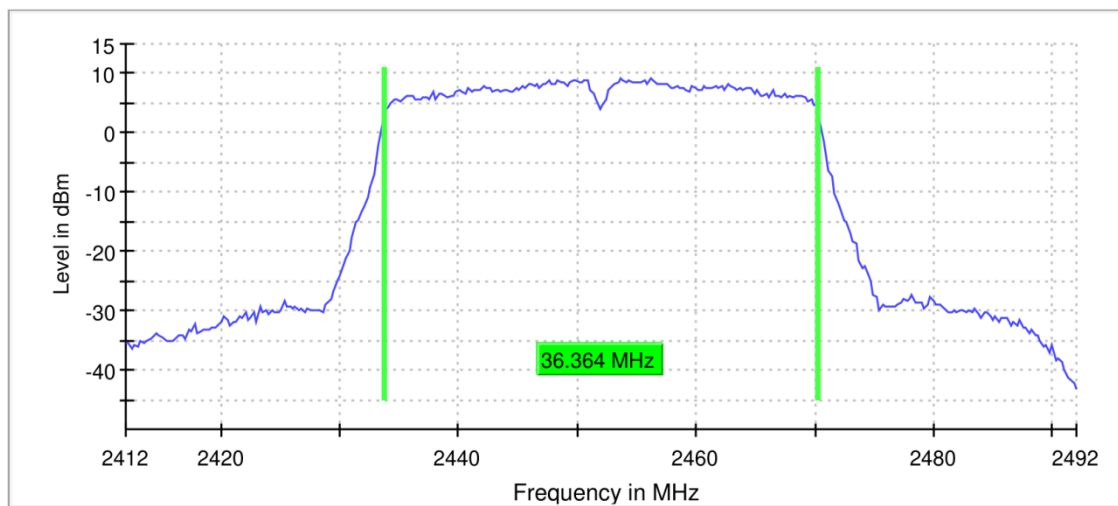


99 % Bandwidth



11N40_ANT7_2452

99 % Bandwidth



20M

RBW 200.000 kHz

VBW 1.000 MHz

40M

RBW 500.000 kHz

VBW 2.000 MHz

**MAXIMUM CONDUCTED OUTPUT POWER****TEST RESULT**

TestMode	TX Mod.	Frequency [MHz]	Peak power [dBm]	MAX Peak power [mw]	Limit [dBm]	Verdict	Power Setting
			ANT7				
11B	SISO	2412	21.26	133.66	≤30.00	PASS	18
		2437	21.12	129.42	≤30.00	PASS	18
		2462	20.81	120.50	≤30.00	PASS	18
11g	SISO	2412	23.54	225.94	≤30.00	PASS	18.5
		2437	23.22	209.89	≤30.00	PASS	18.5
		2462	23.12	205.12	≤30.00	PASS	18.5
11N20	SISO	2412	23.58	228.03	≤30.00	PASS	18.5
		2437	23.15	206.54	≤30.00	PASS	18.5
		2462	22.98	198.61	≤30.00	PASS	18.5
11N40	SISO	2422	23.55	226.46	≤30.00	PASS	17
		2437	23.88	244.34	≤30.00	PASS	17
		2452	23.49	223.36	≤30.00	PASS	17

TestMode	TX Mod.	Freq. [MHz]	Avg.power [dBm]	Power Setting
			ANT7	
11B	SISO	2412	18.73	18
		2437	18.58	18
		2462	18.23	18
11g	SISO	2412	18.79	18.5
		2437	18.51	18.5
		2462	18.16	18.5
11N20	SISO	2412	18.59	18.5
		2437	18.31	18.5
		2462	18.06	18.5
11N40	SISO	2422	16.96	17
		2437	17.28	17



		2452	17.07	17
--	--	------	-------	----

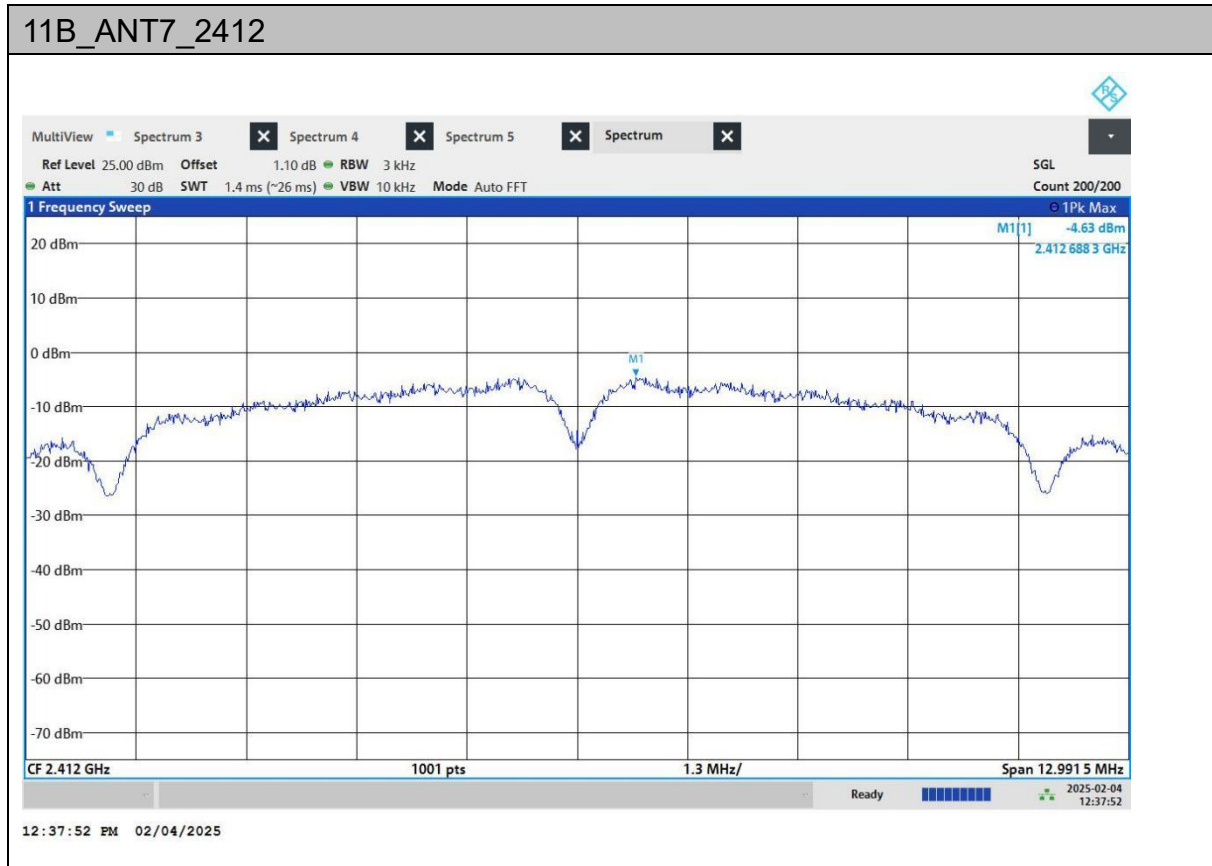


MAXIMUM POWER SPECTRAL DENSITY

TEST RESULT

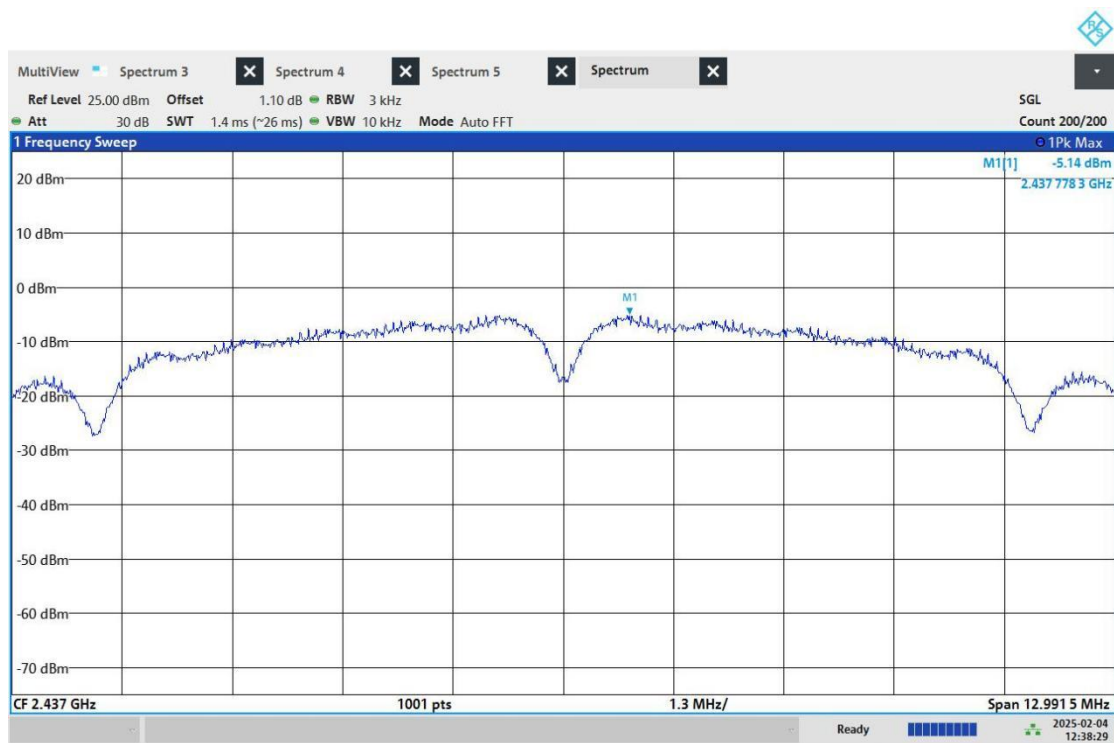
TestMode	Antenna	Frequency [MHz]	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	ANT7	2412	-4.63	≤8.00	PASS
	ANT7	2437	-5.14	≤8.00	PASS
	ANT7	2462	-5.79	≤8.00	PASS
11G	ANT7	2412	-6.72	≤8.00	PASS
	ANT7	2437	-6.87	≤8.00	PASS
	ANT7	2462	-6.82	≤8.00	PASS
11N20	ANT7	2412	-7.24	≤8.00	PASS
	ANT7	2437	-7.50	≤8.00	PASS
	ANT7	2462	-7.43	≤8.00	PASS
11N40	ANT7	2422	-11.34	≤8.00	PASS
	ANT7	2437	-10.46	≤8.00	PASS
	ANT7	2452	-10.76	≤8.00	PASS

TEST GRAPHS



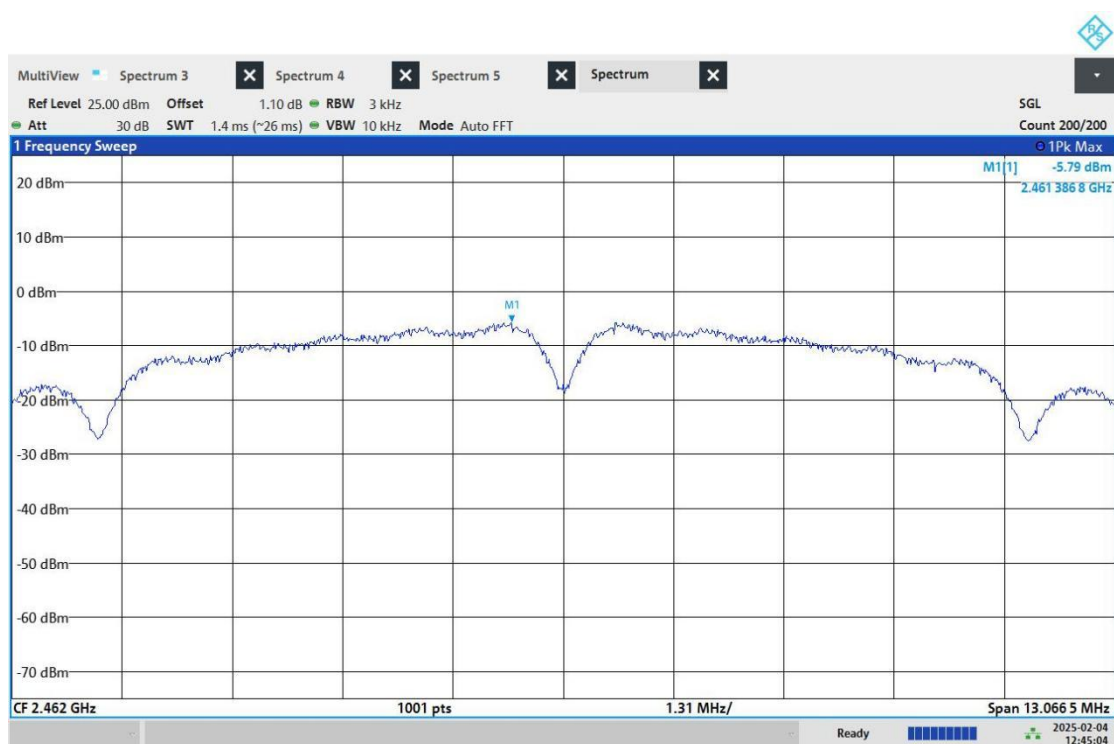


11B_ANT7_2437



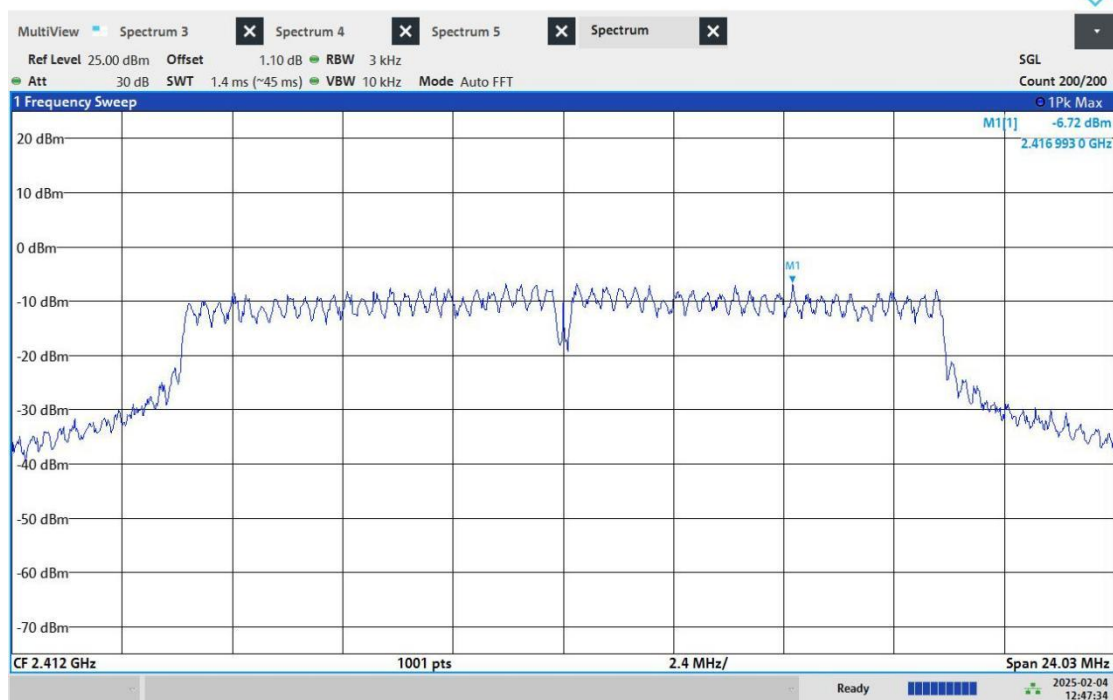
12:38:29 PM 02/04/2025

11B_ANT7_2462



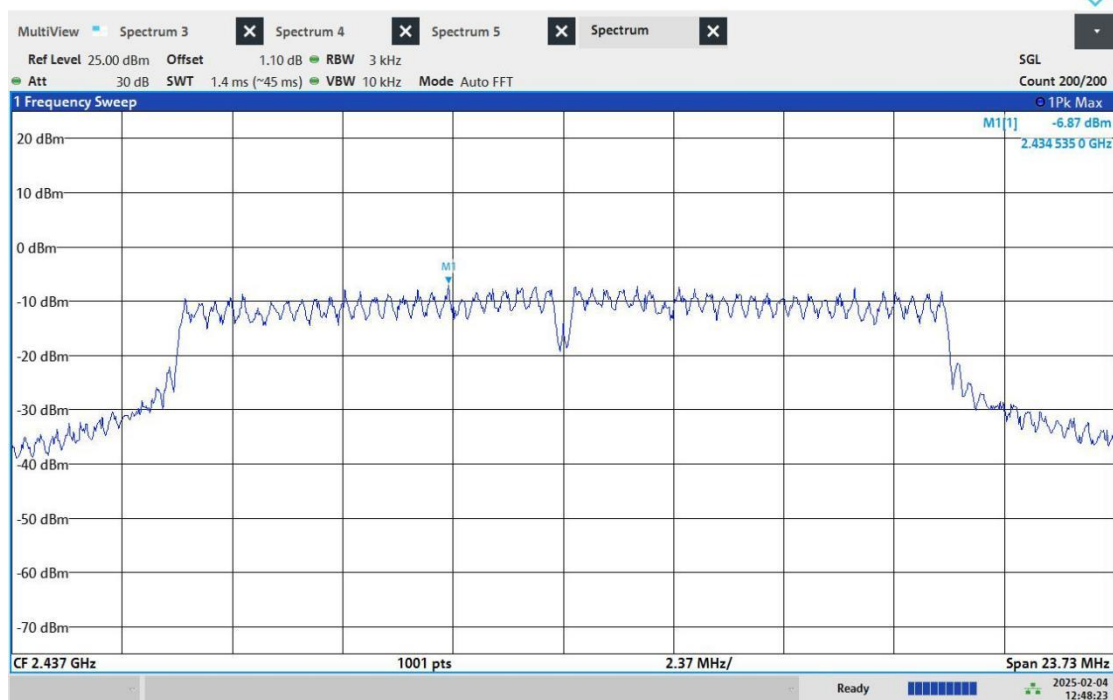
12:45:05 PM 02/04/2025

11G_ANT7_2412



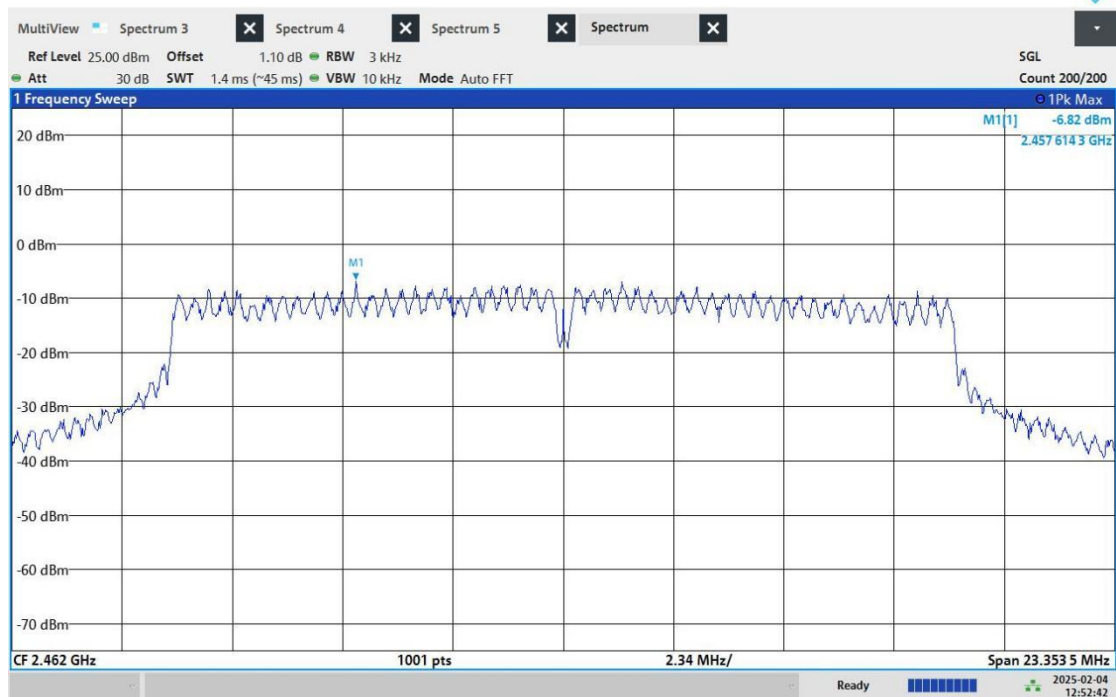
12:47:34 PM 02/04/2025

11G_ANT7_2437



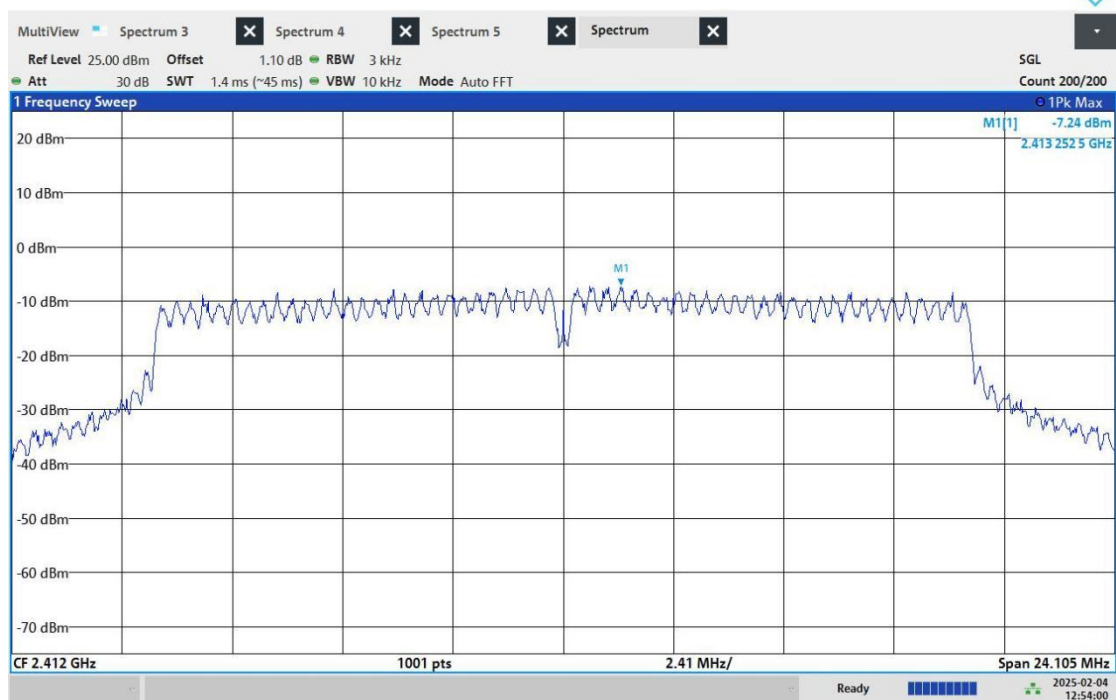
12:48:23 PM 02/04/2025

11G_ANT7_2462



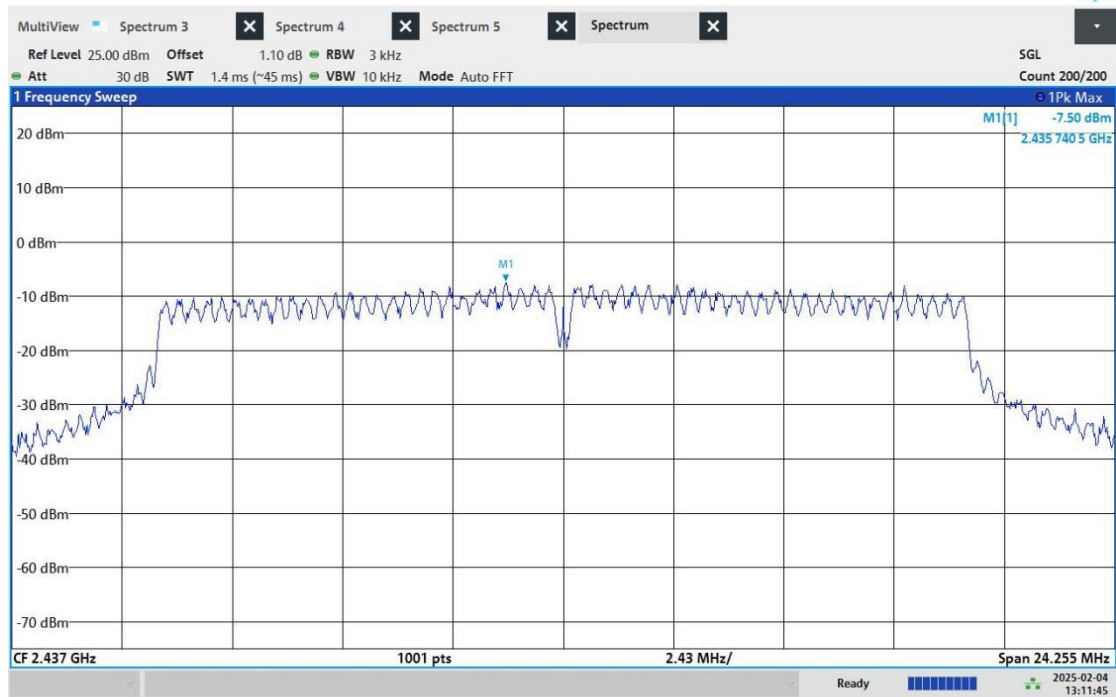
12:52:42 PM 02/04/2025

11N20_ANT7_2412



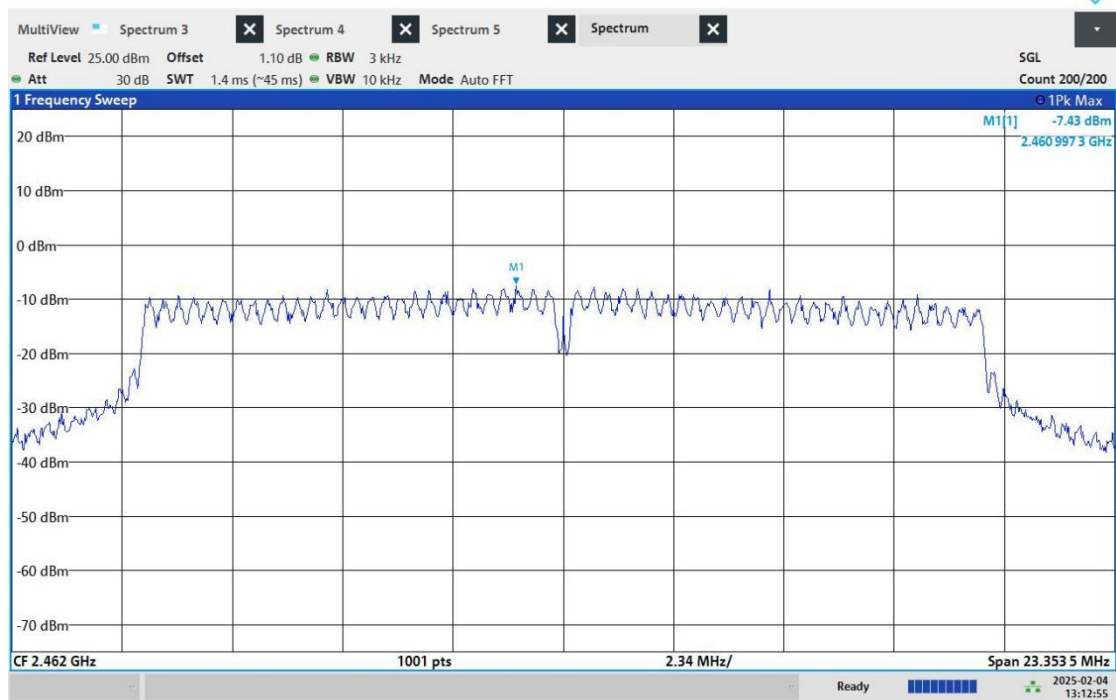
12:54:00 PM 02/04/2025

11N20_ANT7_2437



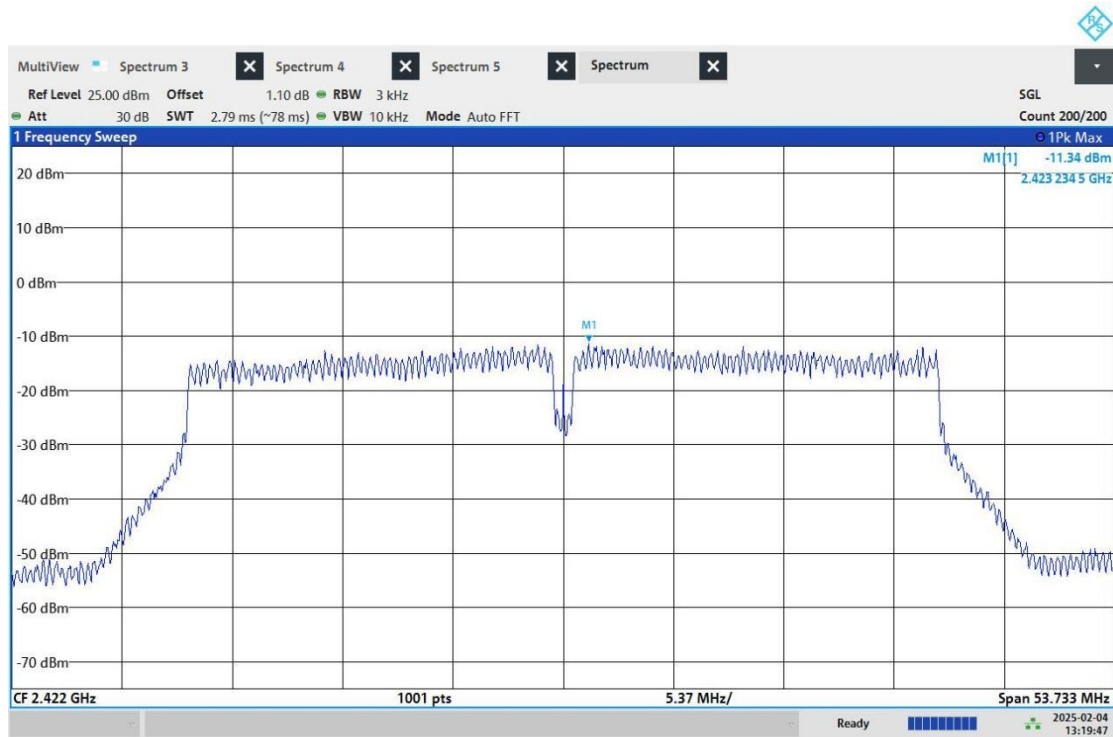
01:11:46 PM 02/04/2025

11N20_ANT7_2462



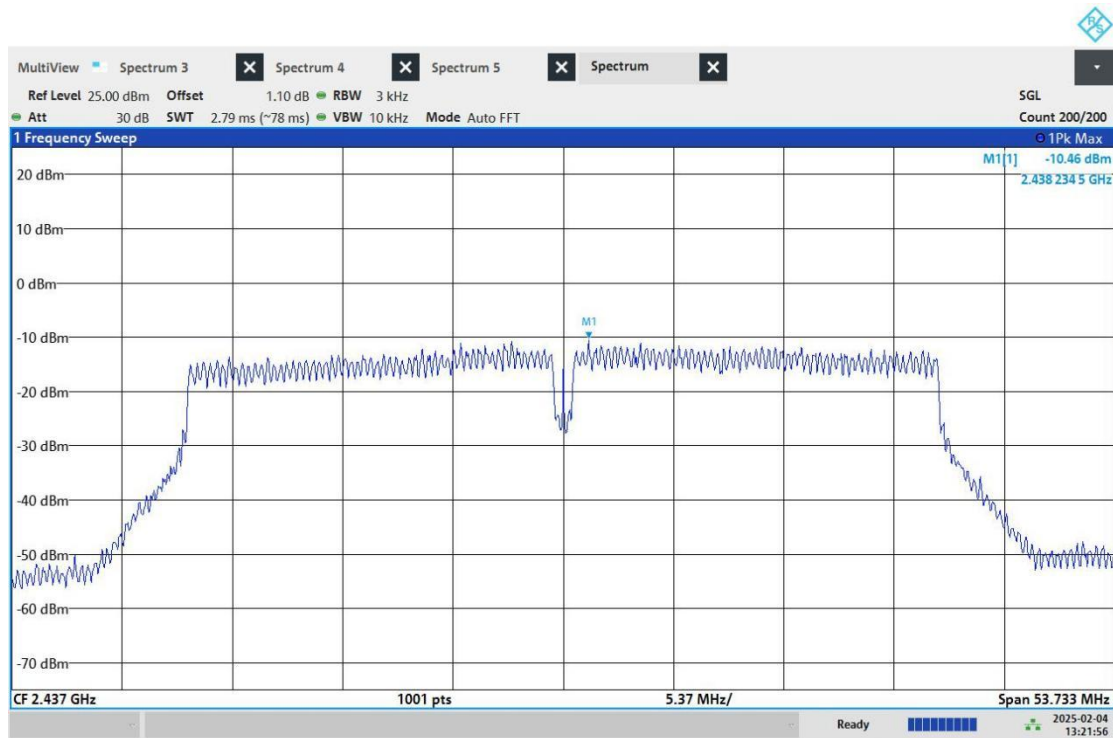
01:12:56 PM 02/04/2025

11N40_ANT7_2422



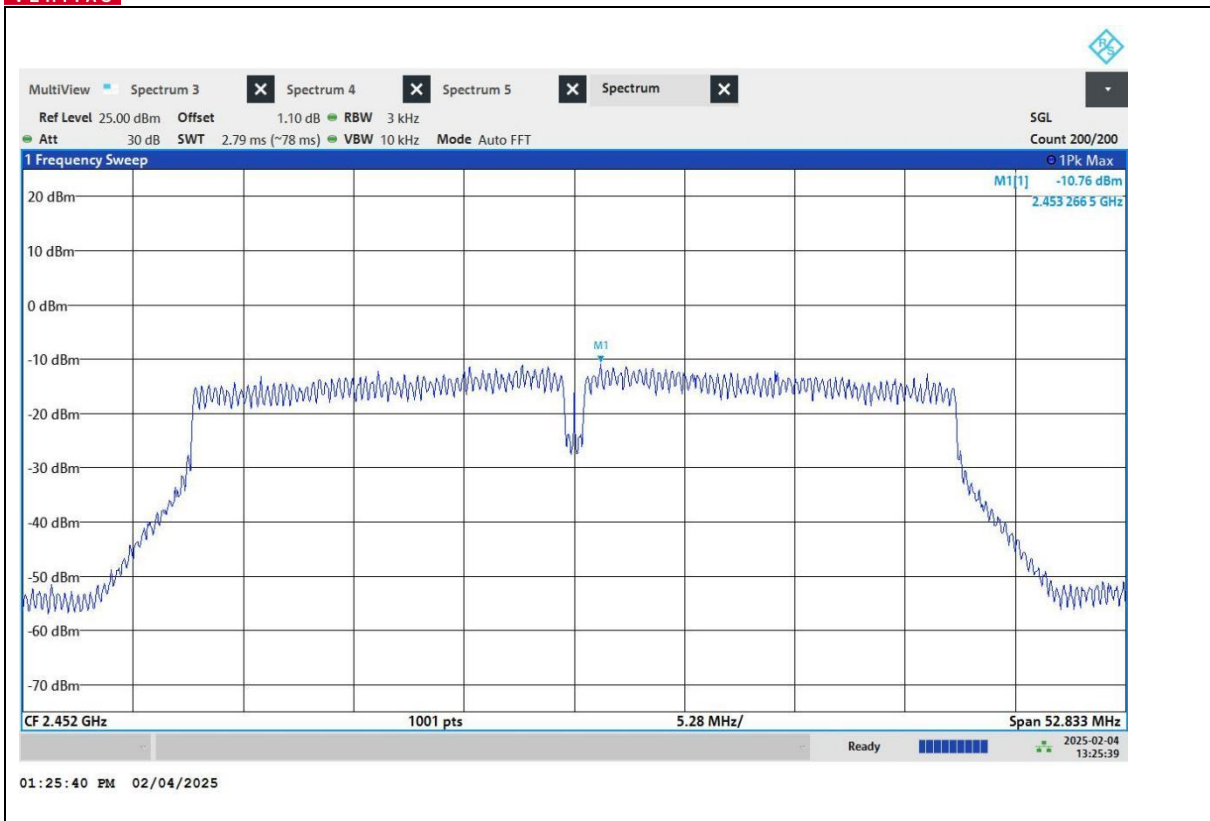
01:19:48 PM 02/04/2025

11N40_ANT7_2437



01:21:56 PM 02/04/2025

11N40_ANT7_2452



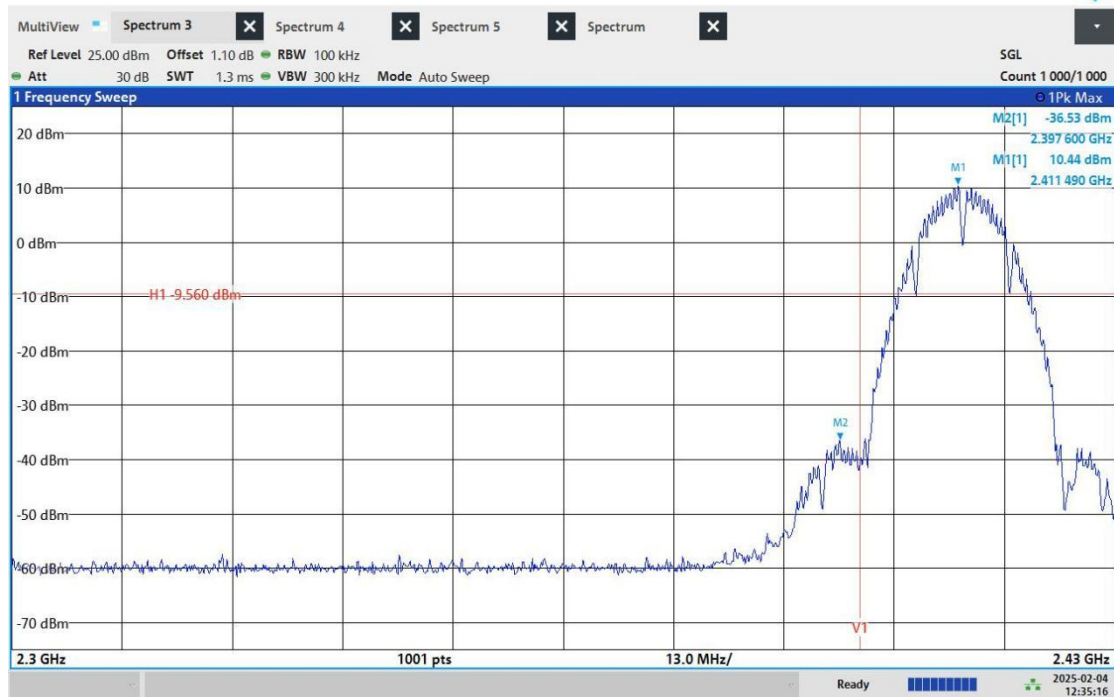
**BAND EDGE MEASUREMENTS****TEST RESULT**

TestMode	Antenna	ChName	Frequency [MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	ANT7	Low	2412	See test graph	See test graph	PASS
	ANT7	High	2462	See test graph	See test graph	PASS
11G	ANT7	Low	2412	See test graph	See test graph	PASS
	ANT7	High	2462	See test graph	See test graph	PASS
11N20	ANT7	Low	2412	See test graph	See test graph	PASS
	ANT7	High	2462	See test graph	See test graph	PASS
11N40	ANT7	Low	2422	See test graph	See test graph	PASS
	ANT7	High	2452	See test graph	See test graph	PASS



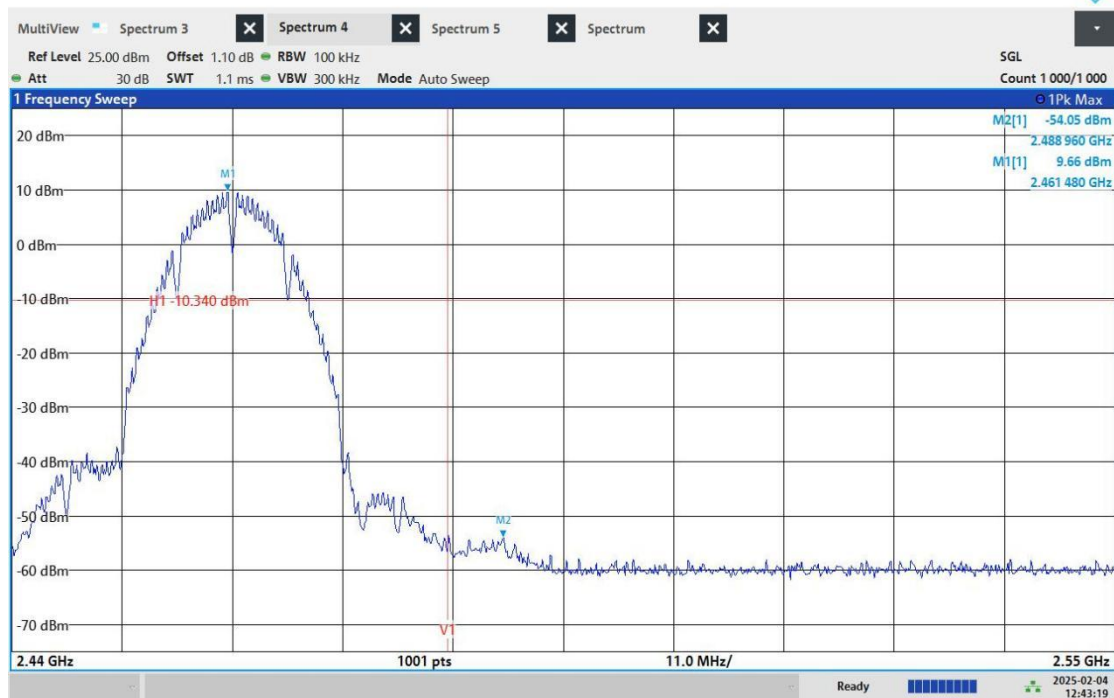
TEST GRAPHS

11B-CDD_ANT7_Low_2412



12:35:16 PM 02/04/2025

11B-CDD_ANT7_High_2462



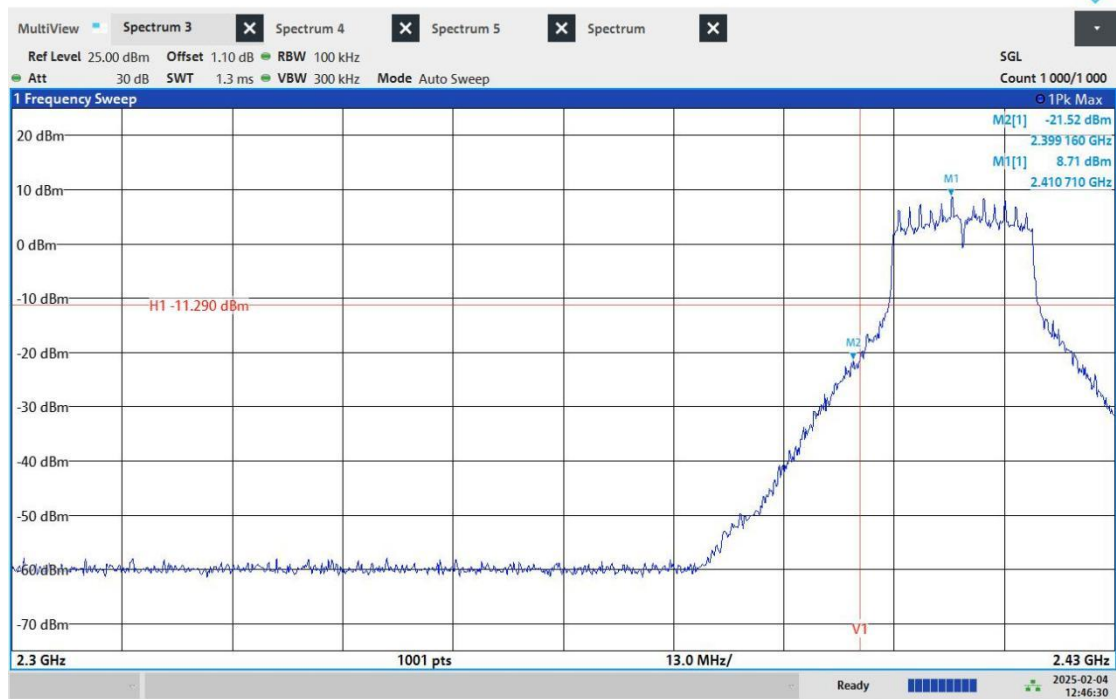
12:43:20 PM 02/04/2025

11G-CDD_ANT7_Low_2412

Huarui 7layers High TeCHnology
(Suzhou) Co., Ltd.

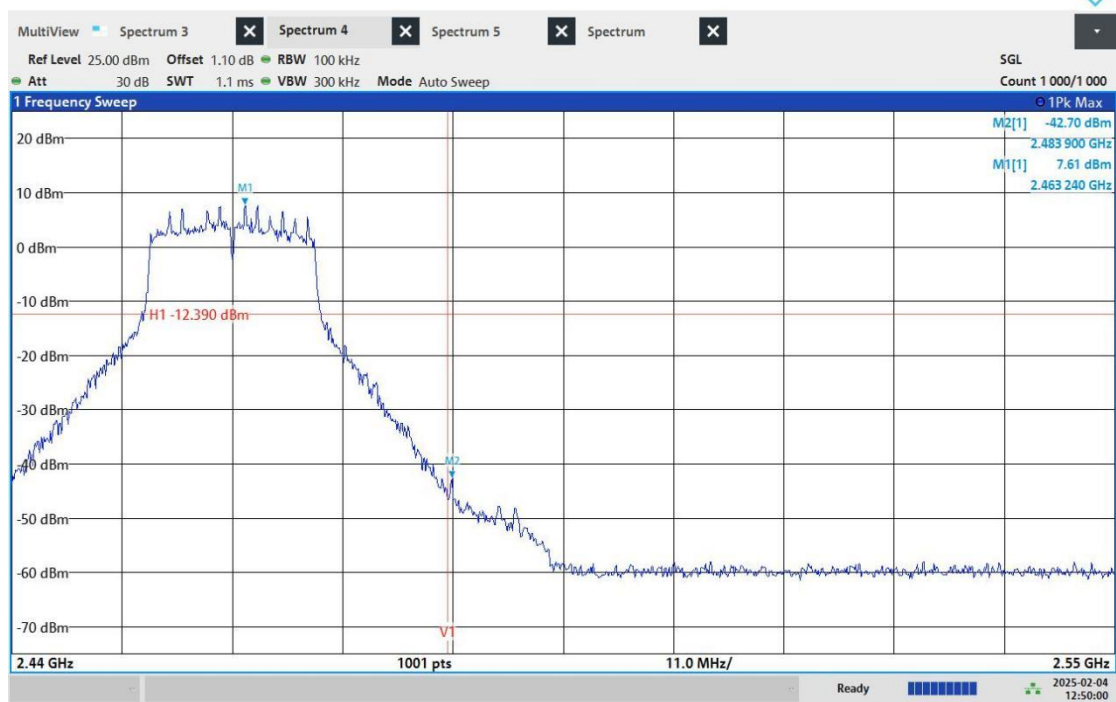
Tower N, Innovation Center, 88 Zuyi Road, High-teCH District,
Suzhou City, Anhui Province

Tel: +86 (0557)
368 1008



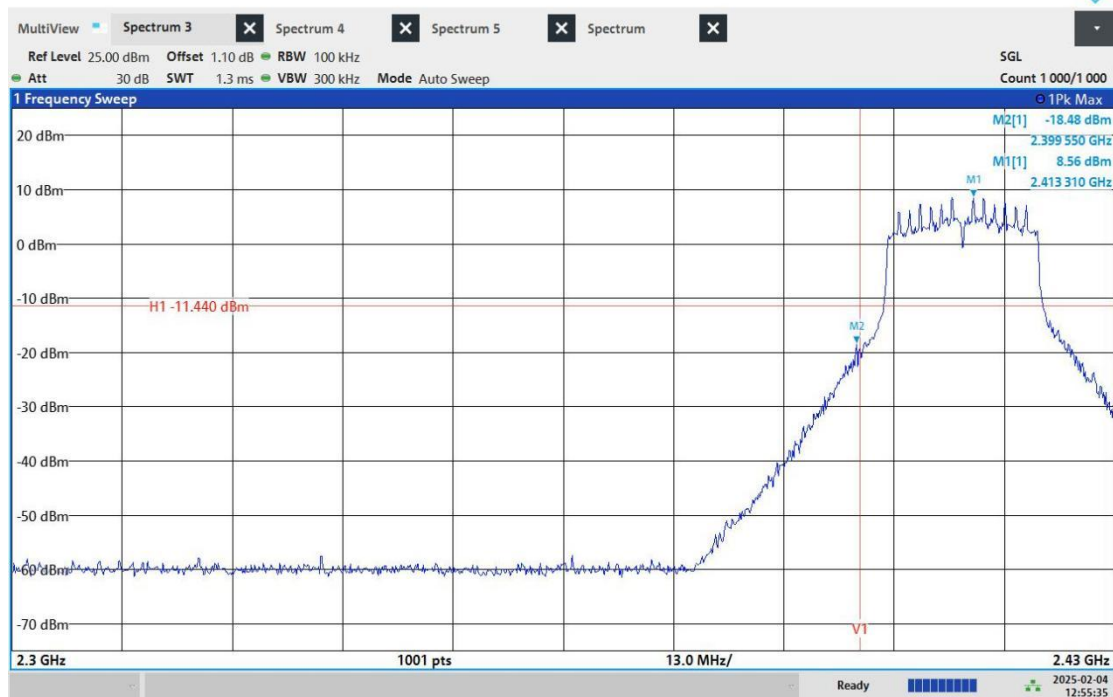
12:46:30 PM 02/04/2025

11G-CDD_ANT7_High_2462

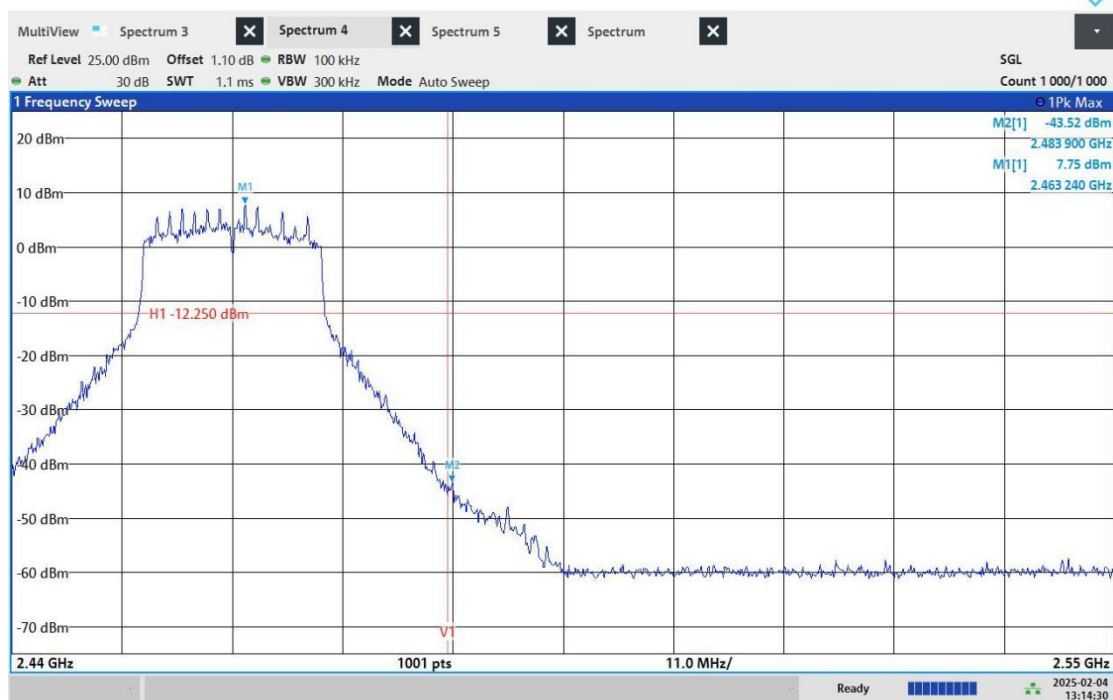


12:50:00 PM 02/04/2025

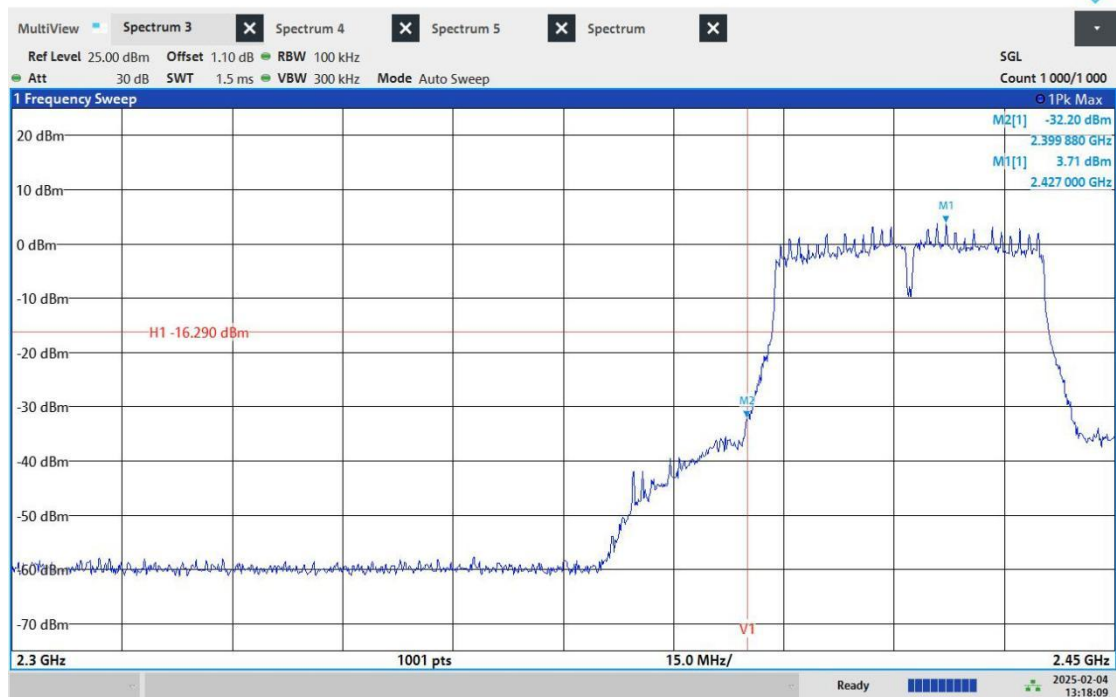
11N20SISO_ANT7_Low_2412



11N20SISO_ANT7_High_2462

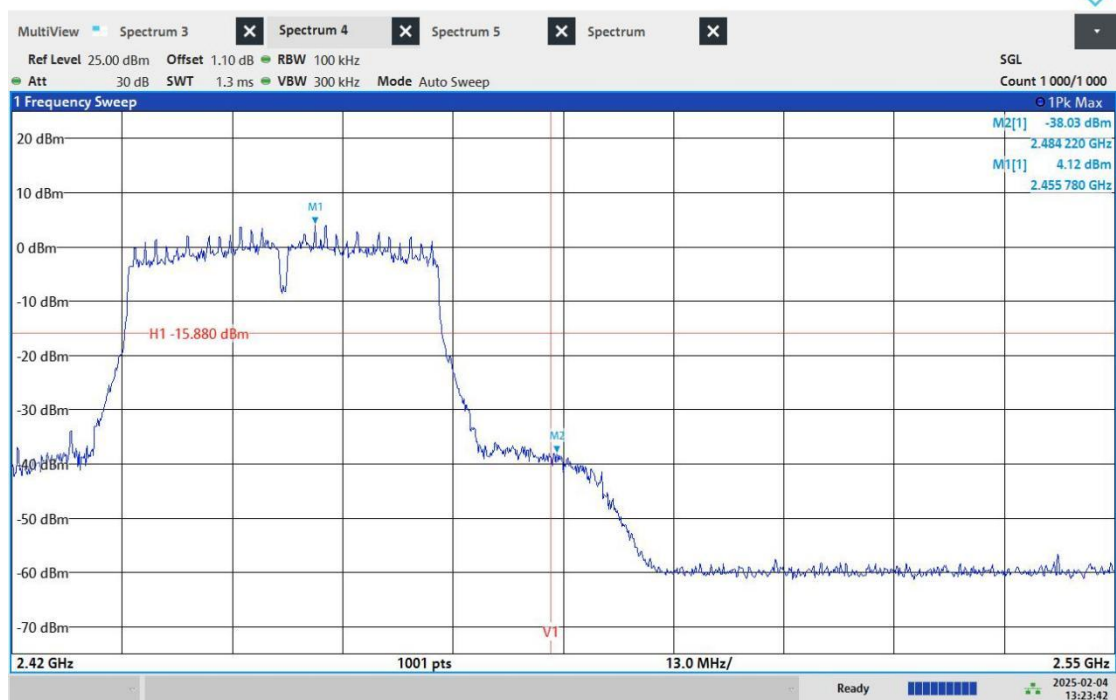


11N40SISO_ANT7_Low_2422



01:18:10 PM 02/04/2025

11N40SISO_ANT7_High_2452



01:23:42 PM 02/04/2025

CONDUCTED SPURIOUS EMISSION

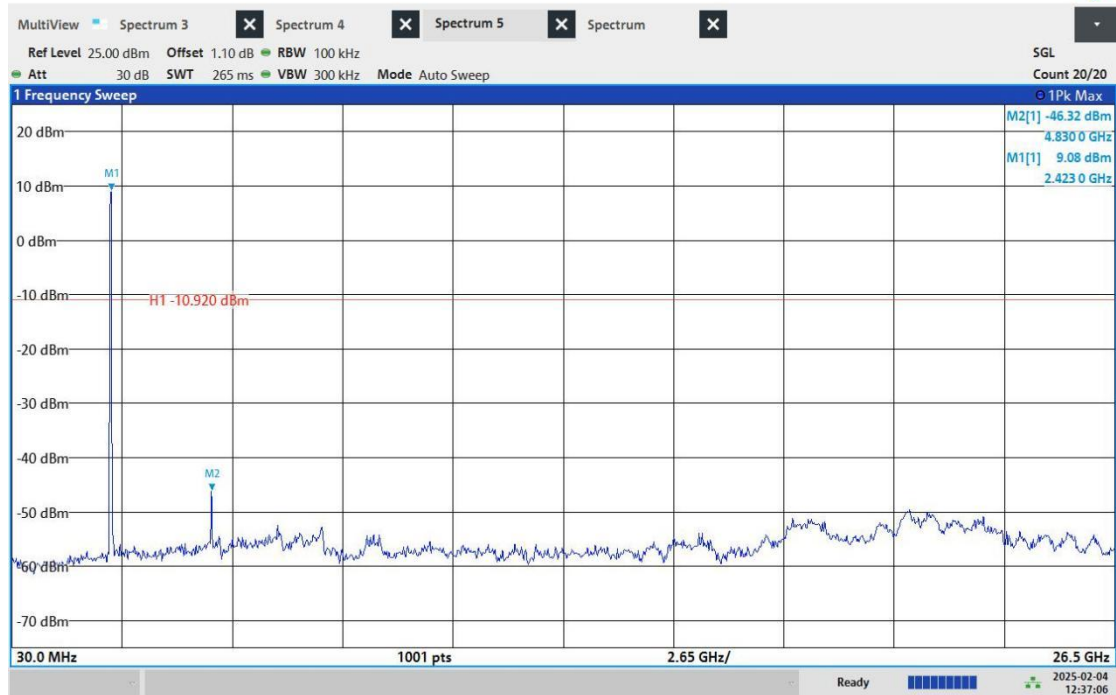
TEST RESULT

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	Result [dBm]	Limit [dBm]	Verdict
11B	ANT7	2412	30~265000	See test graph	See test graph	PASS
	ANT7	2437	30~265000	See test graph	See test graph	PASS
	ANT7	2462	30~265000	See test graph	See test graph	PASS
11G	ANT7	2412	30~265000	See test graph	See test graph	PASS
	ANT7	2437	30~265000	See test graph	See test graph	PASS
	ANT7	2462	30~265000	See test graph	See test graph	PASS
11N20	ANT7	2412	30~265000	See test graph	See test graph	PASS
	ANT7	2437	30~265000	See test graph	See test graph	PASS
	ANT7	2462	30~265000	See test graph	See test graph	PASS
11N40	ANT7	2422	30~265000	See test graph	See test graph	PASS
	ANT7	2437	30~265000	See test graph	See test graph	PASS
	ANT7	2452	30~265000	See test graph	See test graph	PASS



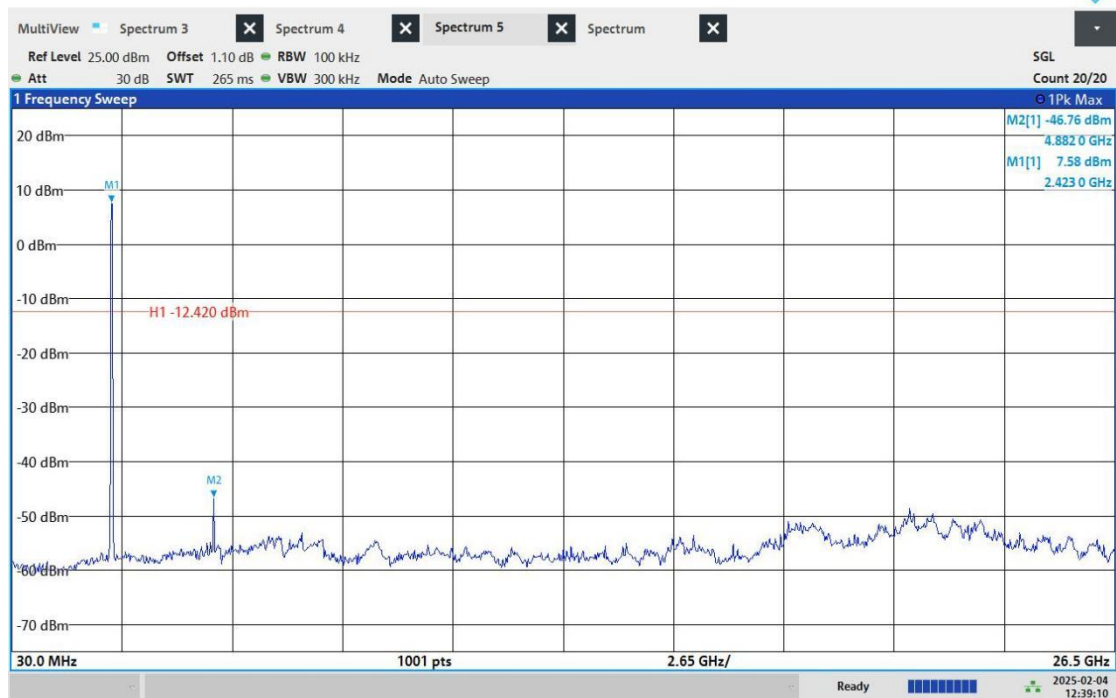
TEST GRAPHS

11B_ANT7_2412_30~265000



12:37:07 PM 02/04/2025

11B_ANT7_2437_30~265000



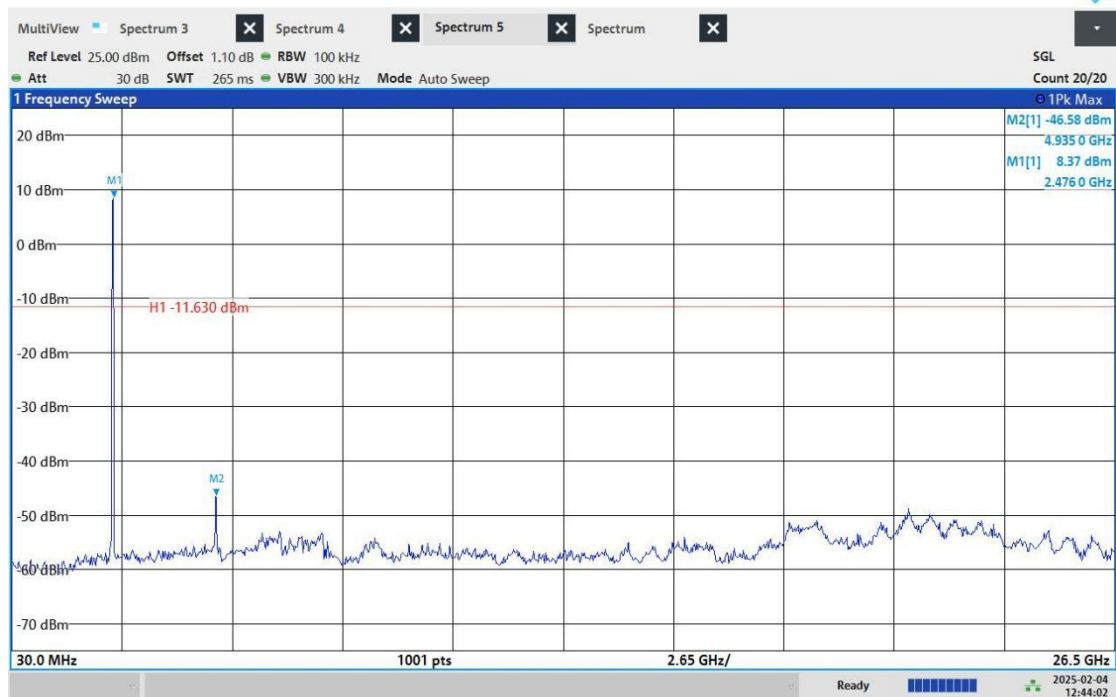
12:39:11 PM 02/04/2025

11B_ANT7_2462_30~260000

Huarui 7layers High TeCHnology
(Suzhou) Co., Ltd.

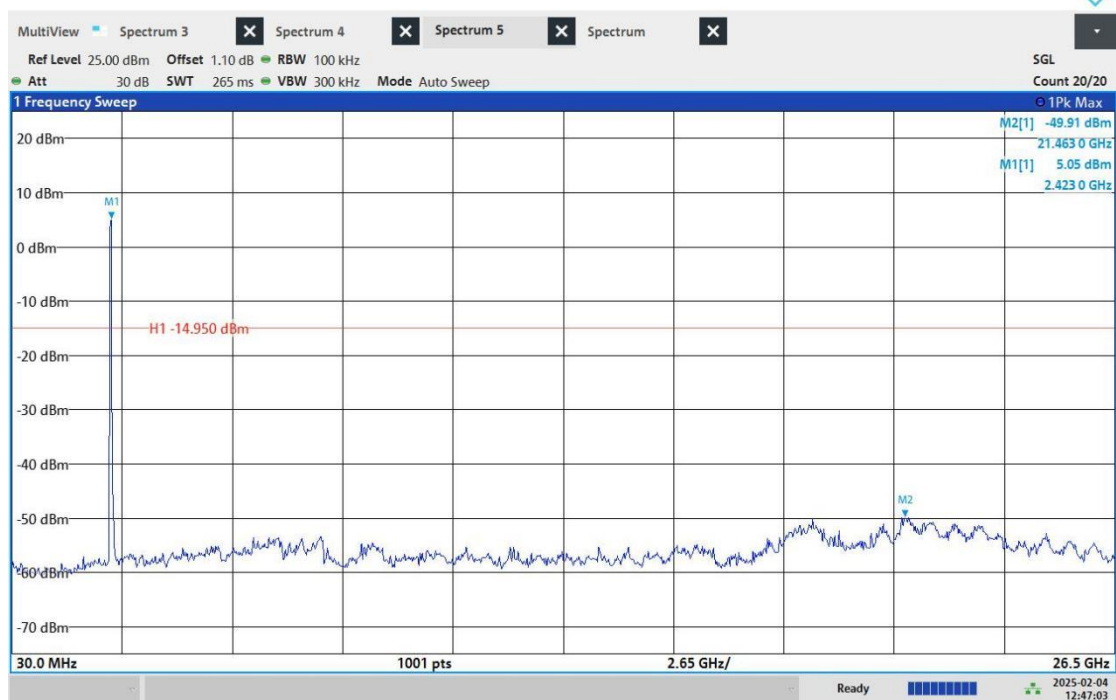
Tower N, Innovation Center, 88 Zuyi Road, High-teCH District,
Suzhou City, Anhui Province

Tel: +86 (0557)
368 1008



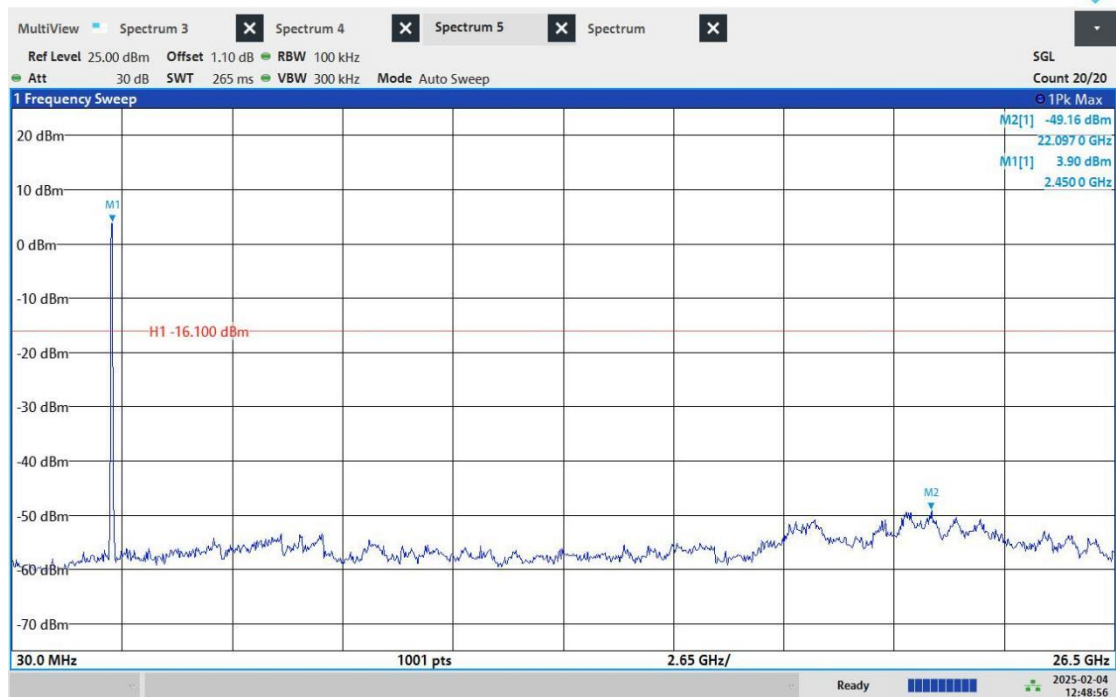
12:44:02 PM 02/04/2025

11G_ANT7_2412_30~265000



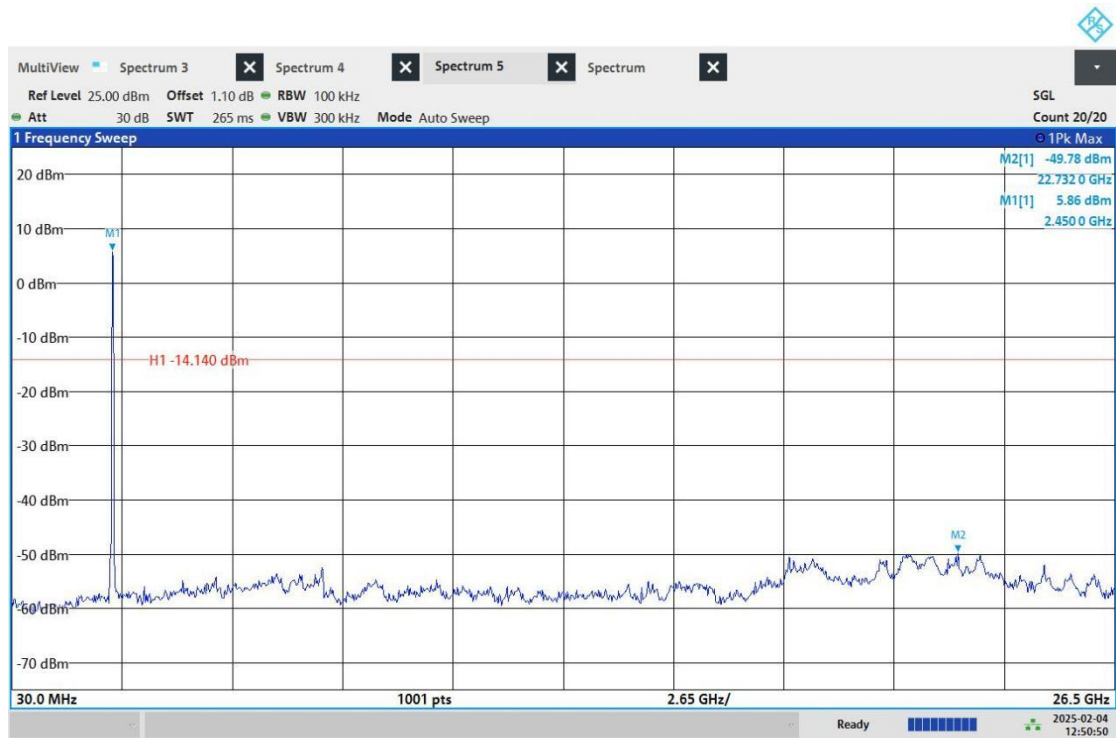
12:47:03 PM 02/04/2025

11G_ANT7_2437_30~265000



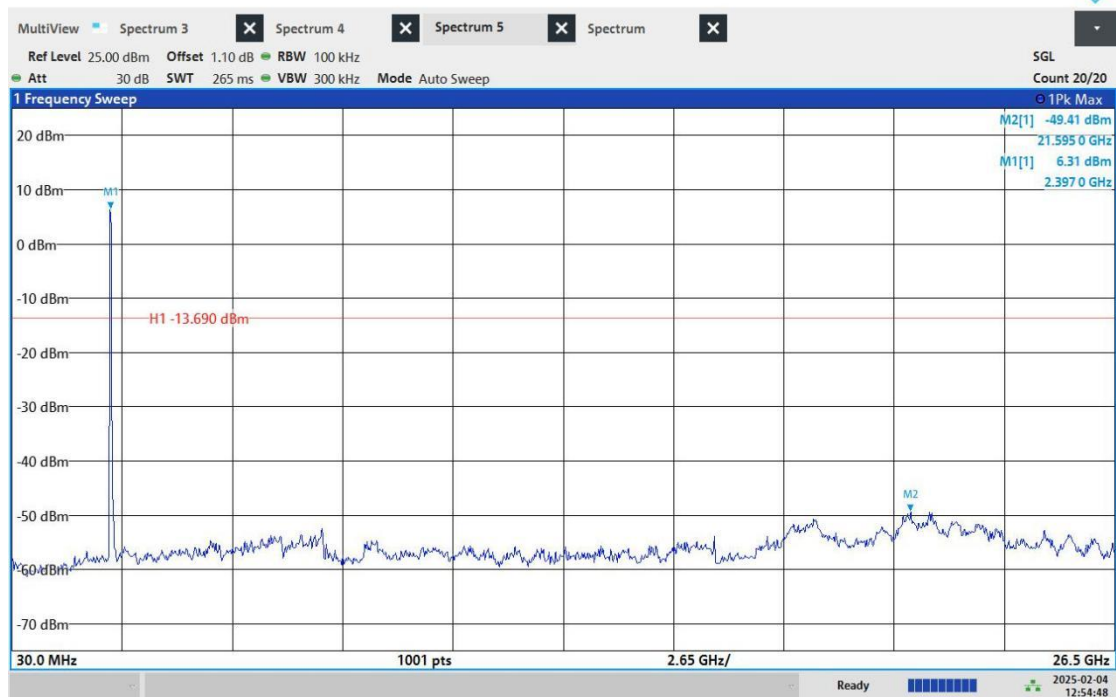
12:48:56 PM 02/04/2025

11G_ANT7_2462_30~265000



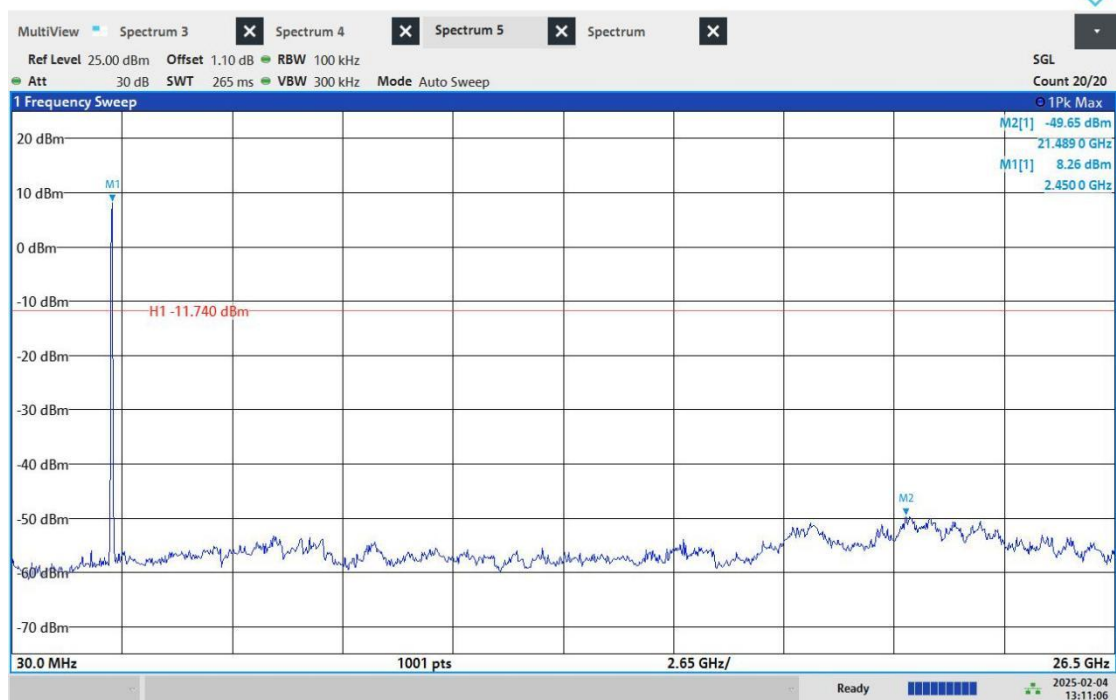
12:50:51 PM 02/04/2025

11N20_ANT7_2412_30~265000



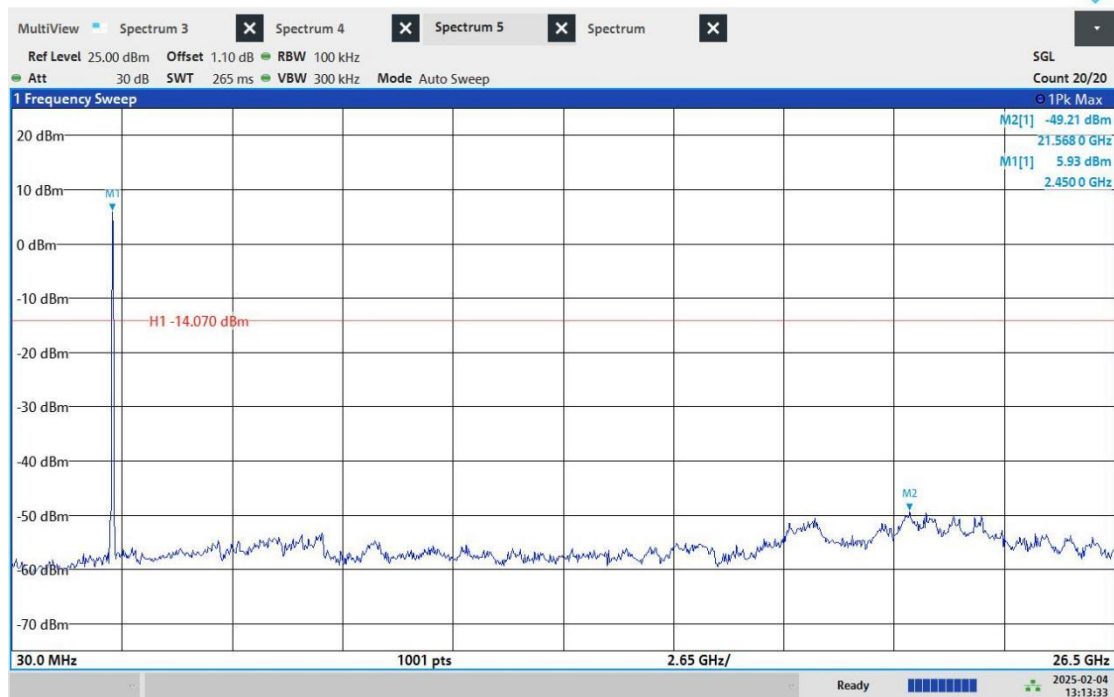
12:54:48 PM 02/04/2025

11N20_ANT7_2437_30~265000



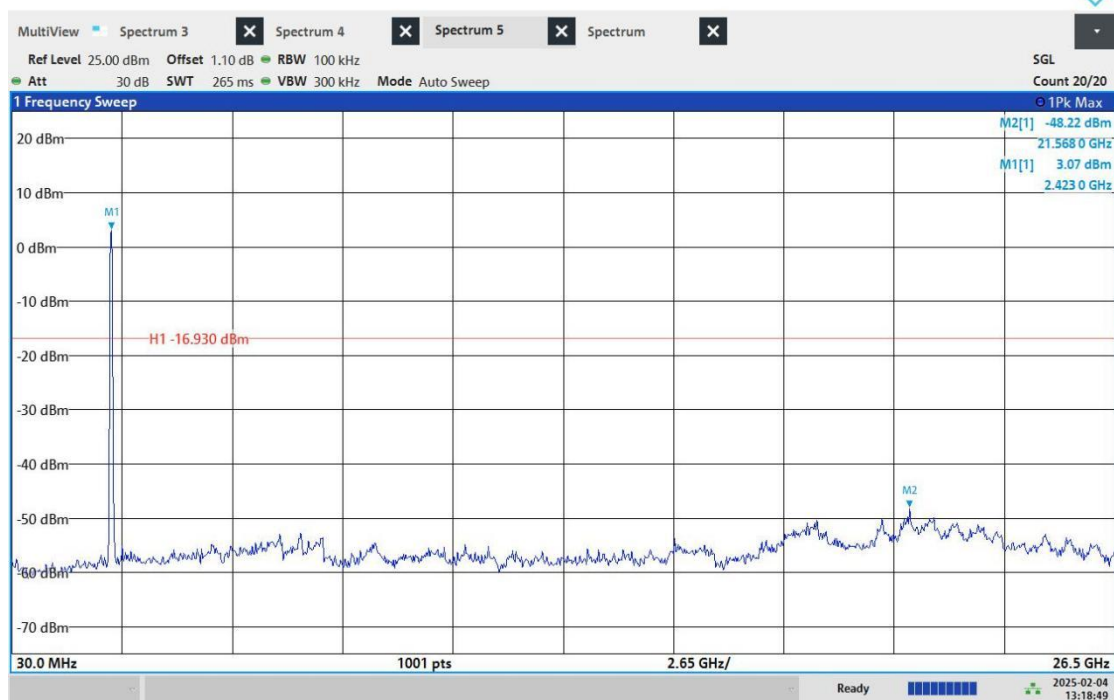
01:11:07 PM 02/04/2025

11N20_ANT7_2462_30~265000



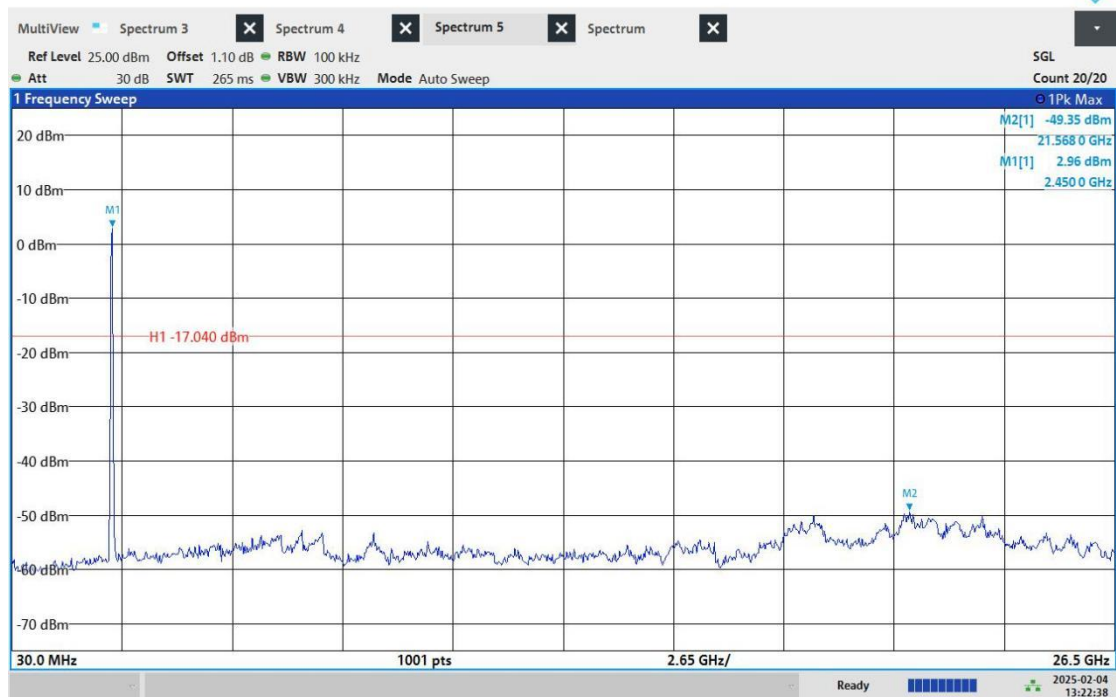
01:13:34 PM 02/04/2025

11N40_ANT7_2422_30~265000



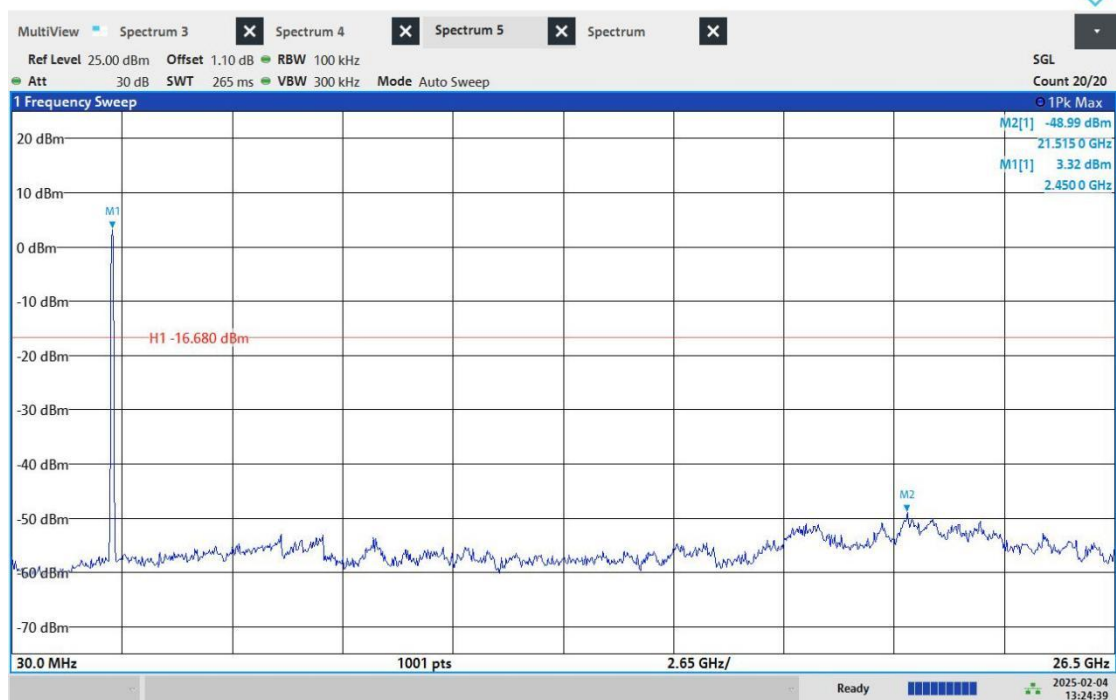
01:18:50 PM 02/04/2025

11N40_ANT7_2437_30~265000



01:22:39 PM 02/04/2025

11N40_ANT7_2452_30~265000



01:24:39 PM 02/04/2025

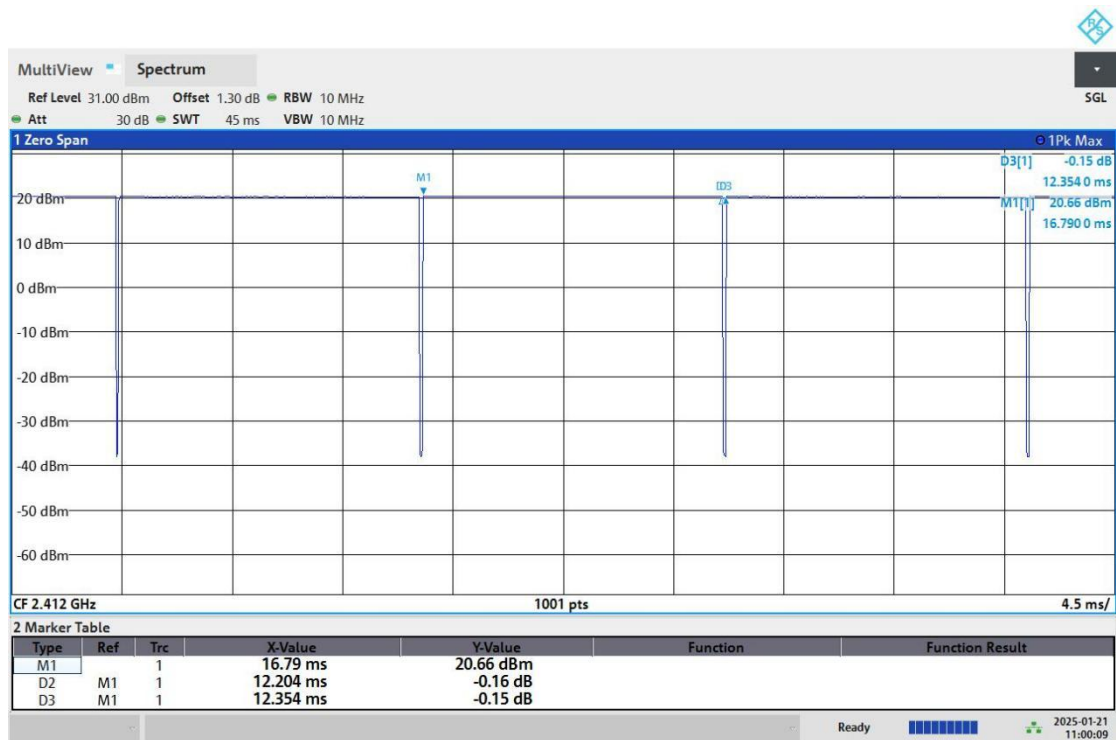
**DUTY CYCLE****TEST RESULT**

TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	duty cycle factor
11B	ANT7	2412	12.204	12.354	98.79	0.05
11G	ANT7	2412	2.0325	2.07	98.19	0.08
11N20	ANT7	2412	1.89	1.9275	98.05	0.09
11N40	ANT7	2422	0.926	0.978	94.63	0.24



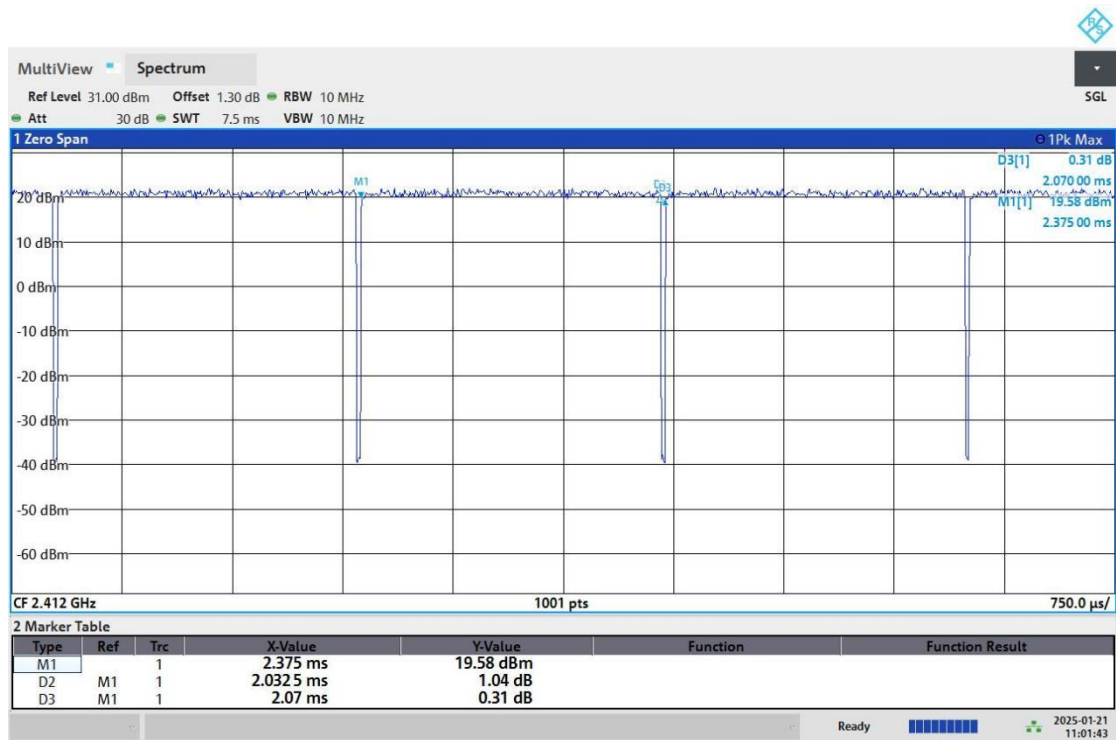
TEST GRAPHS

11B_ANT7_2412



11:00:10 AM 01/21/2025

11G_ANT7_2412



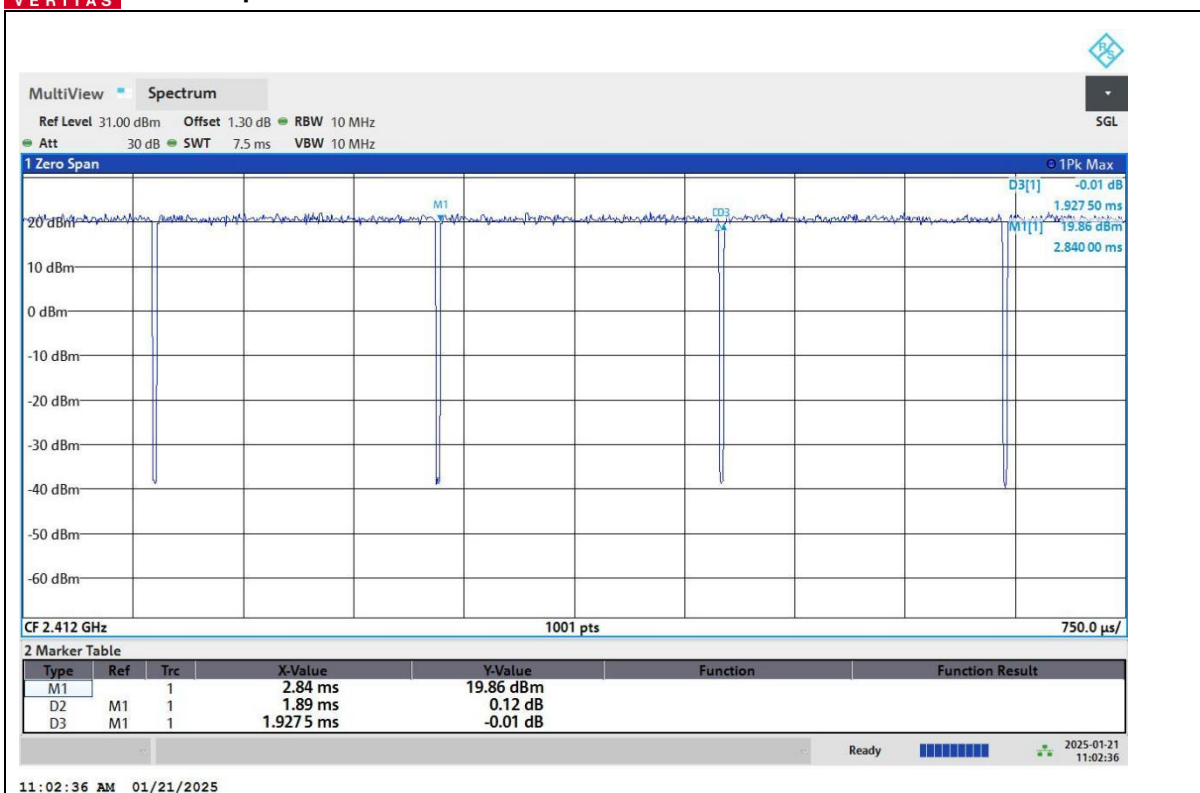
11:01:43 AM 01/21/2025

11N20_ANT7_2412

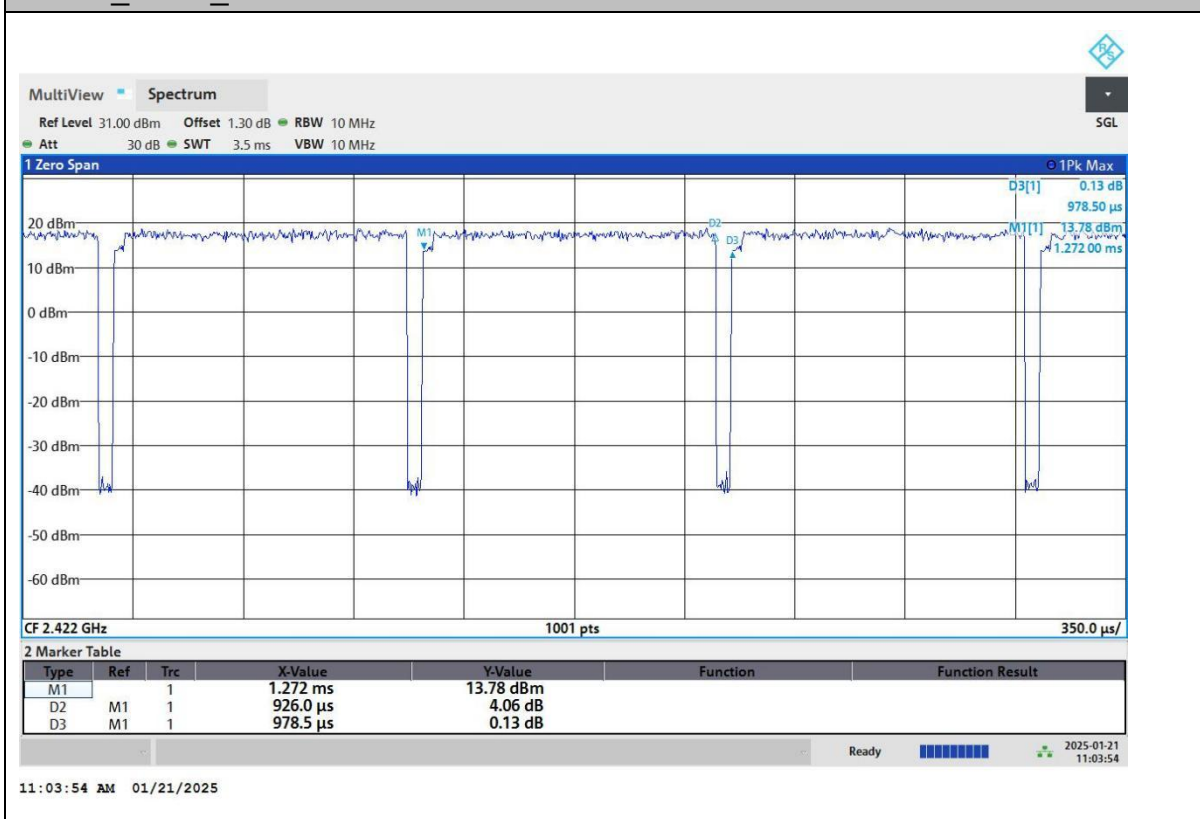
Huarui 7layers High TeCHnology
(Suzhou) Co., Ltd.

Tower N, Innovation Center, 88 Zuyi Road, High-teCH District,
Suzhou City, Anhui Province

Tel: +86 (0557)
368 1008



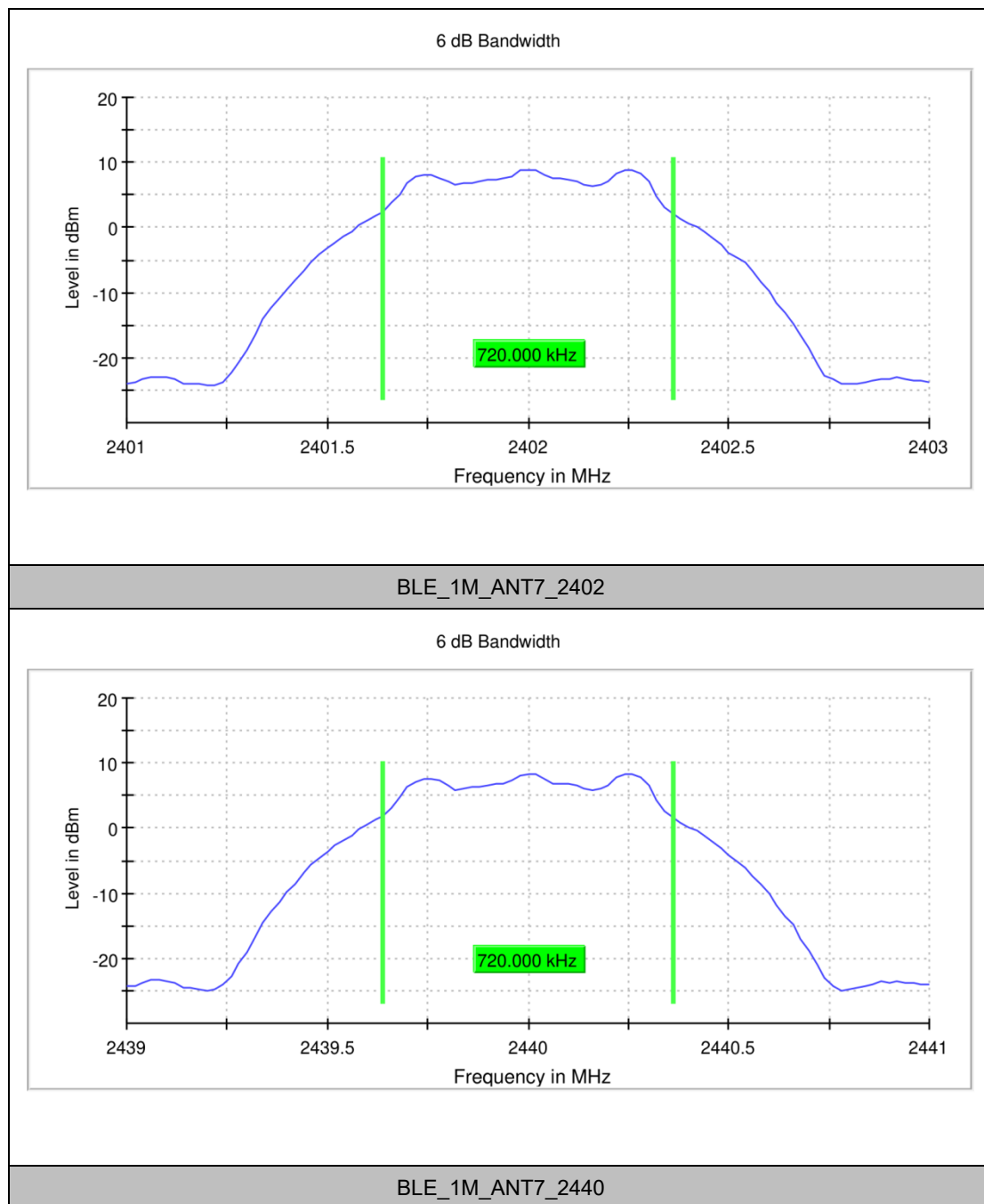
11N40_ANT7_2422



7 APPENDIX B:BLE DTS BANDWIDTH

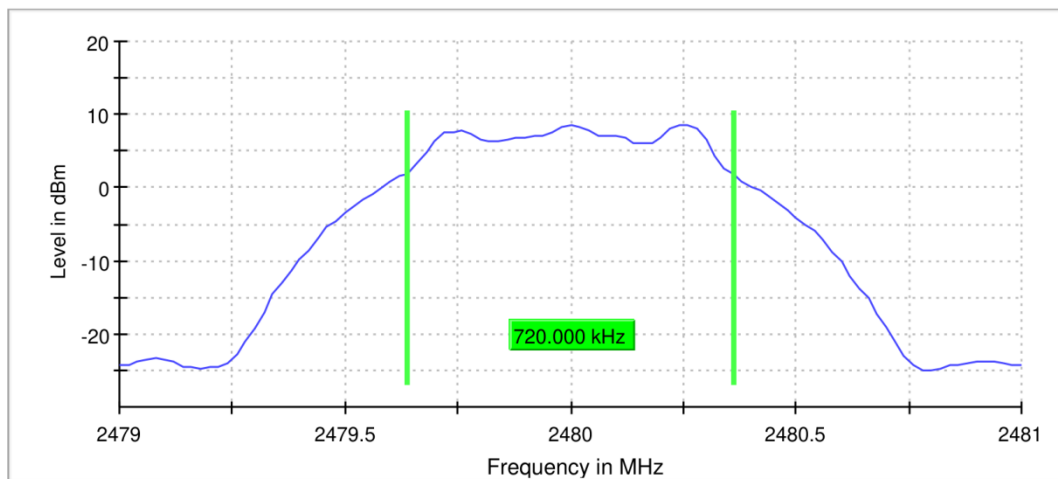
TEST RESULT

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	ANT7	2402	0.720	2401.640	2402.360	0.5	PASS
		2440	0.720	2439.640	2440.360	0.5	PASS
		2480	0.720	2479.640	2480.360	0.5	PASS
BLE_2M	ANT7	2404	1.240	2403.400	2404.640	0.5	PASS
		2440	1.280	2439.360	2440.640	0.5	PASS
		2478	1.240	2477.400	2478.640	0.5	PASS
BLE-S2	ANT7	2402	0.720	2401.640	2402.360	0.5	PASS
		2440	0.720	2439.640	2440.360	0.5	PASS
		2480	0.720	2479.640	2480.360	0.5	PASS
BLE_S8	ANT7	2402	0.660	2401.660	2402.320	0.5	PASS
		2440	0.660	2439.660	2440.320	0.5	PASS
		2480	0.660	2479.660	2480.320	0.5	PASS



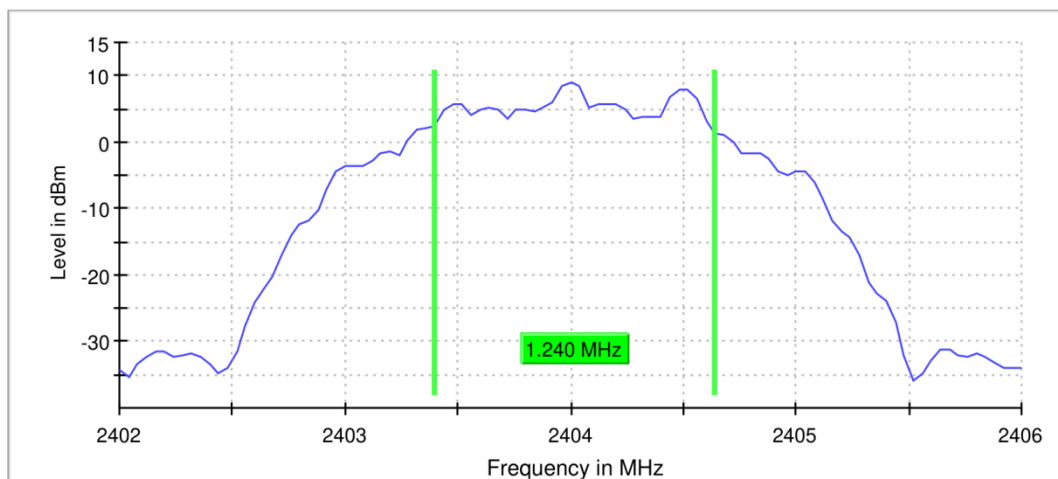


6 dB Bandwidth



BLE_1M_ANT7_2480

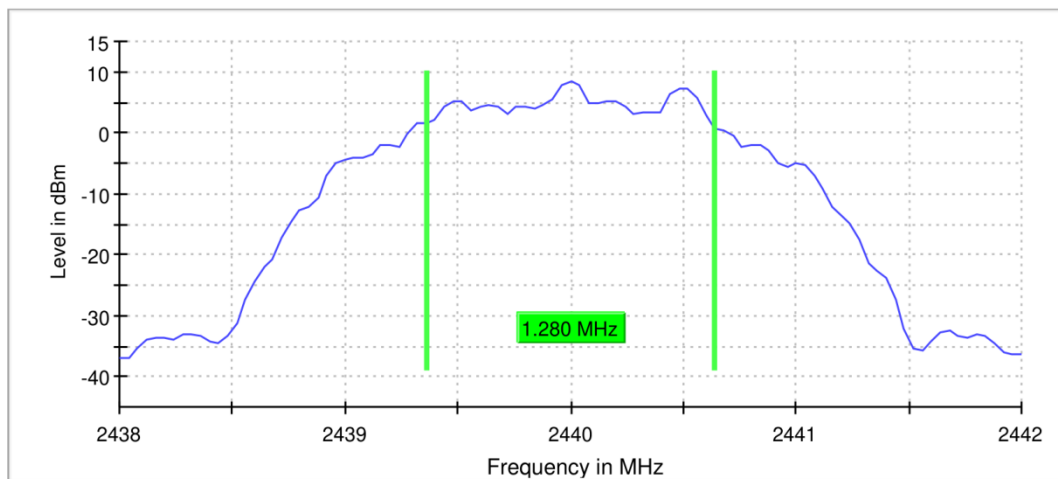
6 dB Bandwidth



BLE_2M_ANT7_2404

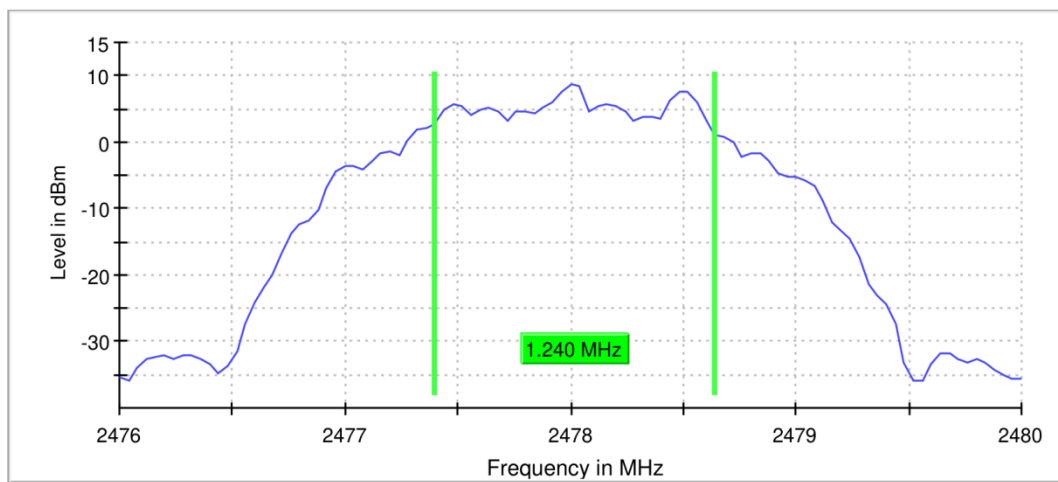


6 dB Bandwidth



BLE_2M_ANT7_2440

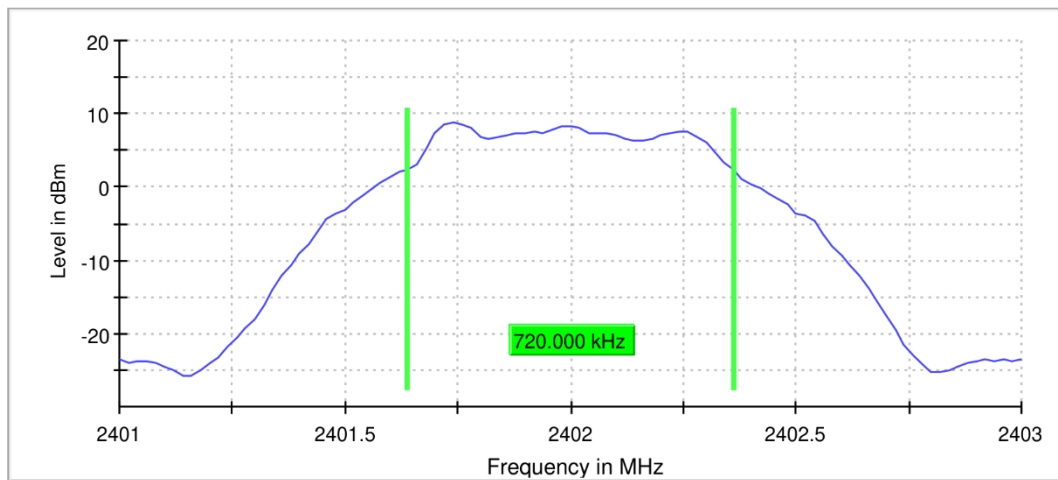
6 dB Bandwidth



BLE_2M_ANT7_2478

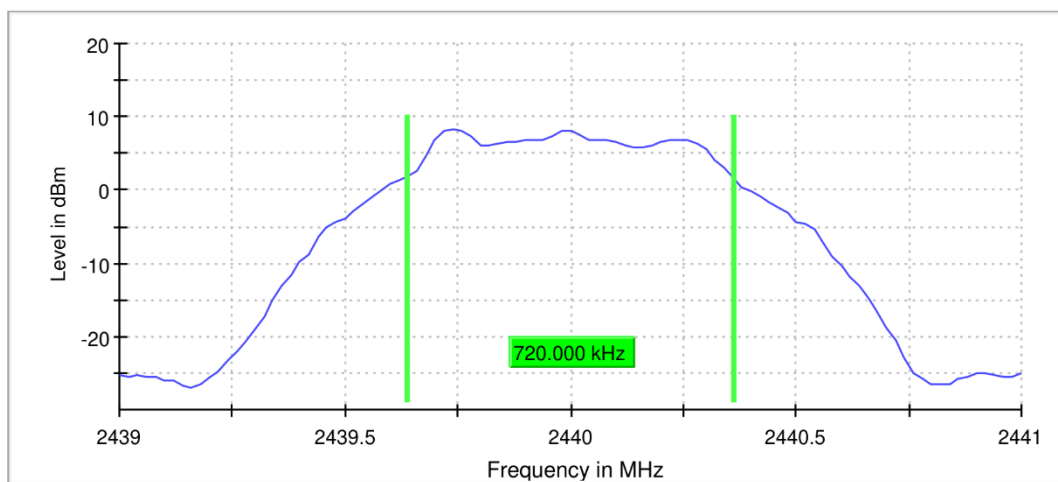


6 dB Bandwidth



BLE_S2_ANT7_2402

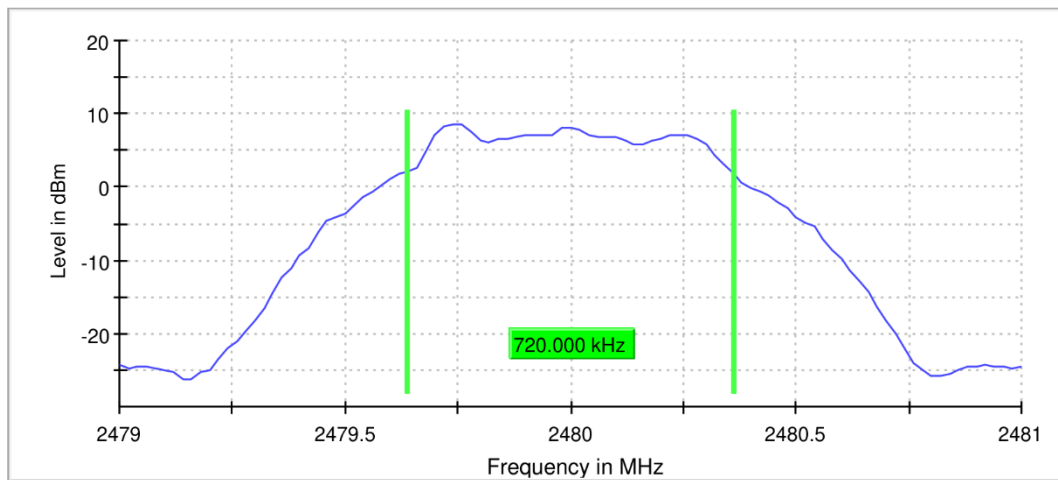
6 dB Bandwidth



BLE_S2_ANT7_2440

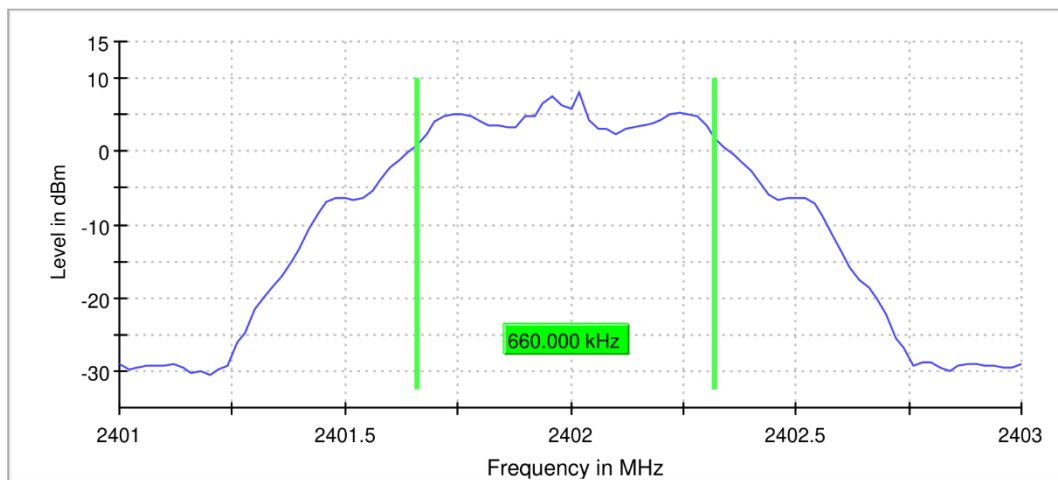


6 dB Bandwidth



BLE_S2_ANT7_2480

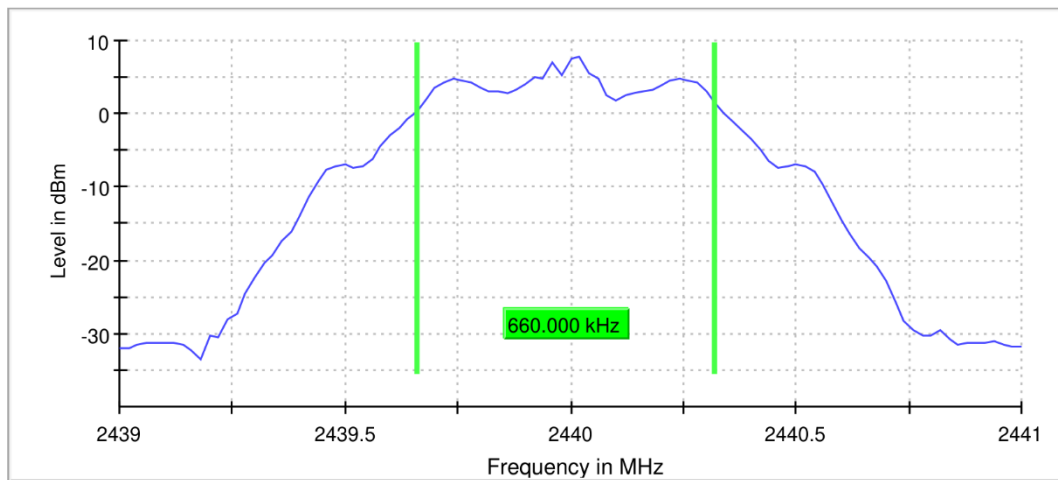
6 dB Bandwidth



BLE_S8_ANT7_2402

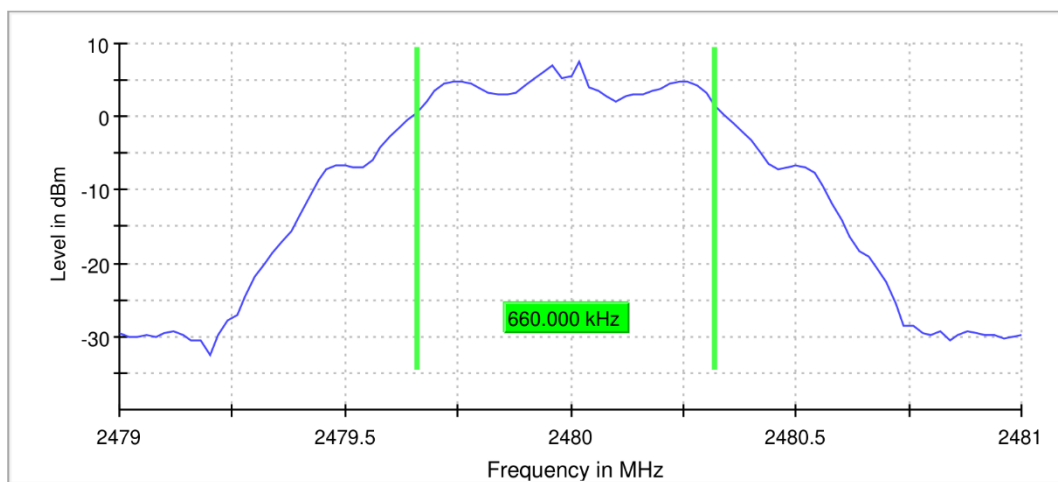


6 dB Bandwidth



BLE_S8_ANT7_2440

6 dB Bandwidth



BLE_S8_ANT7_2480

RBW 100.000 kHz

VBW 300.000 kHz

**OCCUPIED CHANNEL BANDWIDTH****TEST RESULT**

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	ANT7	2402	1.023	2401.491	2402.514	2400-24835	PASS
		2440	1.033	2439.486	2440.519	2400-24835	PASS
		2480	1.018	2479.491	2480.509	2400-24835	PASS
BLE_2M	ANT7	2404	2.025	2402.992	2405.018	2400-24835	PASS
		2440	2.025	2438.992	2441.018	2400-24835	PASS
		2478	2.025	2476.992	2479.018	2400-24835	PASS
BLE-S2	ANT7	2402	1.033	2401.481	2402.514	2400-24835	PASS
		2440	1.023	2439.486	2440.509	2400-24835	PASS
		2480	1.033	2479.481	2480.514	2400-24835	PASS
BLE_S8	ANT7	2402	1.053	2401.471	2402.524	2400-24835	PASS
		2440	1.053	2439.471	2440.524	2400-24835	PASS
		2480	1.053	2479.471	2480.524	2400-24835	PASS

