

Appendix Test Data

Report No:	1813C40076012503	Test Sample NO:	1-2-2
Start Test Date:	2024.9.19	Finish Test Date:	2024.9.19
Test Engineer:	<i>Joker Wang</i>	Auditor:	<i>Justin Feng</i>
Temperature:	24.9°C	Relative Humidity:	55%
Pressure:	101 kPa		

Appendix A: DTS Bandwidth

Test Result

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	6.80	2408.40	2415.20	0.5	PASS
11B	Ant2	2412	7.20	2408.40	2415.60	0.5	PASS
11B	Ant1	2437	7.96	2432.88	2440.84	0.5	PASS
11B	Ant2	2437	7.56	2433.20	2440.76	0.5	PASS
11B	Ant1	2462	7.84	2458.28	2466.12	0.5	PASS
11B	Ant2	2462	7.48	2458.12	2465.60	0.5	PASS
11G	Ant1	2412	16.76	2403.48	2420.24	0.5	PASS
11G	Ant2	2412	16.44	2403.80	2420.24	0.5	PASS
11G	Ant1	2437	16.60	2428.68	2445.28	0.5	PASS
11G	Ant2	2437	16.52	2428.76	2445.28	0.5	PASS
11G	Ant1	2462	16.84	2453.44	2470.28	0.5	PASS
11G	Ant2	2462	16.40	2453.88	2470.28	0.5	PASS
11N20MIMO	Ant1	2412	16.84	2403.52	2420.36	0.5	PASS
11N20MIMO	Ant2	2412	17.96	2402.92	2420.88	0.5	PASS
11N20MIMO	Ant1	2437	16.48	2428.76	2445.24	0.5	PASS
11N20MIMO	Ant2	2437	17.88	2428.00	2445.88	0.5	PASS
11N20MIMO	Ant1	2462	16.20	2454.00	2470.20	0.5	PASS
11N20MIMO	Ant2	2462	17.76	2453.12	2470.88	0.5	PASS
11AX20MIMO	Ant1	2412	19.12	2402.52	2421.64	0.5	PASS
11AX20MIMO	Ant2	2412	19.00	2402.52	2421.52	0.5	PASS
11AX20MIMO	Ant1	2437	19.08	2427.48	2446.56	0.5	PASS
11AX20MIMO	Ant2	2437	19.24	2427.40	2446.64	0.5	PASS
11AX20MIMO	Ant1	2462	19.16	2452.32	2471.48	0.5	PASS
11AX20MIMO	Ant2	2462	18.96	2452.60	2471.56	0.5	PASS

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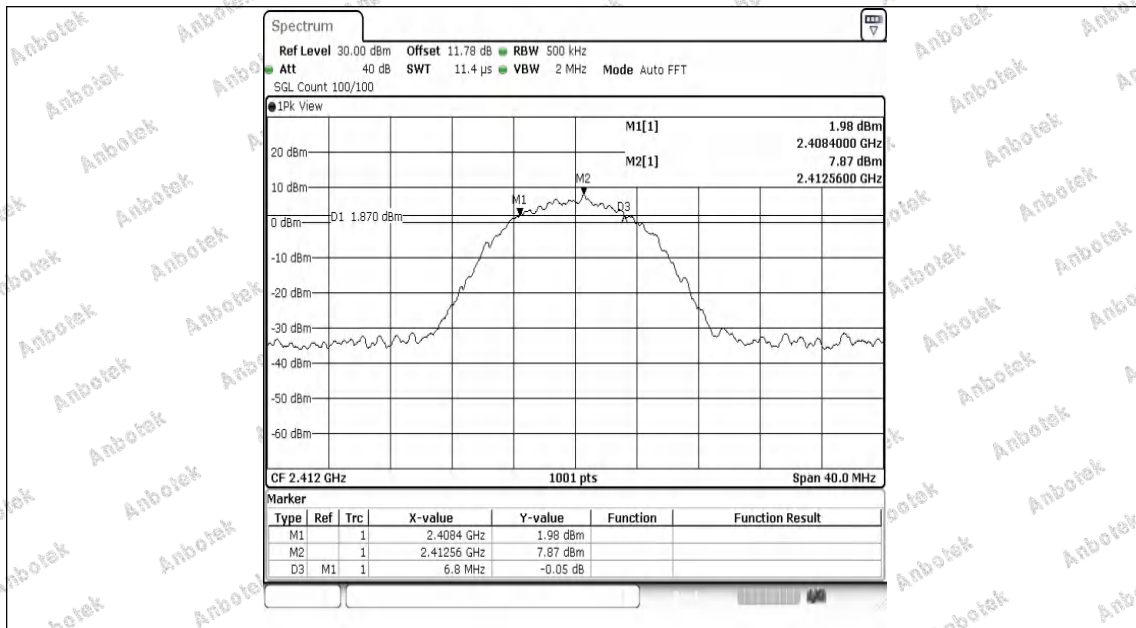


Hotline
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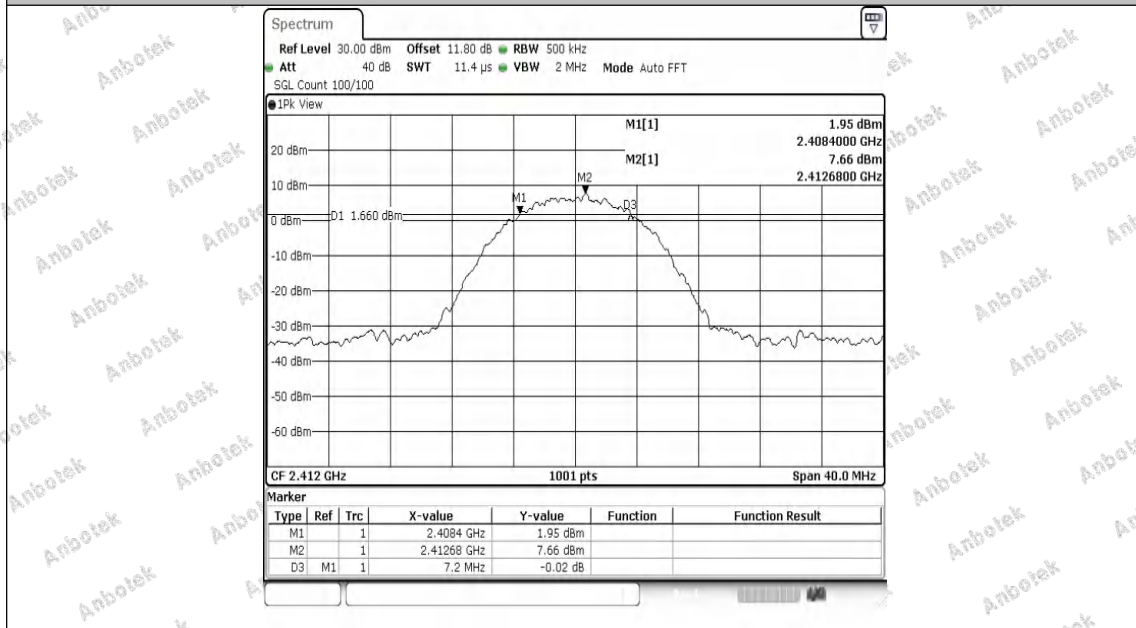
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Test Graphs

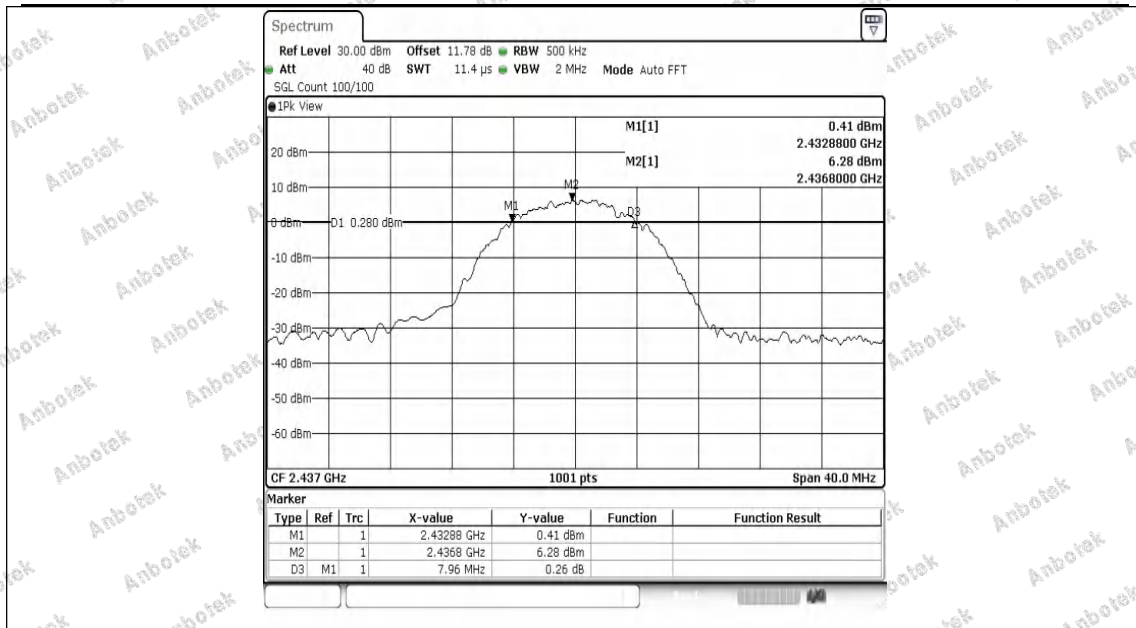


11B-Ant1-2412-PASS

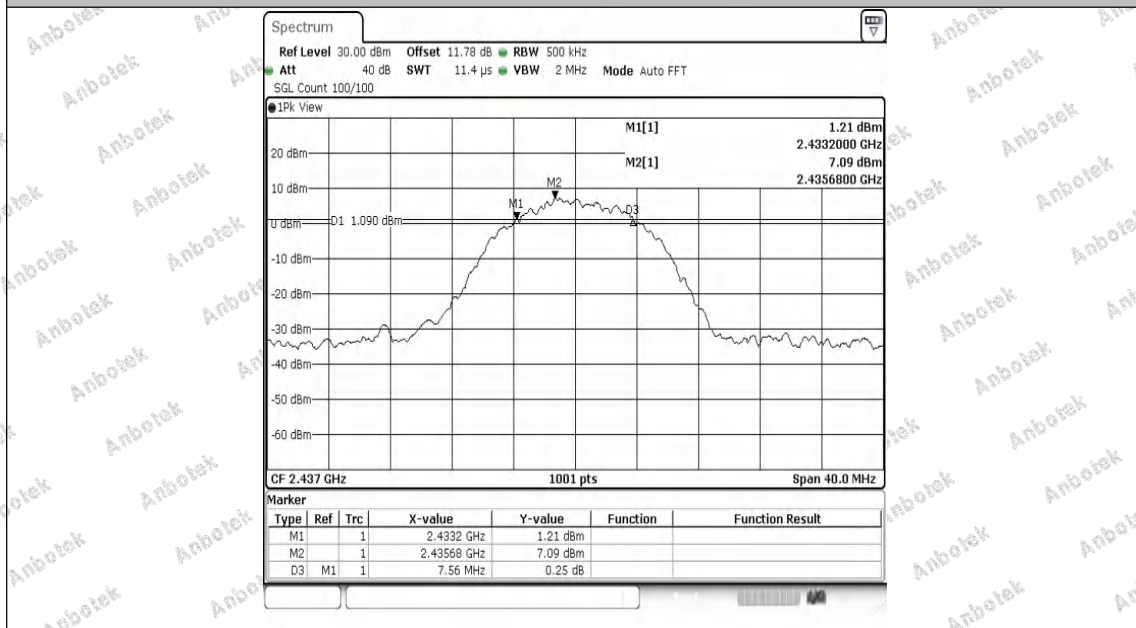


11B-Ant2-2412-PASS



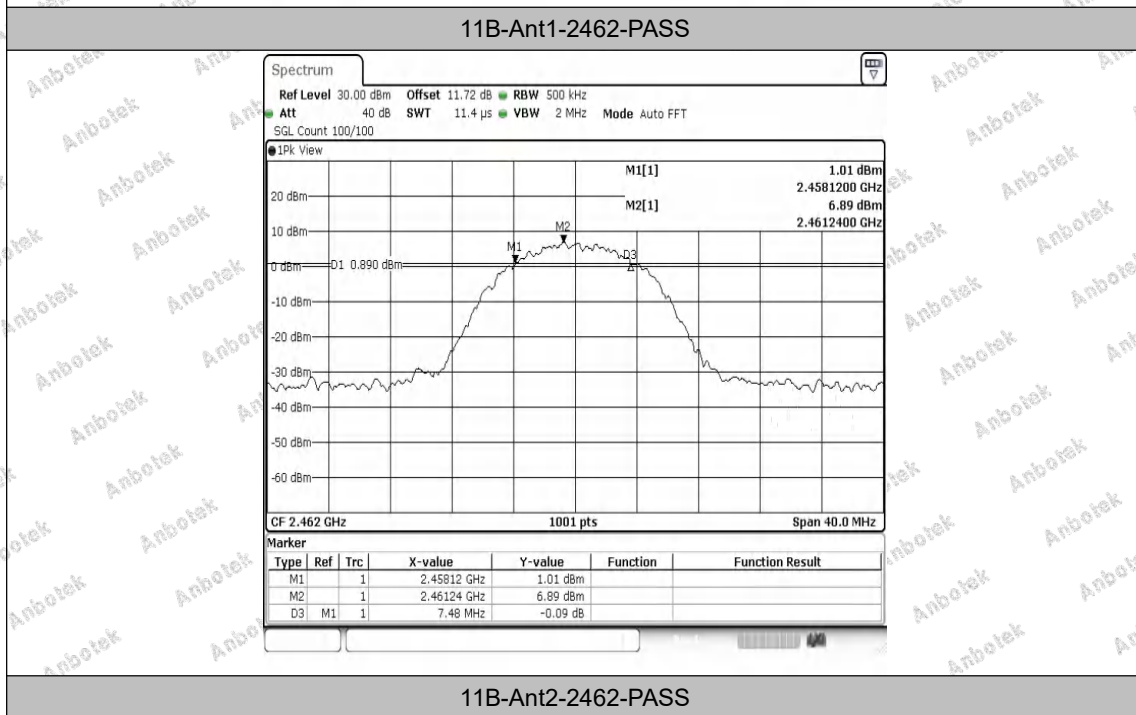
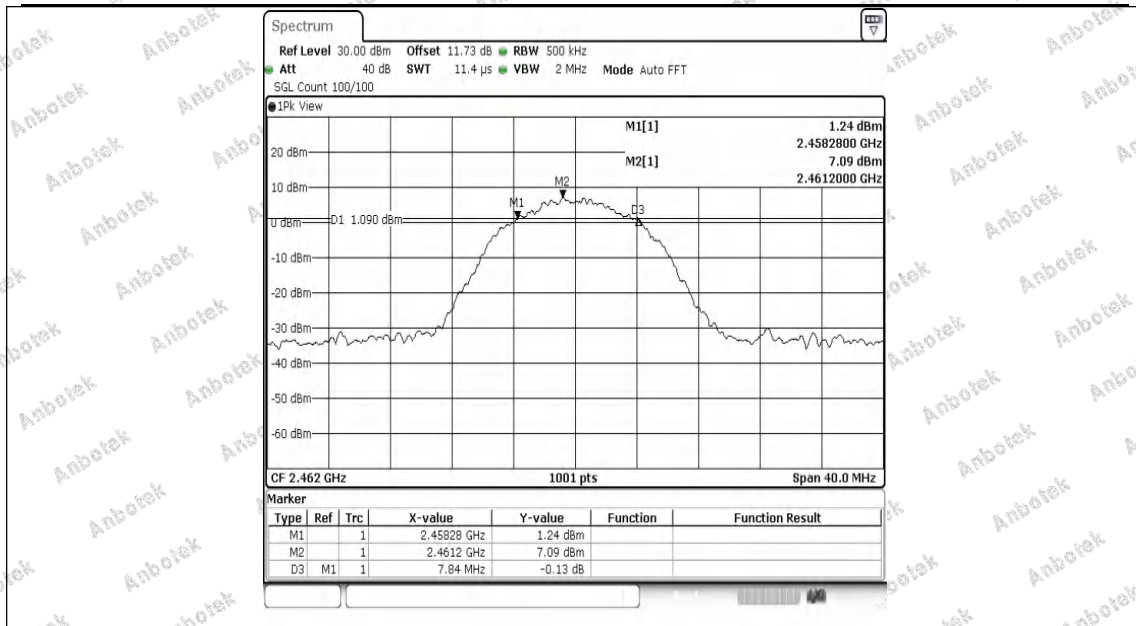


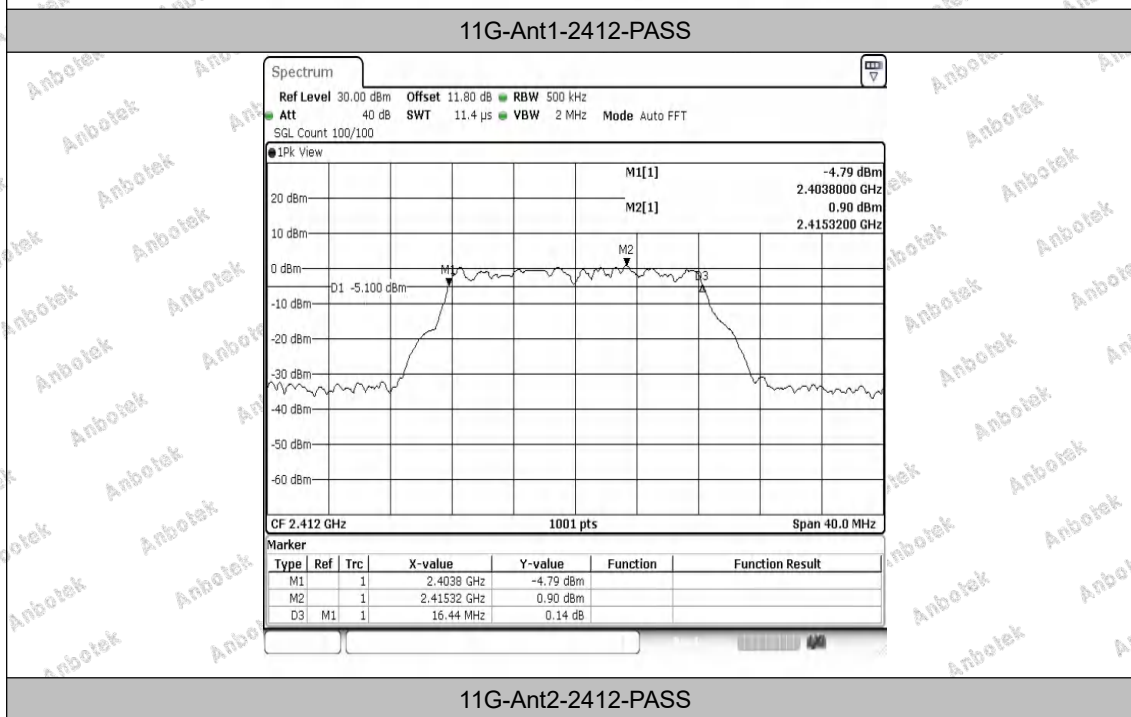
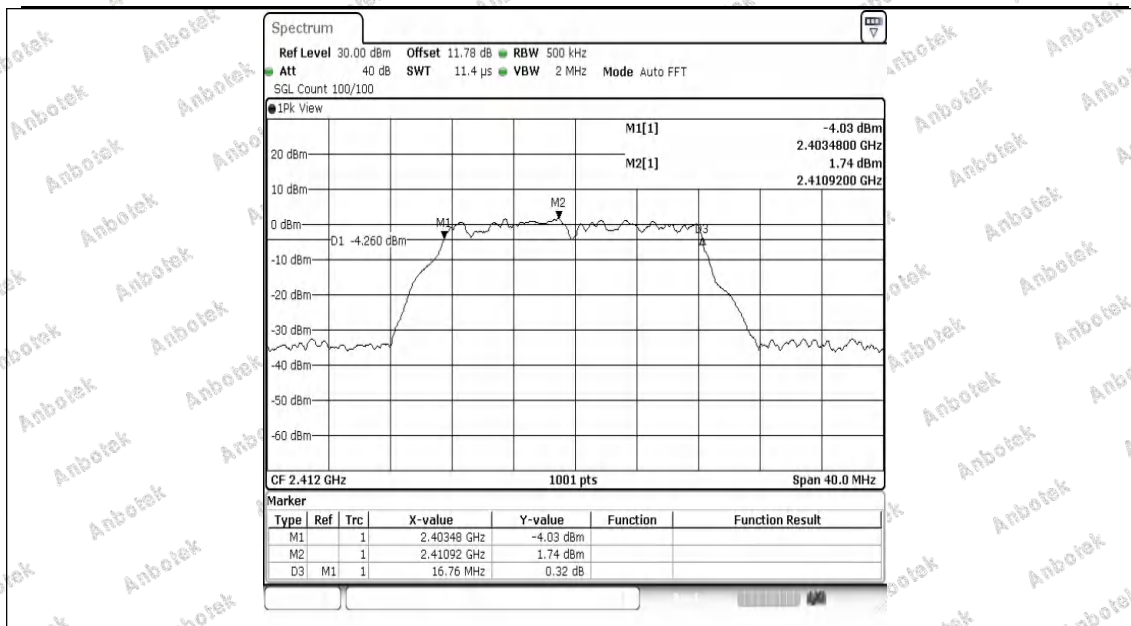
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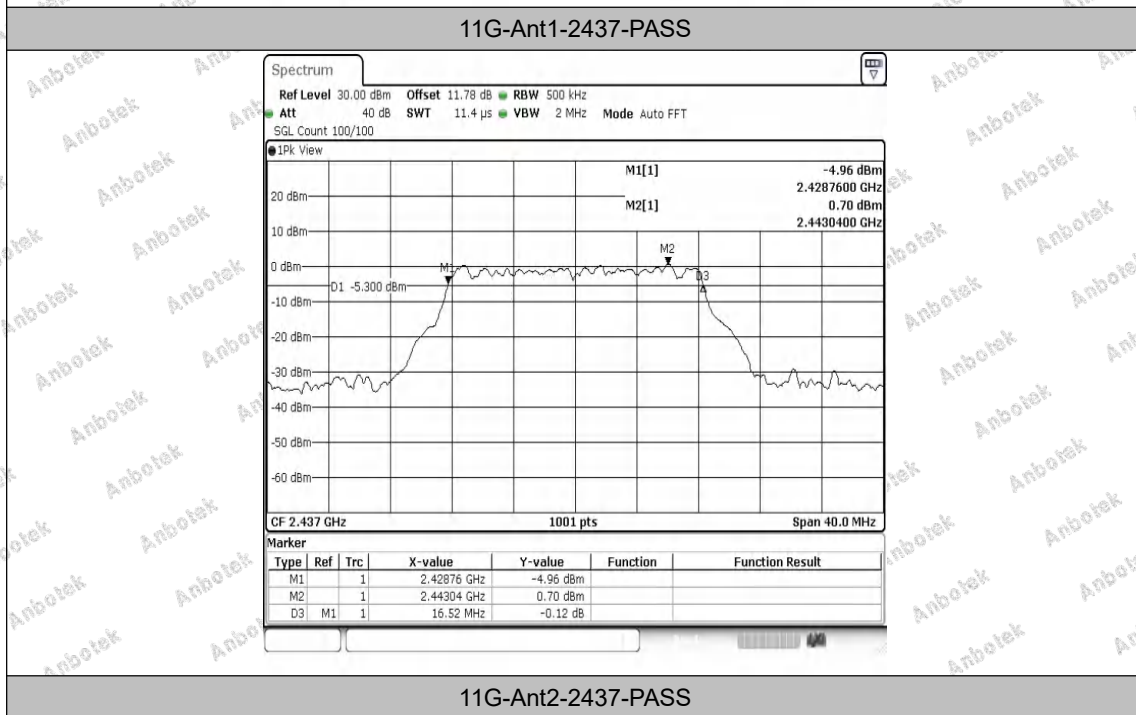
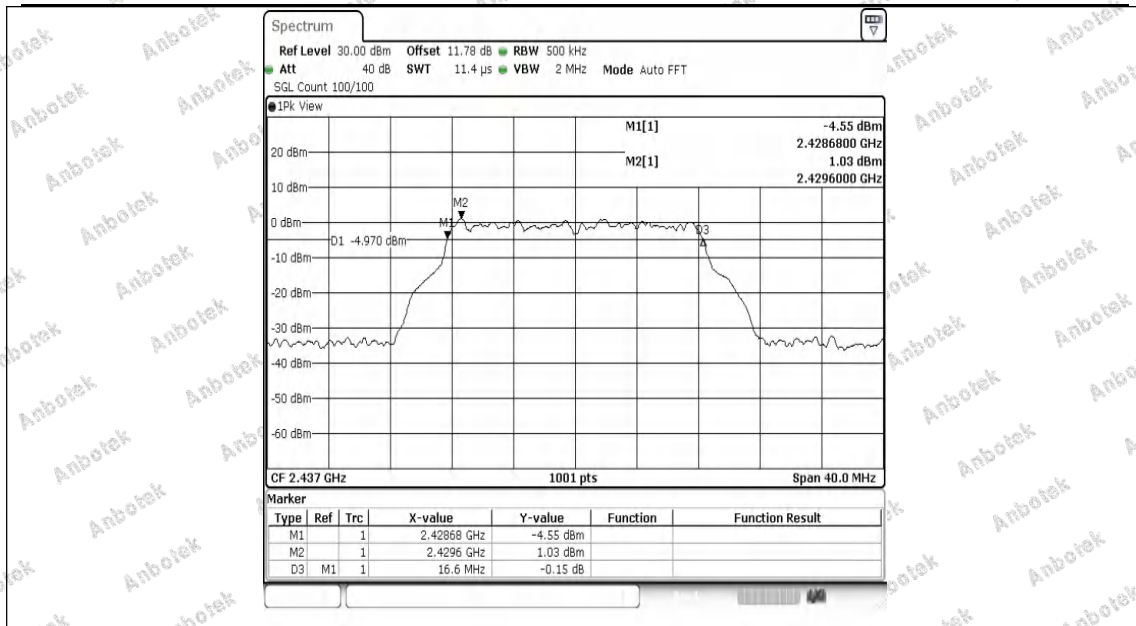


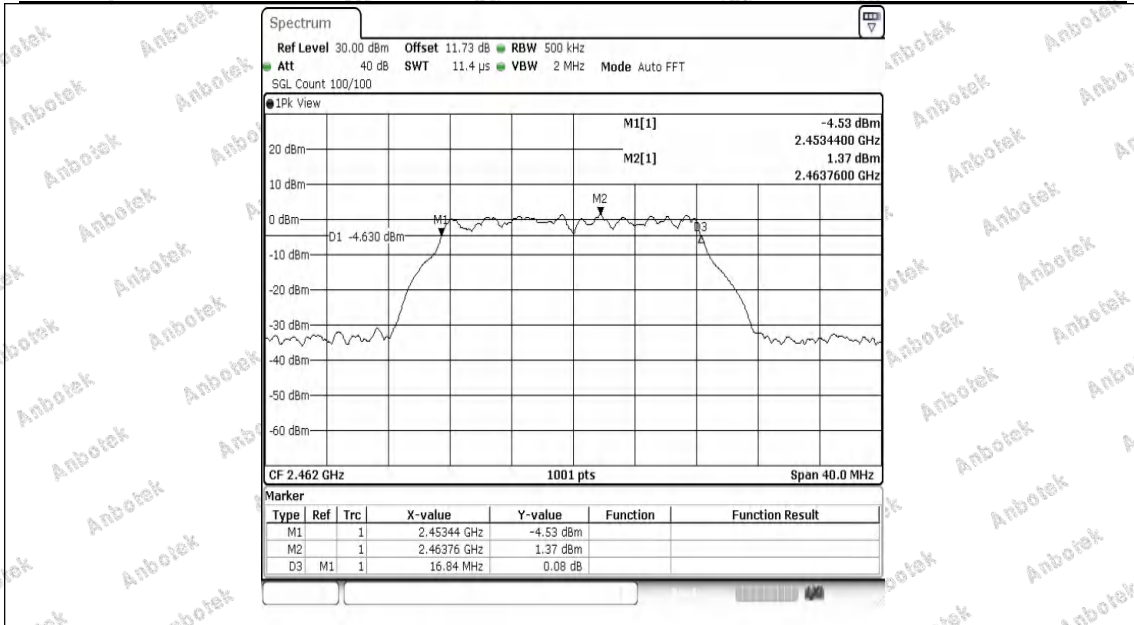
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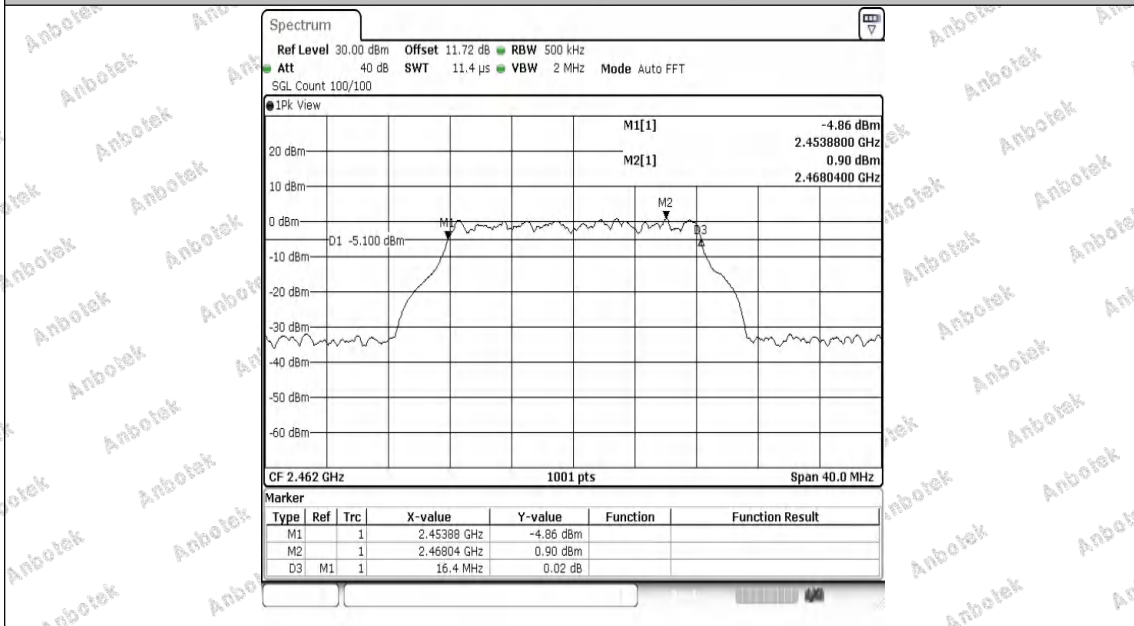






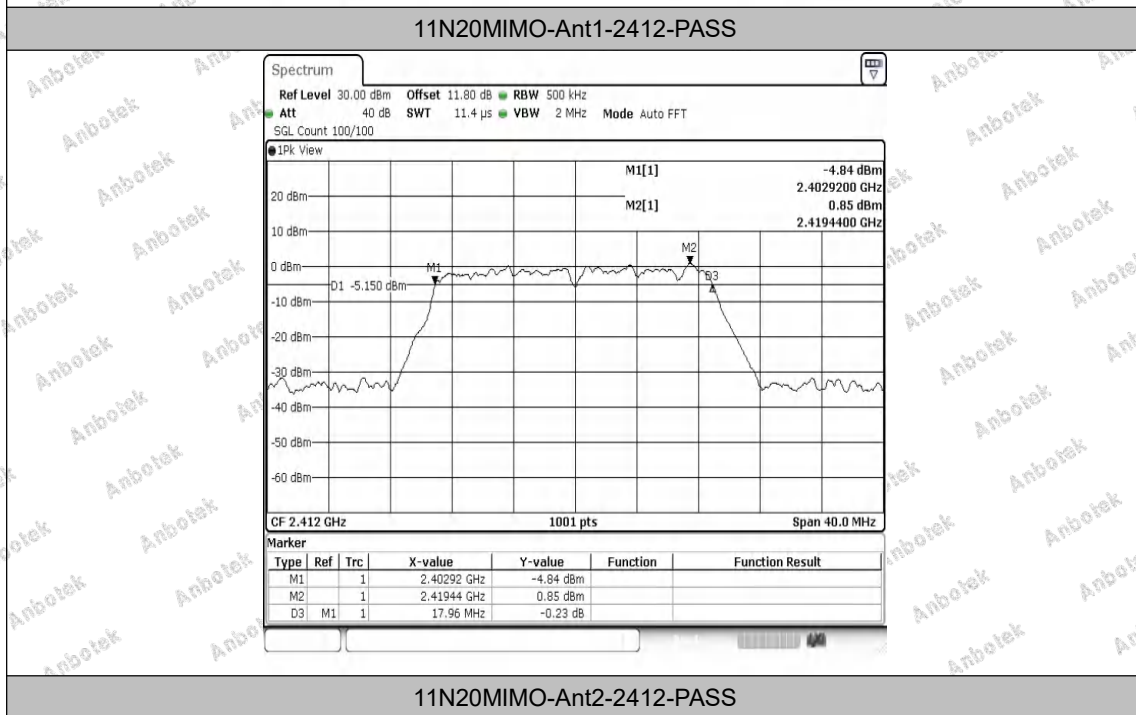
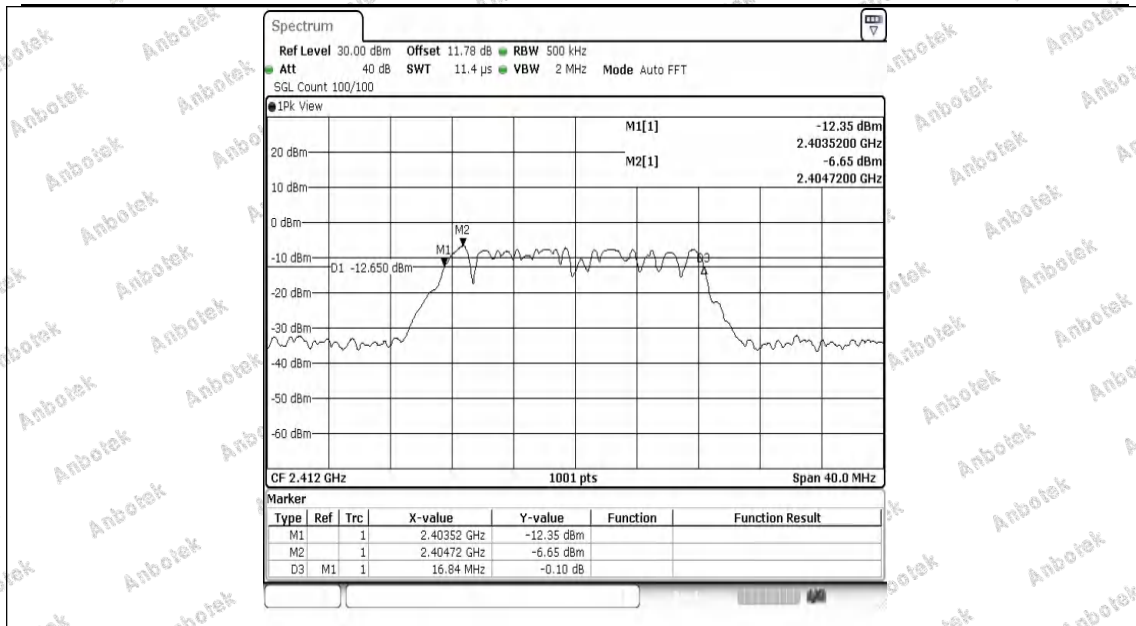


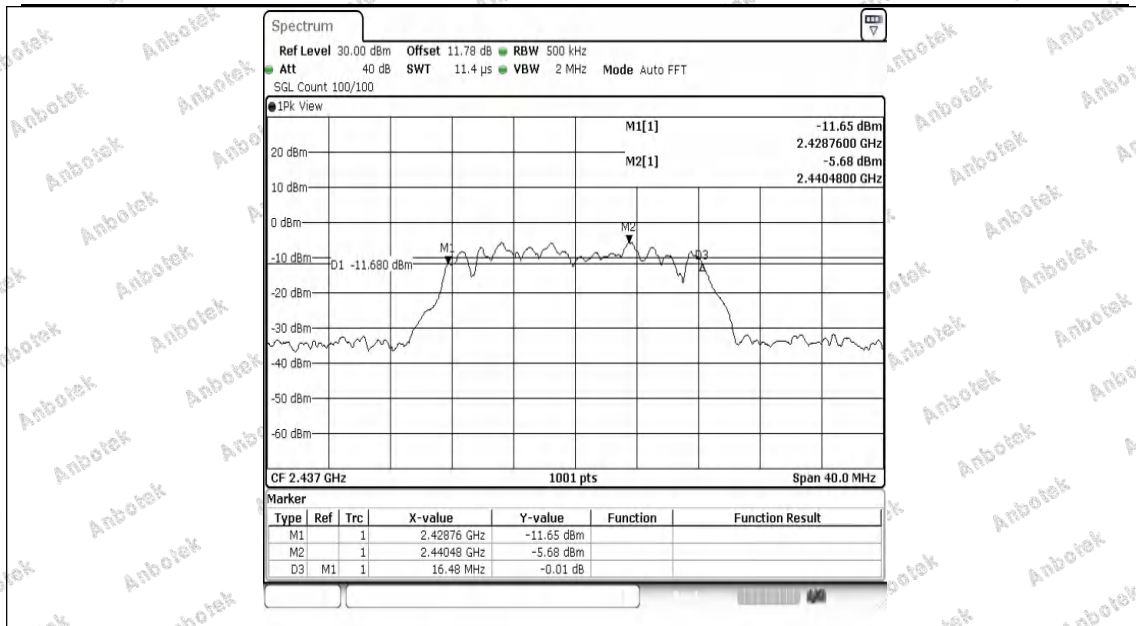
11G-Ant1-2462-PASS



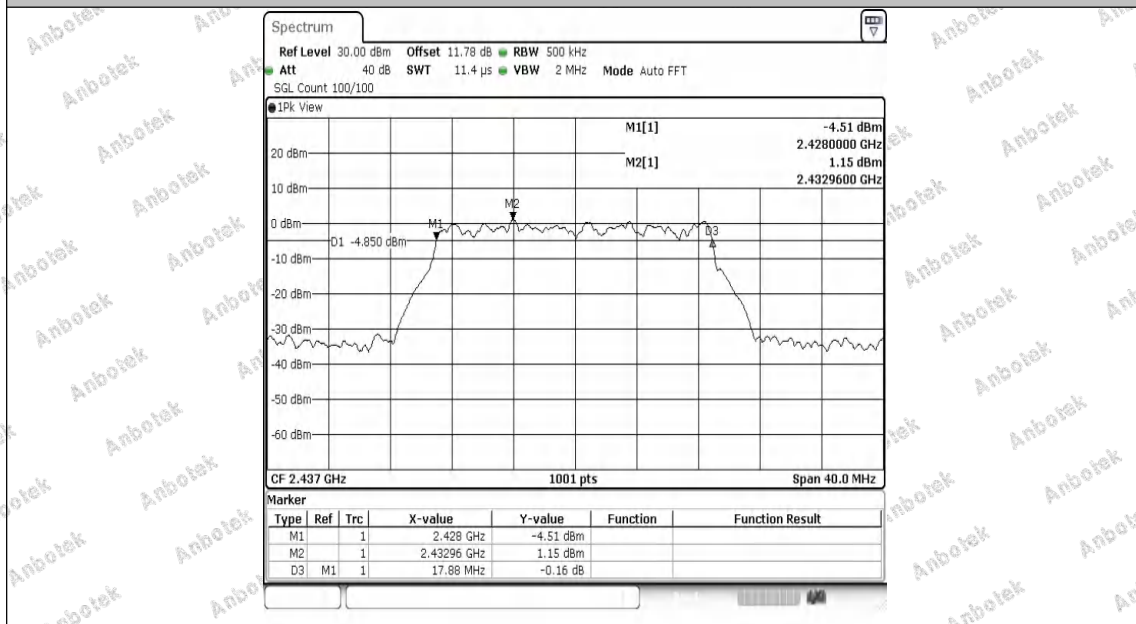
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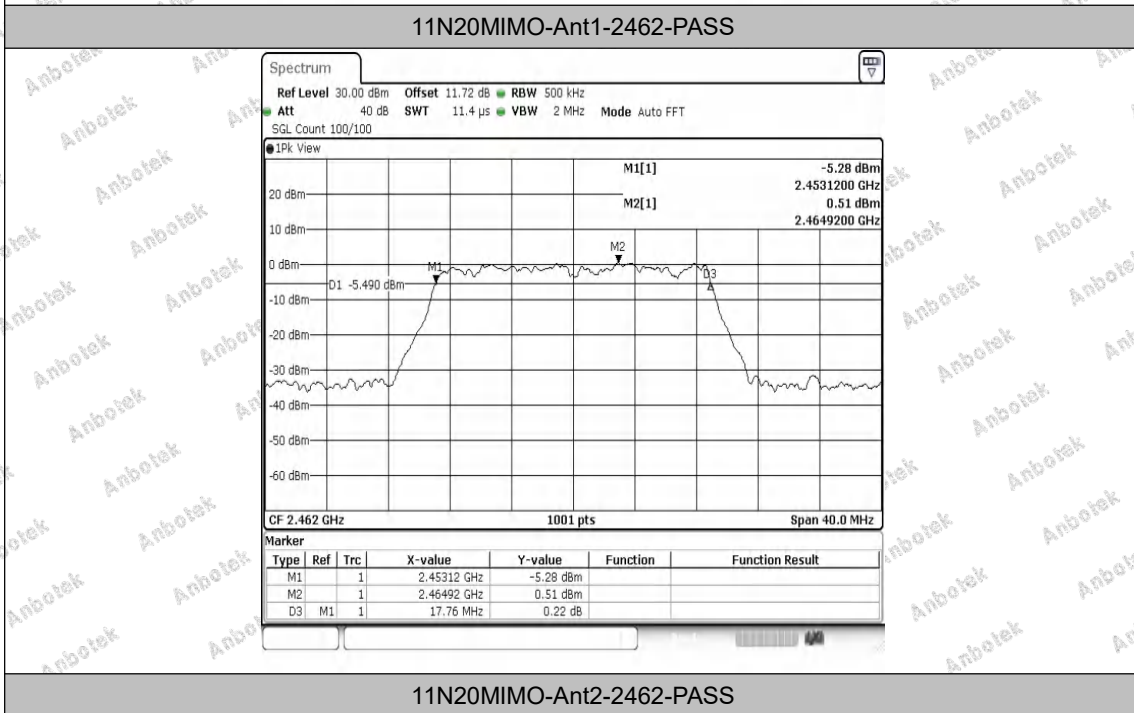
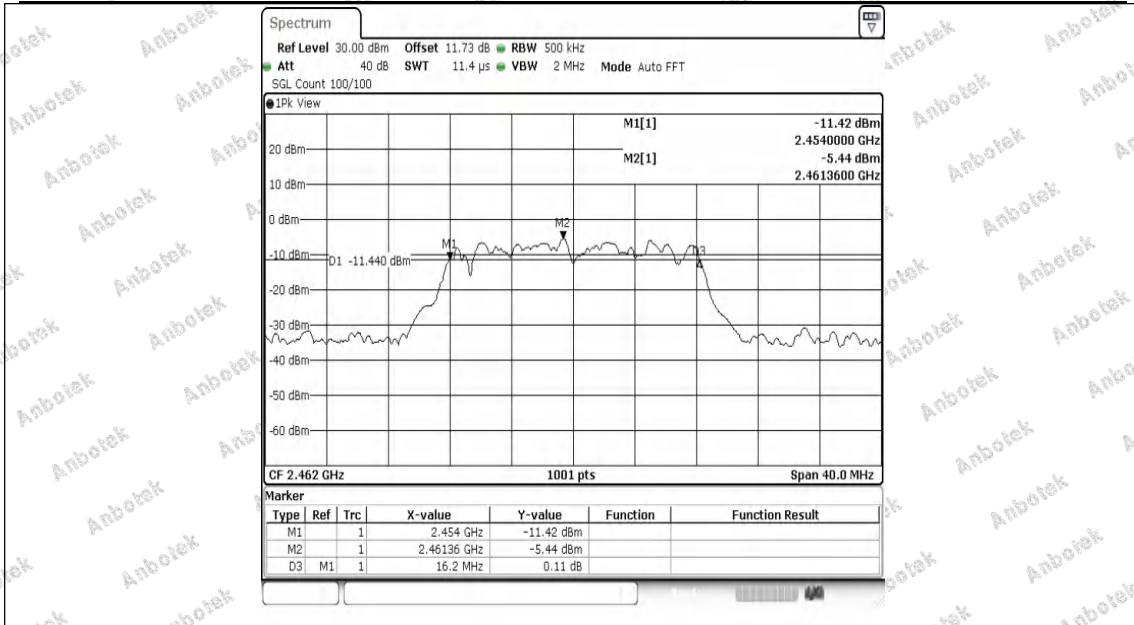


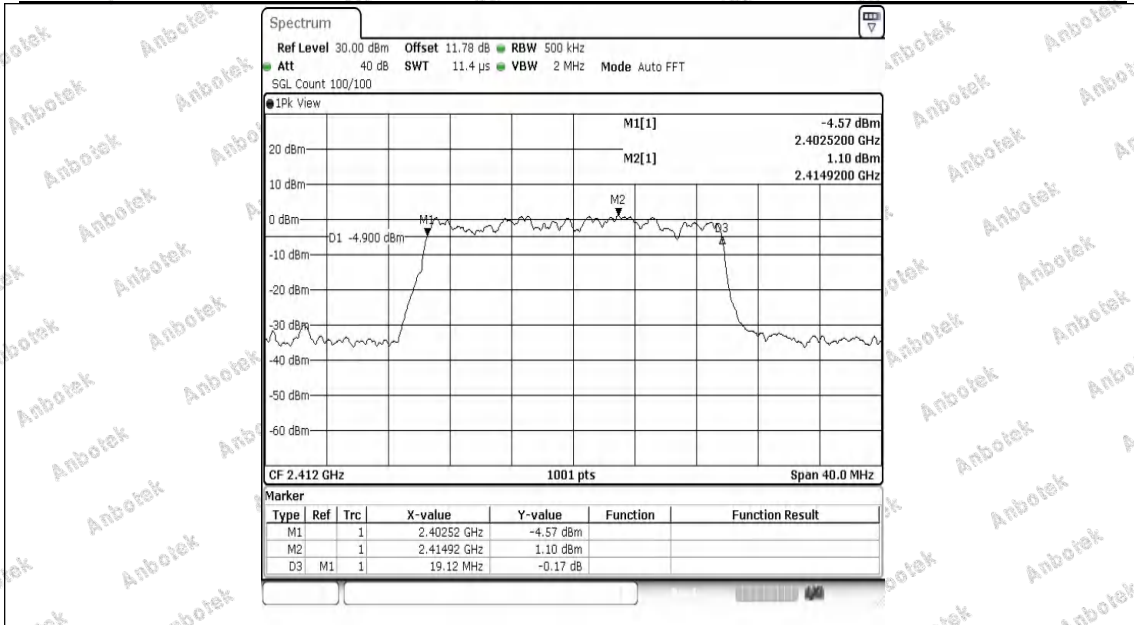
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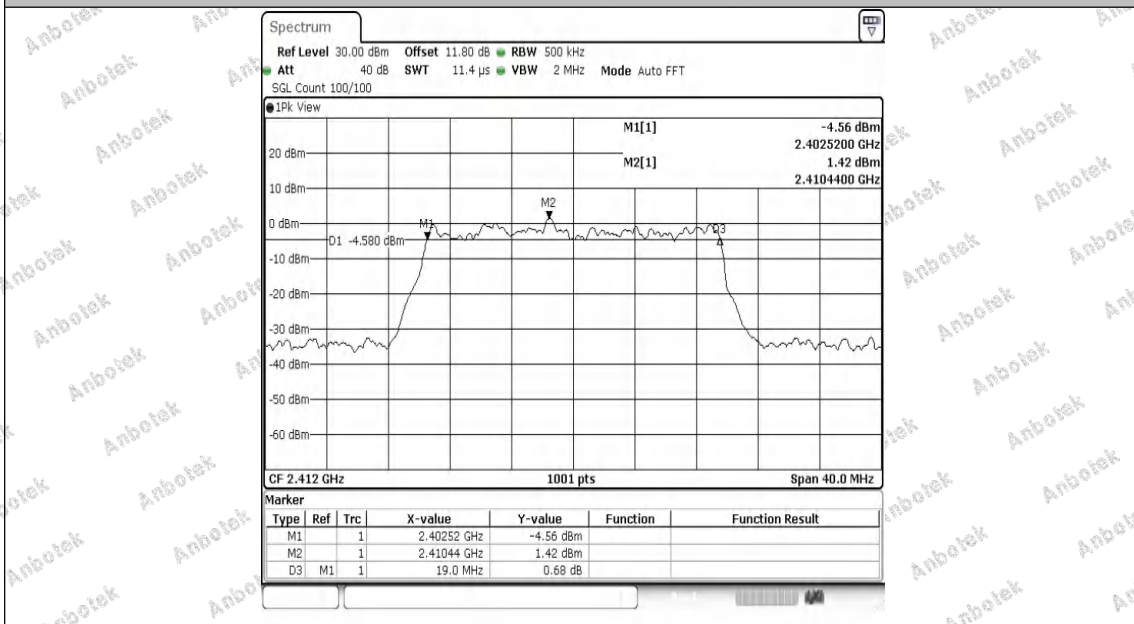
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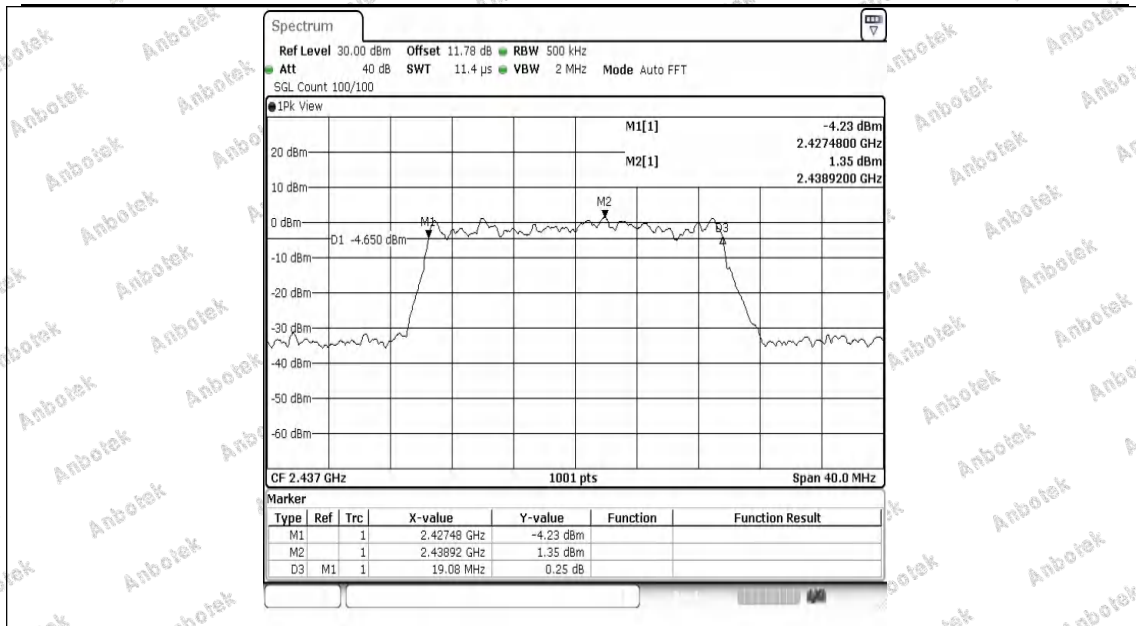


11AX20MIMO-Ant1-2412-PASS

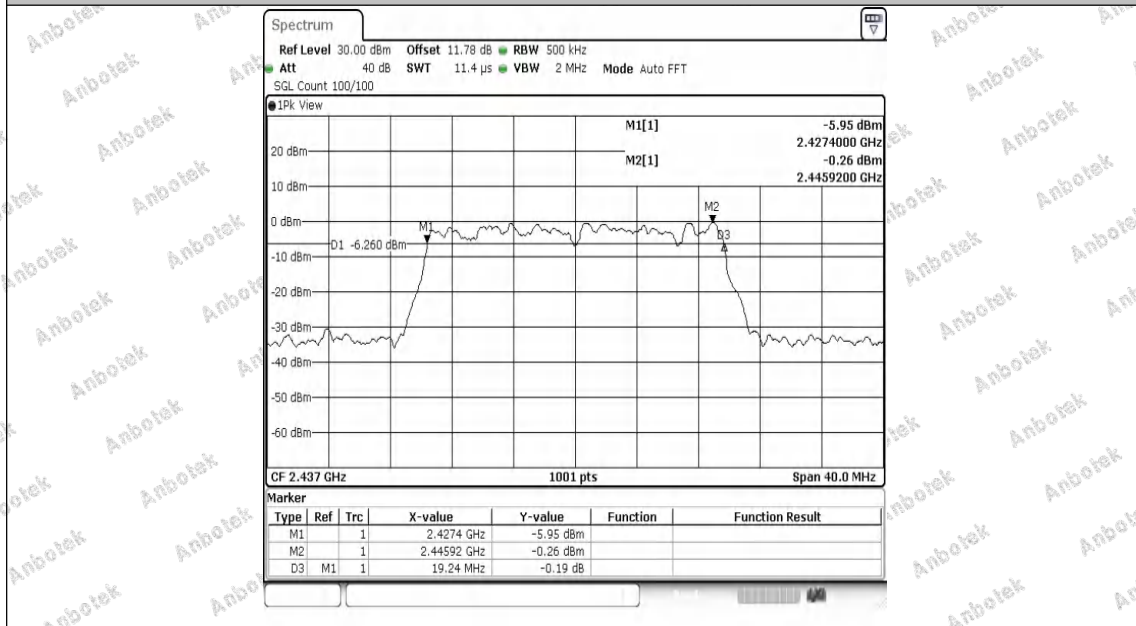


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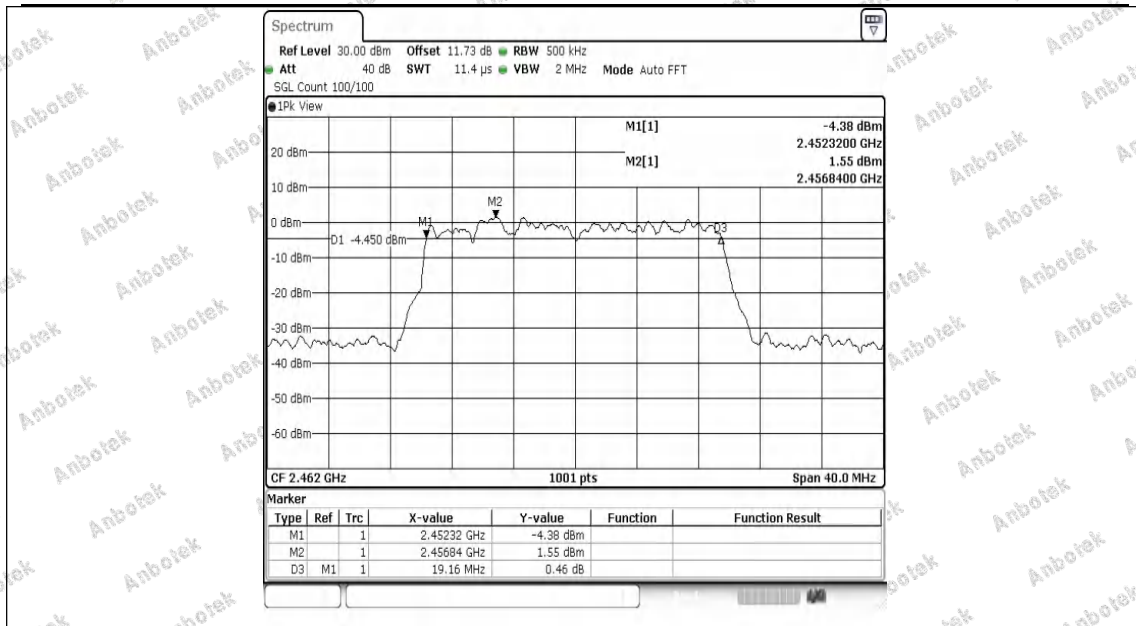


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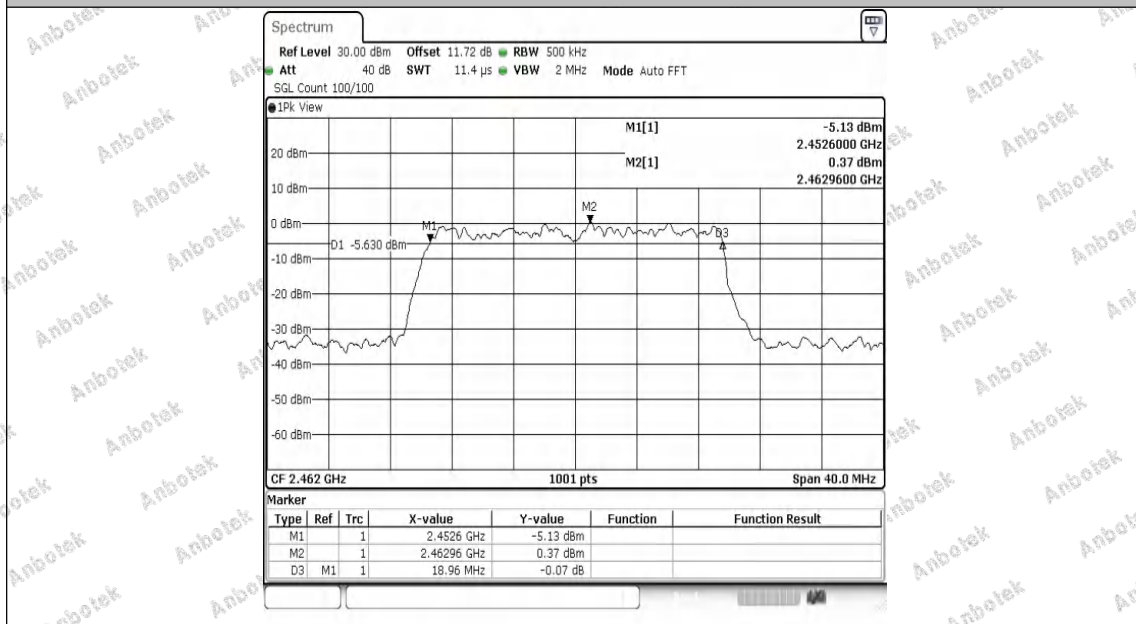


11AX20MIMO-Ant2-2437-PASS





11AX20MIMO-Ant1-2462-PASS



11AX20MIMO-Ant2-2462-PASS



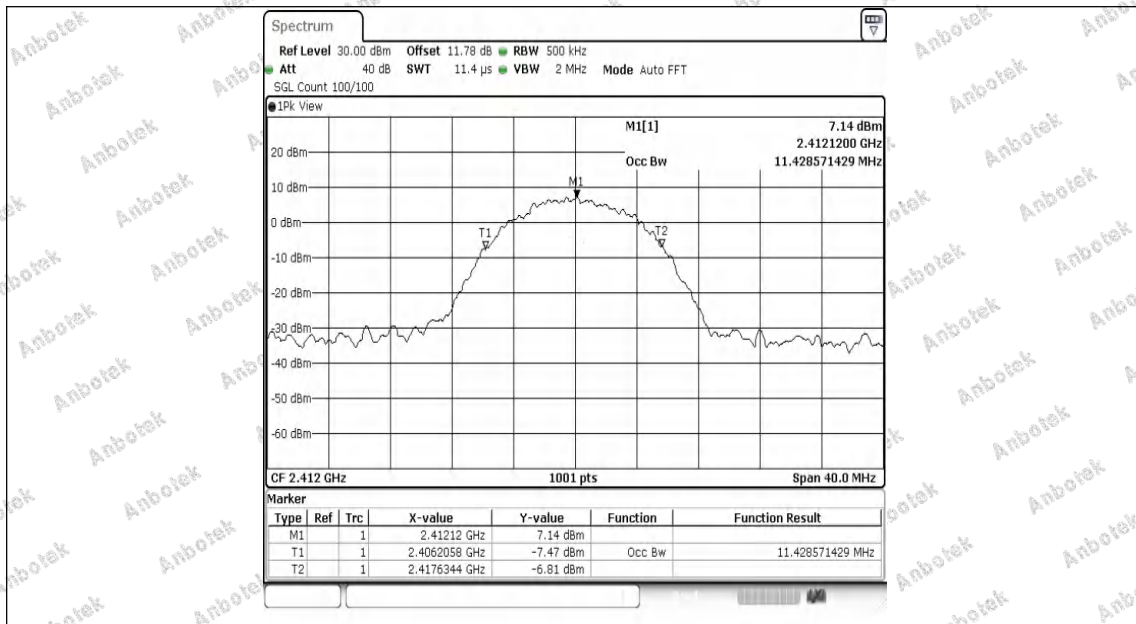
Appendix B: Occupied Channel Bandwidth

Test Result

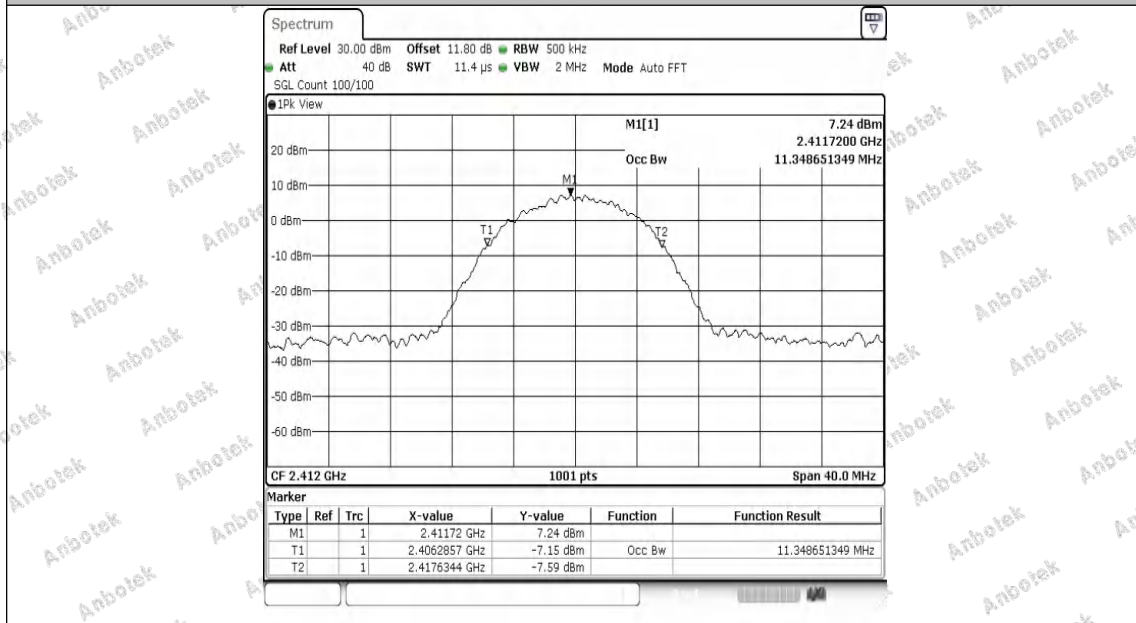
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	11.429	2406.2058	2417.6344	---	---
11B	Ant2	2412	11.349	2406.2857	2417.6344	---	---
11B	Ant1	2437	11.628	2431.1259	2442.7542	---	---
11B	Ant2	2437	11.508	2431.2458	2442.7542	---	---
11B	Ant1	2462	11.548	2456.1259	2467.6743	---	---
11B	Ant2	2462	11.429	2456.2458	2467.6743	---	---
11G	Ant1	2412	16.983	2403.6484	2420.6314	---	---
11G	Ant2	2412	16.863	2403.5684	2420.4316	---	---
11G	Ant1	2437	17.423	2427.9291	2445.3516	---	---
11G	Ant2	2437	17.183	2428.5684	2445.7512	---	---
11G	Ant1	2462	16.703	2453.6084	2470.3117	---	---
11G	Ant2	2462	17.143	2453.4086	2470.5514	---	---
11N20MIMO	Ant1	2412	16.903	2403.4086	2420.3117	---	---
11N20MIMO	Ant2	2412	17.942	2402.9291	2420.8711	---	---
11N20MIMO	Ant1	2437	17.383	2428.0889	2445.4715	---	---
11N20MIMO	Ant2	2437	18.382	2427.8092	2446.1908	---	---
11N20MIMO	Ant1	2462	17.383	2453.4086	2470.7912	---	---
11N20MIMO	Ant2	2462	18.501	2452.8092	2471.3107	---	---
11AX20MIMO	Ant1	2412	18.981	2402.4895	2421.4705	---	---
11AX20MIMO	Ant2	2412	19.141	2402.4496	2421.5904	---	---
11AX20MIMO	Ant1	2437	19.301	2427.3297	2446.6304	---	---
11AX20MIMO	Ant2	2437	19.101	2427.4096	2446.5105	---	---
11AX20MIMO	Ant1	2462	19.261	2452.3297	2471.5904	---	---
11AX20MIMO	Ant2	2462	19.181	2452.3696	2471.5504	---	---



Test Graphs

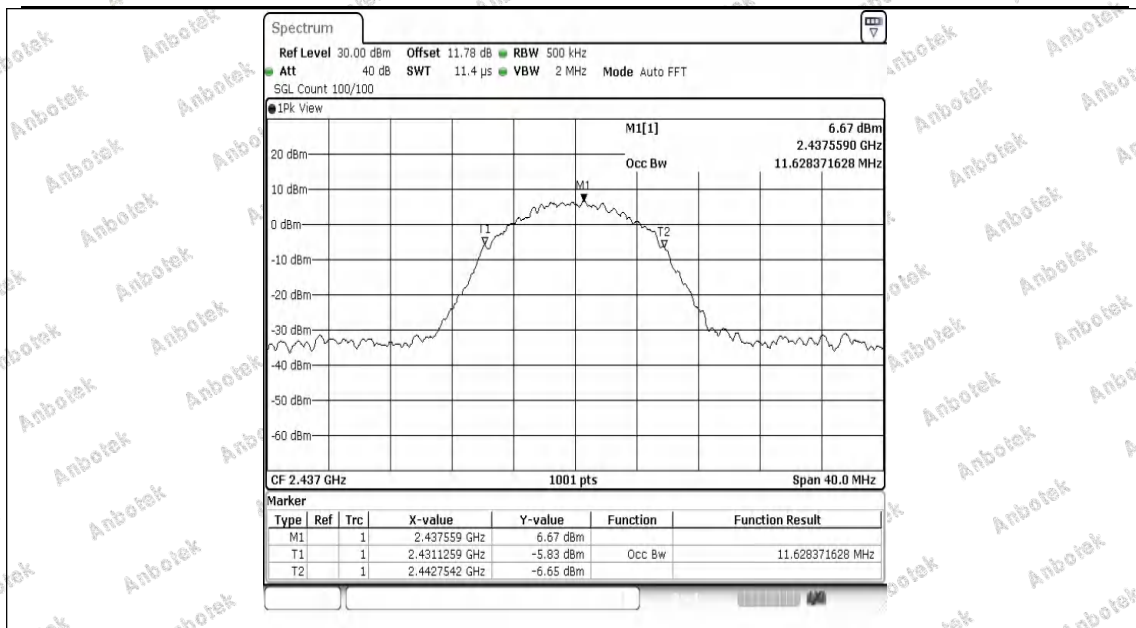


11B-Ant1-2412

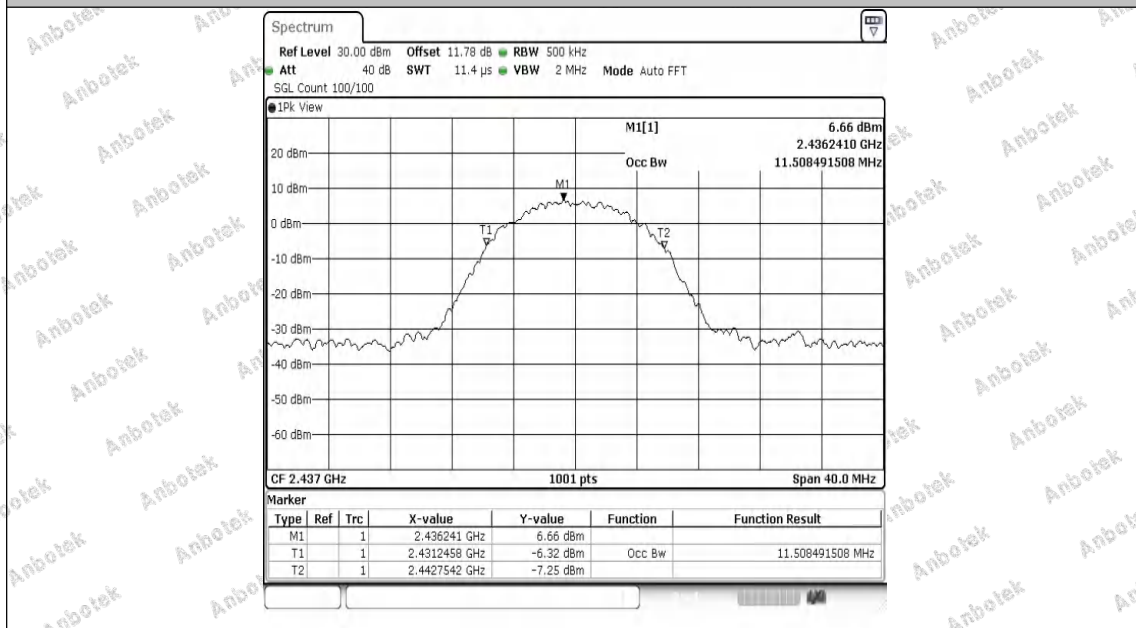


11B-Ant2-2412



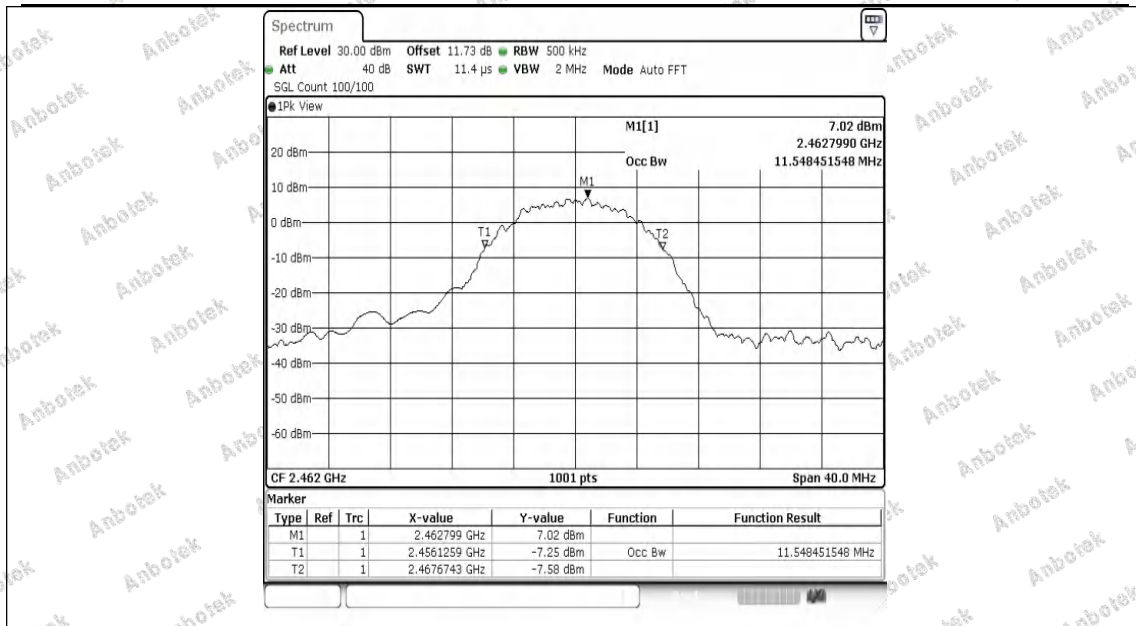


11B-Ant1-2437

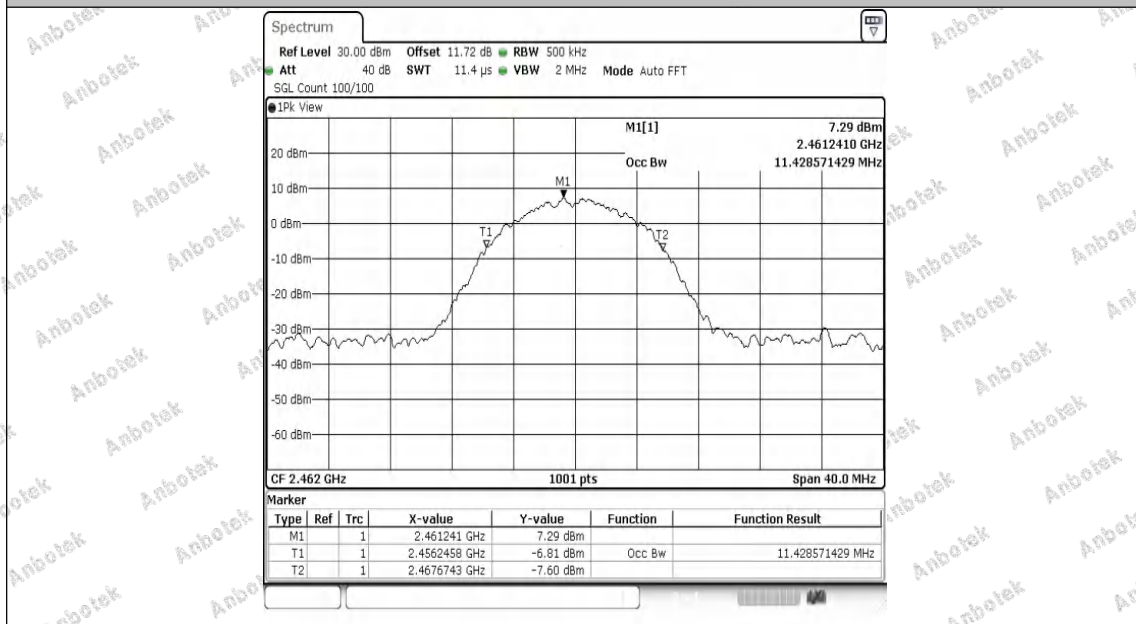


11B-Ant2-2437



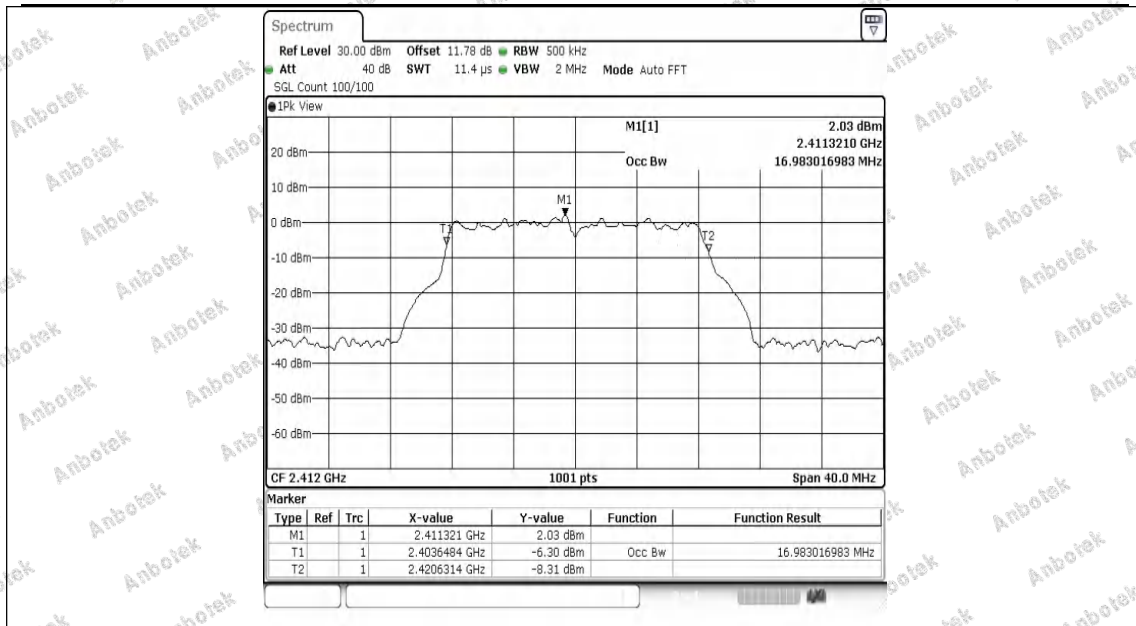


11B-Ant1-2462

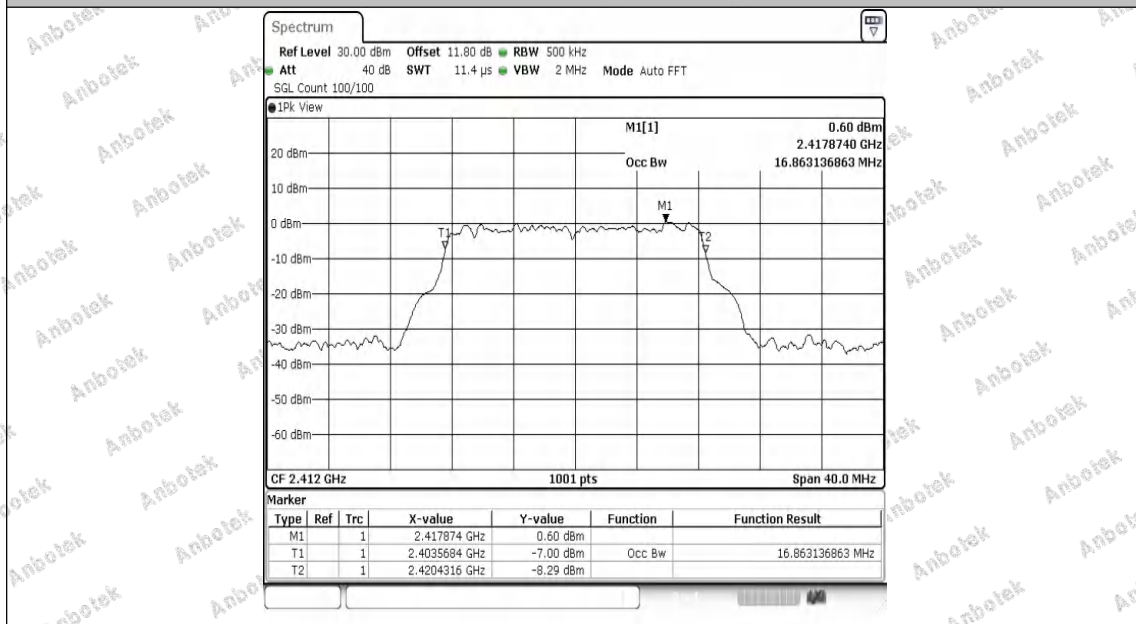


11B-Ant2-2462



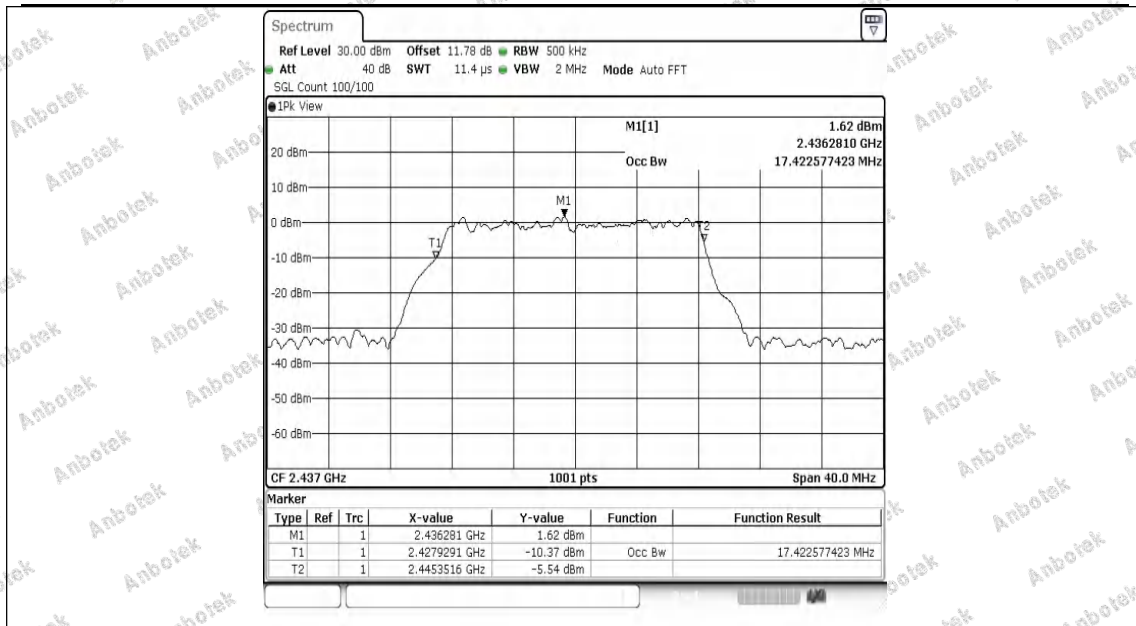


11G-Ant1-2412

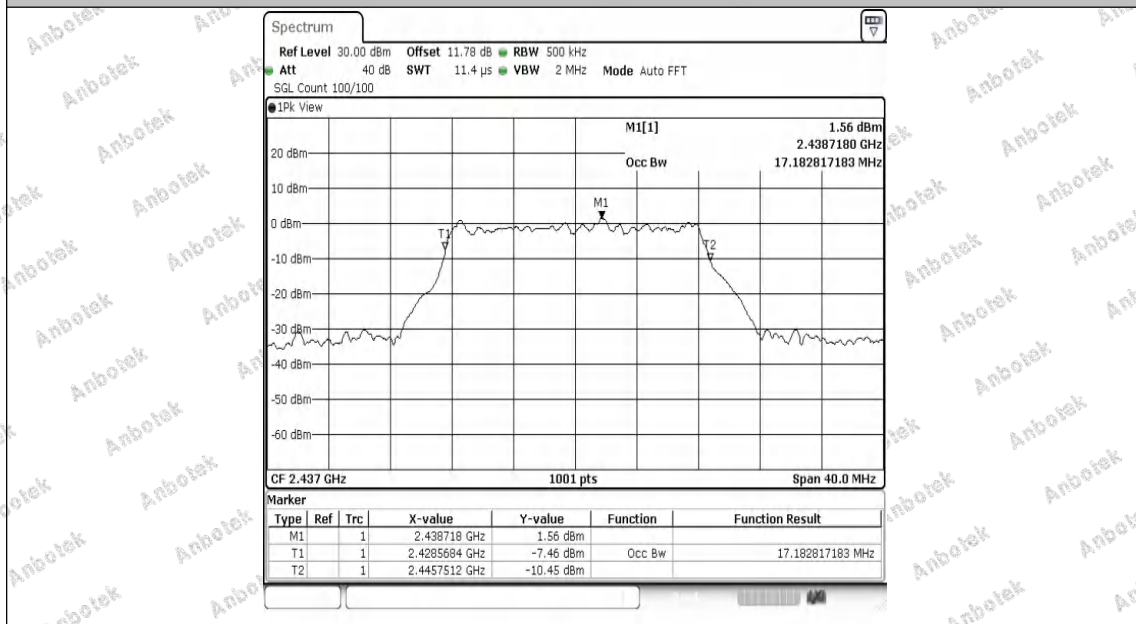


11G-Ant2-2412



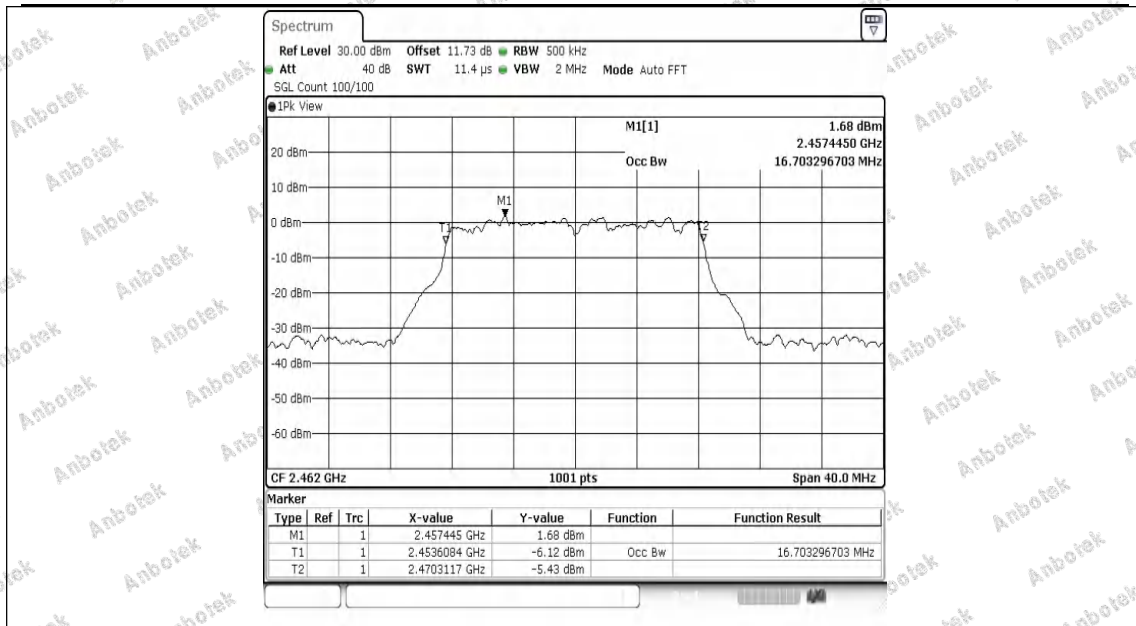


11G-Ant1-2437

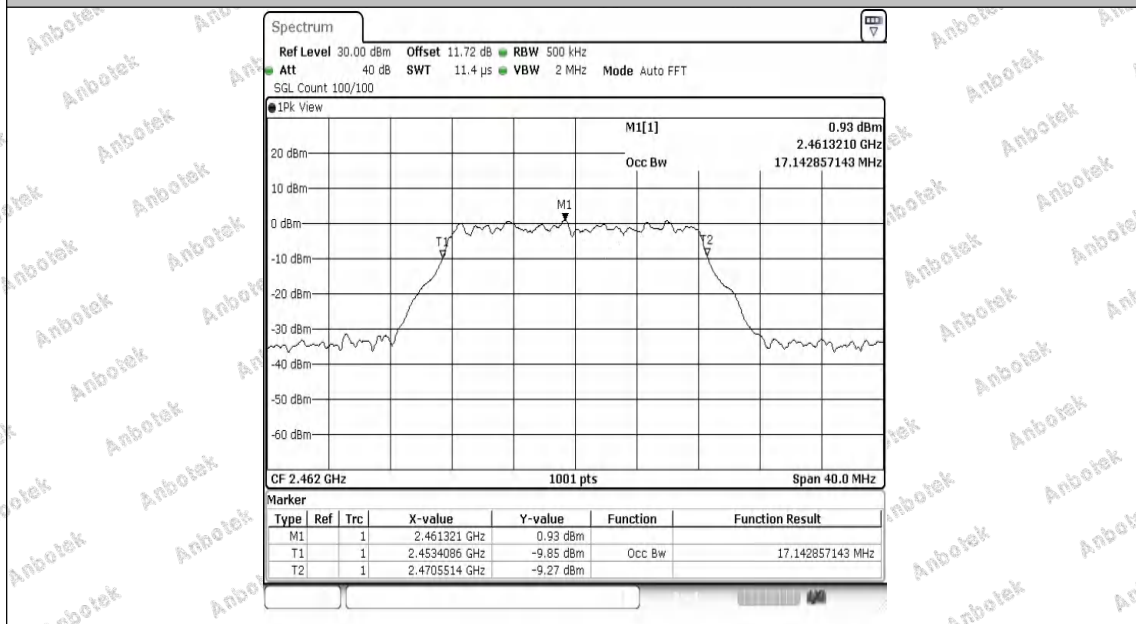


11G-Ant2-2437



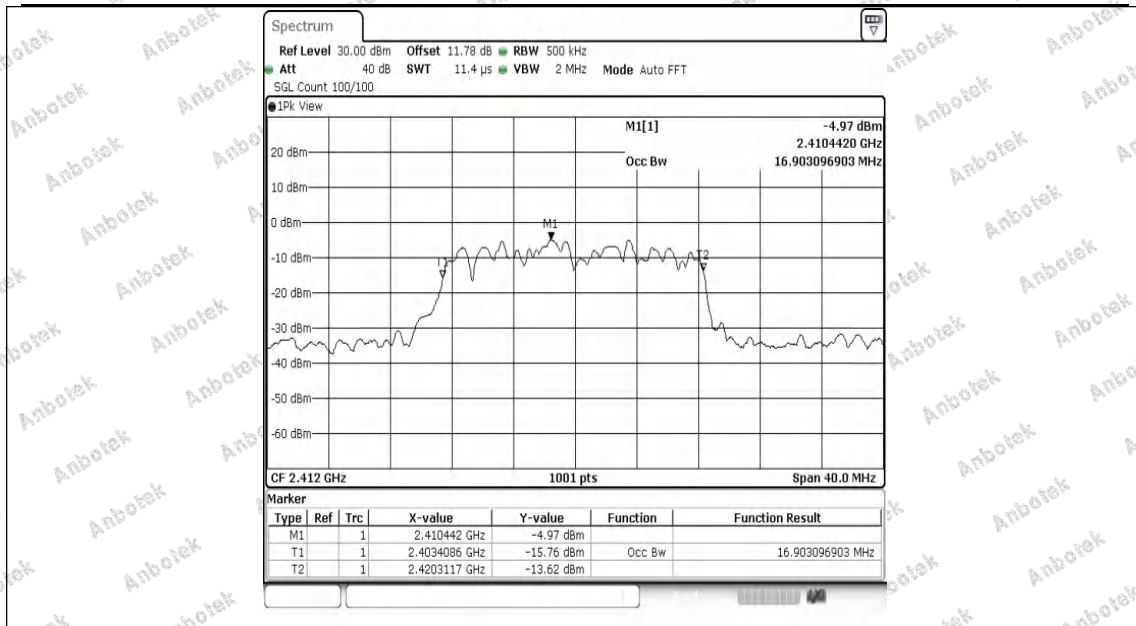


11G-Ant1-2462

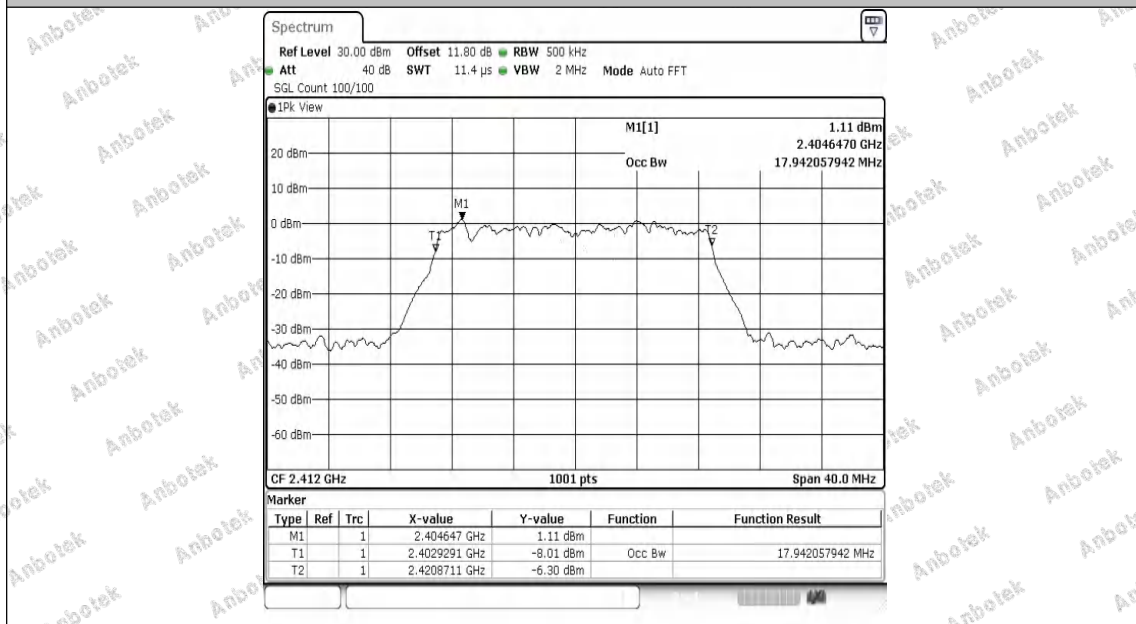


11G-Ant2-2462



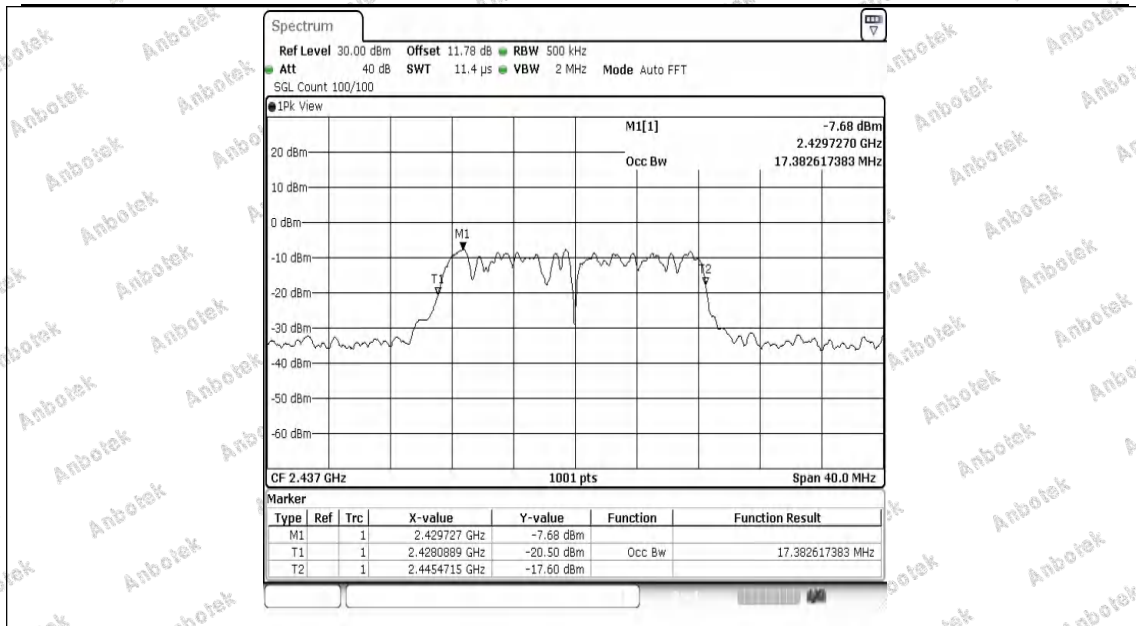


11N20MIMO-Ant1-2412

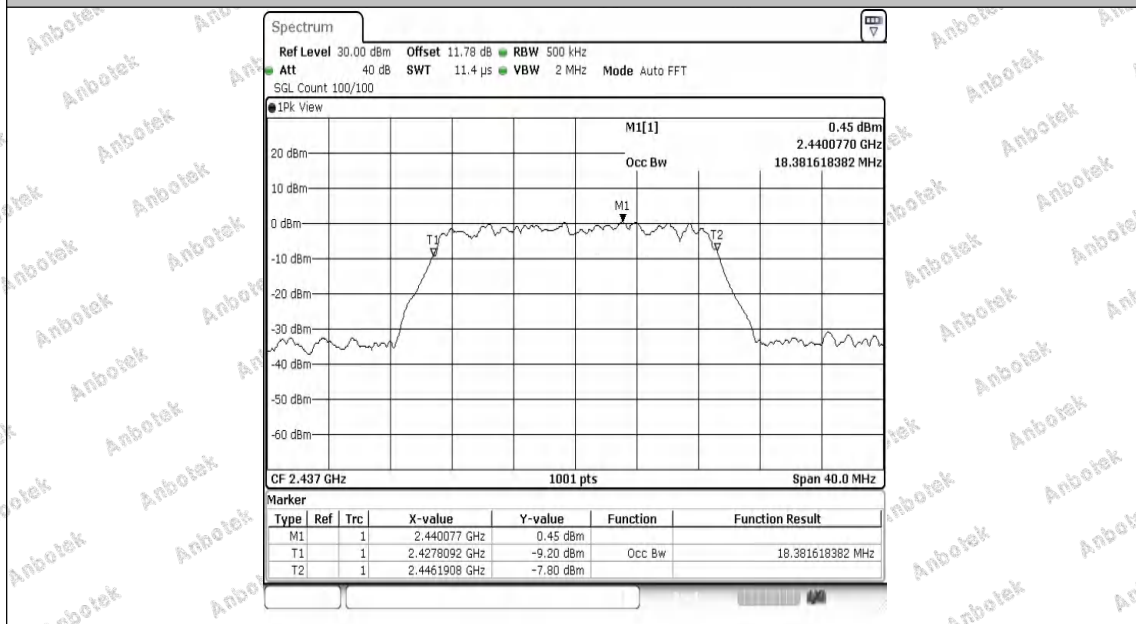


11N20MIMO-Ant2-2412



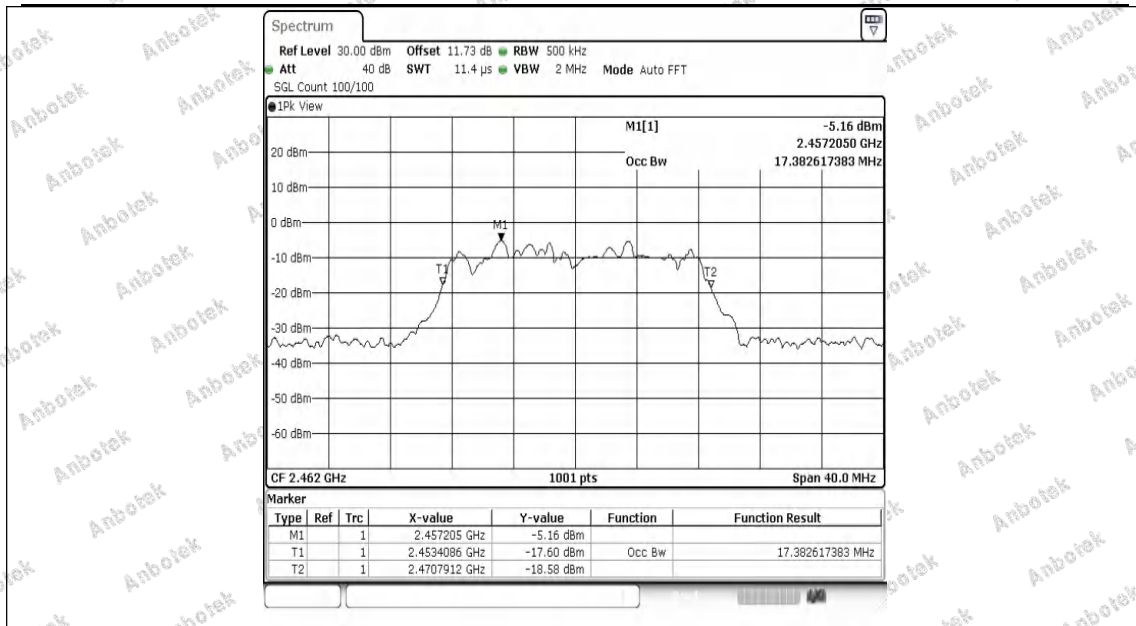


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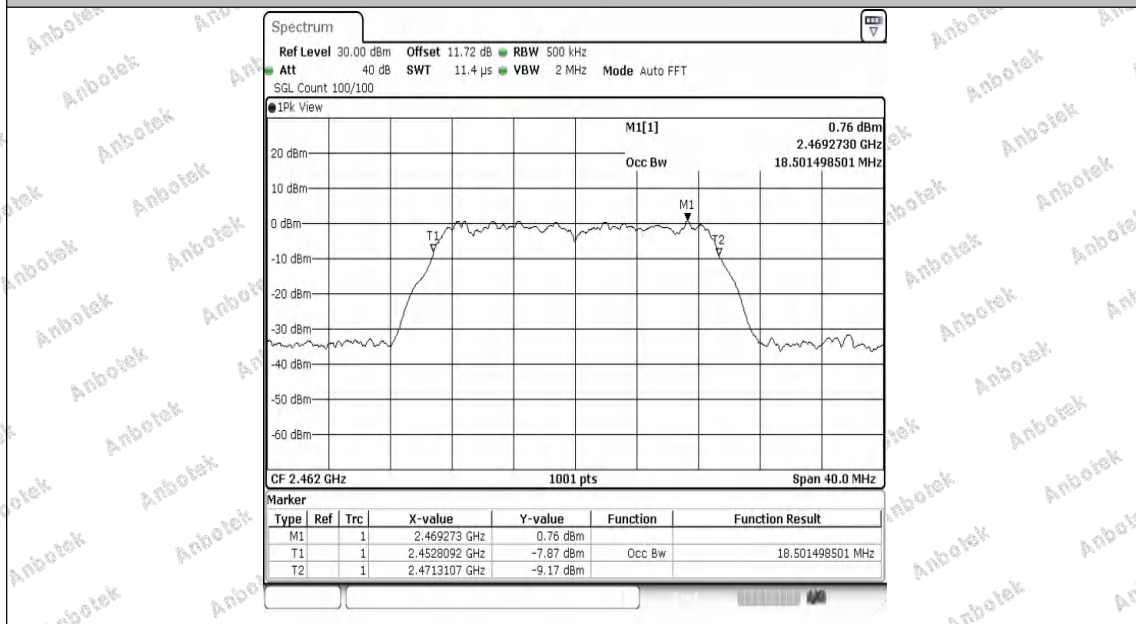


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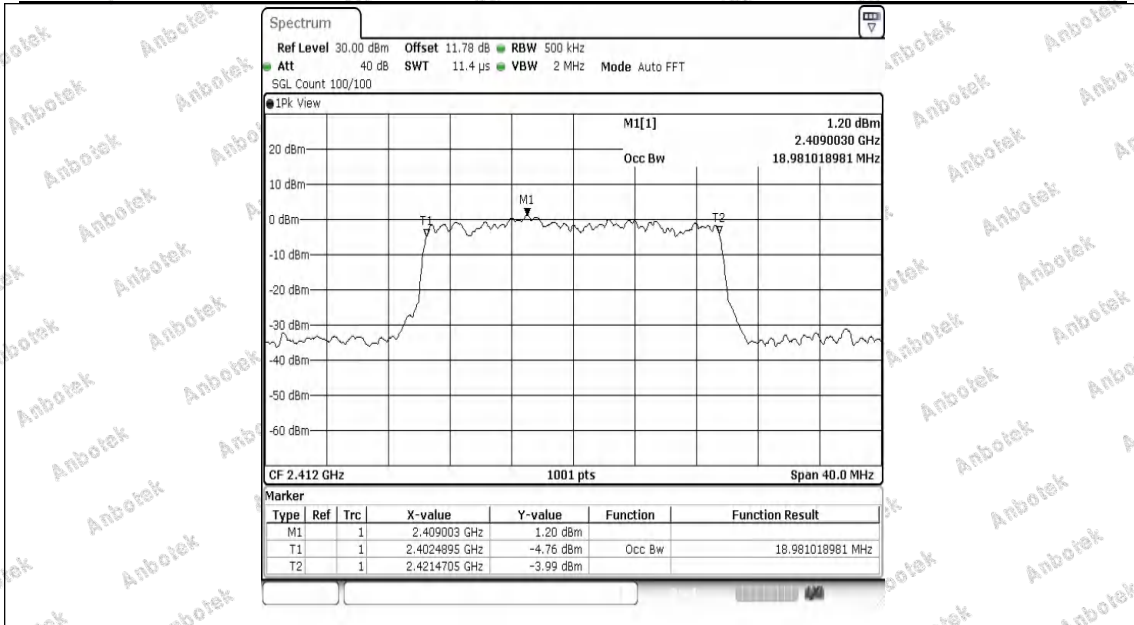


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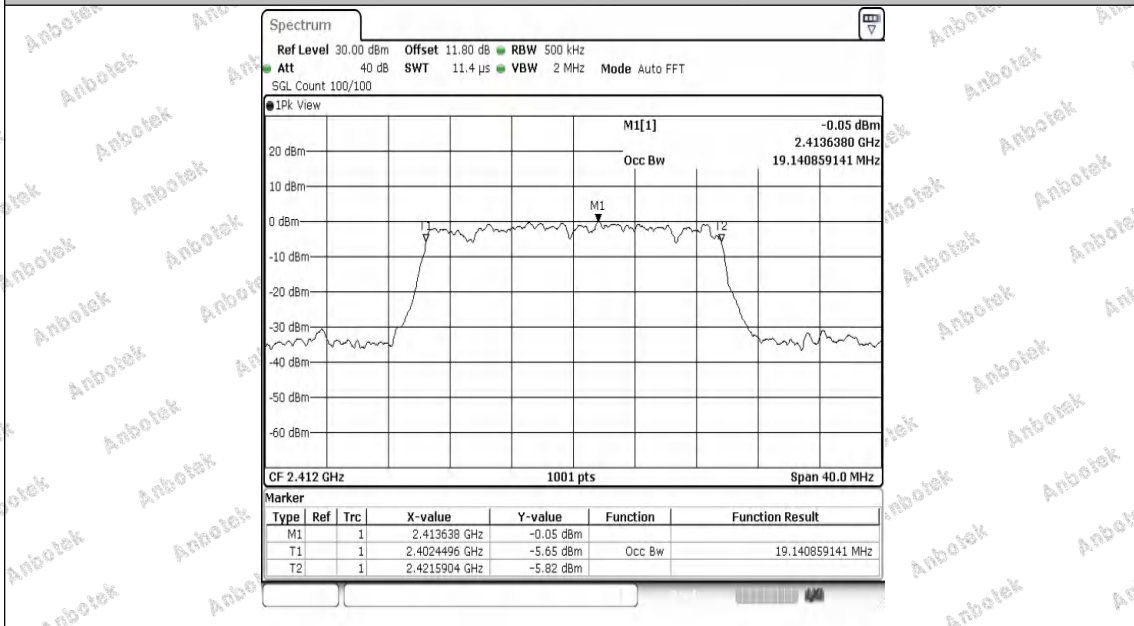


11N20MIMO-Ant2-2462



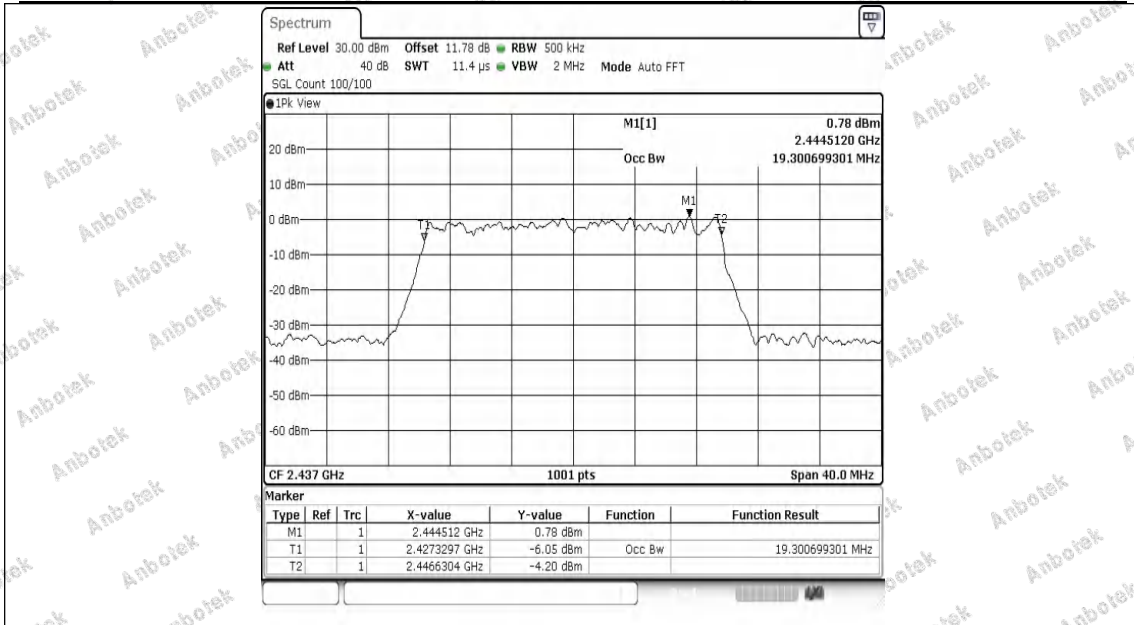


11AX20MIMO-Ant1-2412

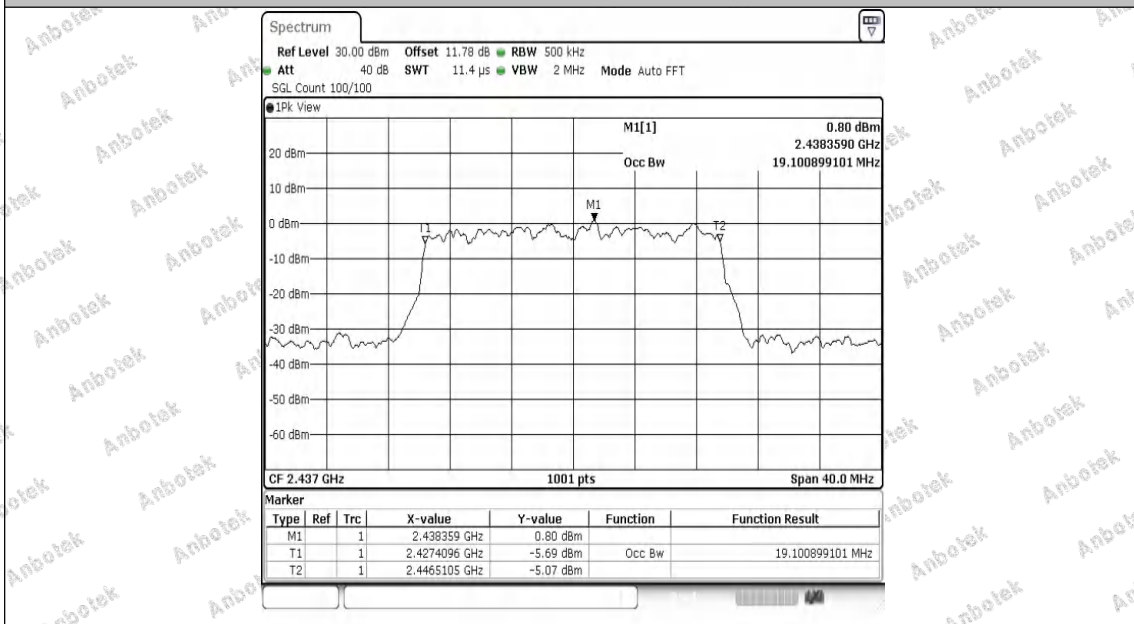


11AX20MIMO-Ant2-2412



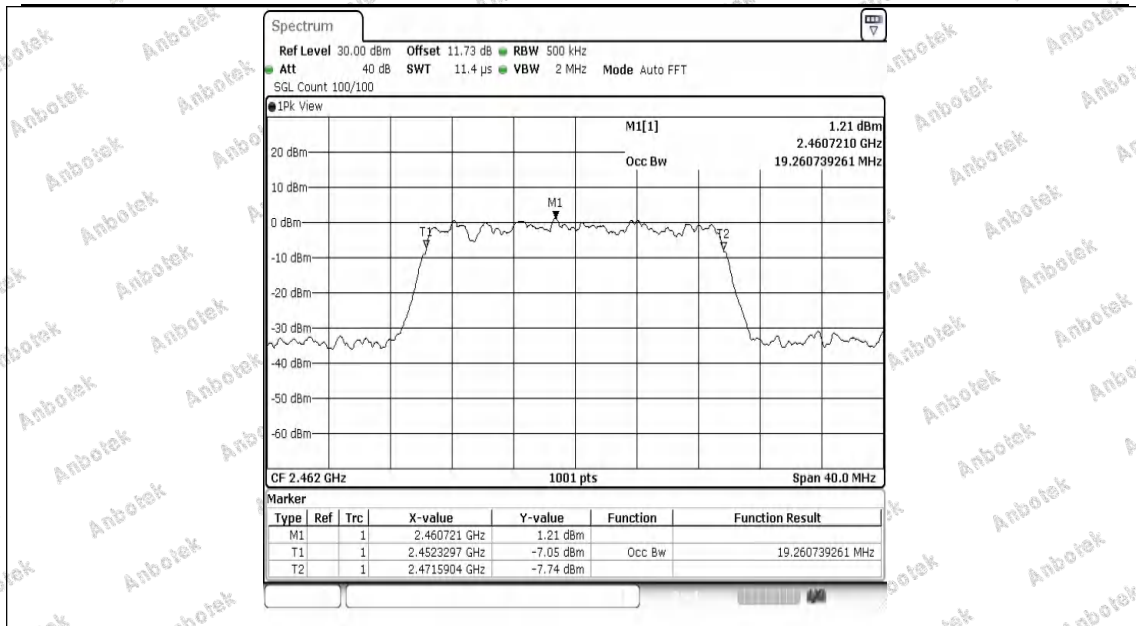


11AX20MIMO-Ant1-2437

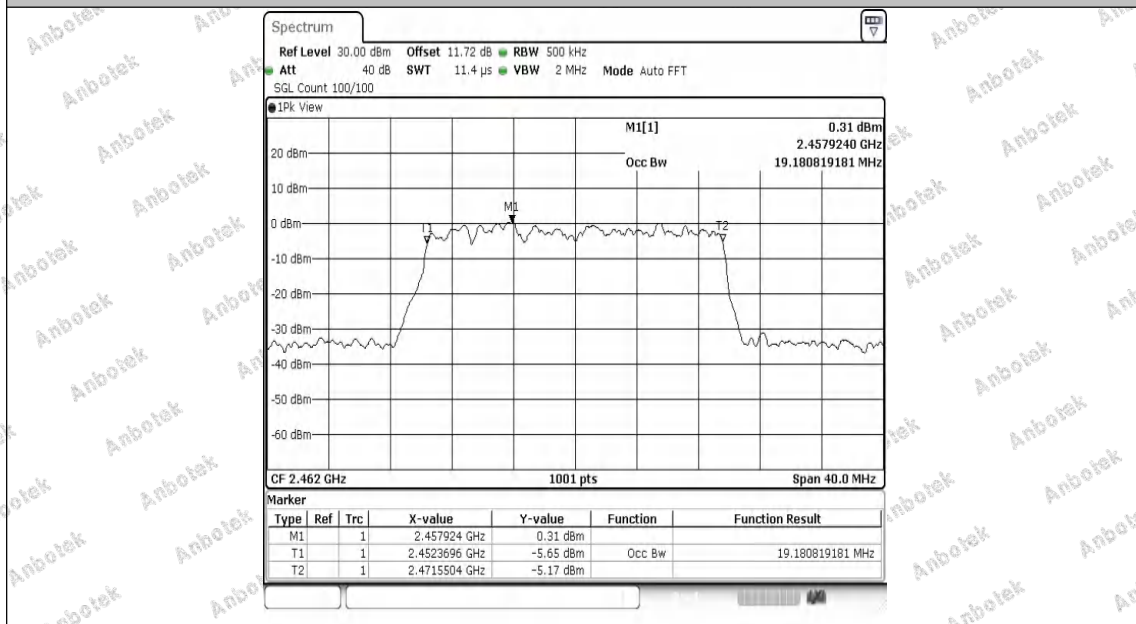


11AX20MIMO-Ant2-2437





11AX20MIMO-Ant1-2462



11AX20MIMO-Ant2-2462



Appendix C: Maximum conducted output power

Test Result Average

Test Mode	Antenna	Frequency [MHz]	Average power [dBm]	Duty Cycle [%]	DC Factor [dB]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	15.43	90.32	0.44	15.87	≤30.00	PASS
11B	Ant2	2412	15.60	90.43	0.44	16.04	≤30.00	PASS
11B	Ant1	2437	15.34	90.43	0.44	15.78	≤30.00	PASS
11B	Ant2	2437	15.43	89.36	0.49	15.92	≤30.00	PASS
11B	Ant1	2462	15.55	90.32	0.44	15.99	≤30.00	PASS
11B	Ant2	2462	15.68	90.43	0.44	16.12	≤30.00	PASS
11G	Ant1	2412	13.98	66.67	1.76	15.74	≤30.00	PASS
11G	Ant2	2412	12.92	64.29	1.92	14.84	≤30.00	PASS
11G	Ant1	2437	13.71	64.29	1.92	15.63	≤30.00	PASS
11G	Ant2	2437	13.32	64.29	1.92	15.24	≤30.00	PASS
11G	Ant1	2462	14.17	62.96	2.01	16.18	≤30.00	PASS
11G	Ant2	2462	13.35	64.29	1.92	15.27	≤30.00	PASS
11N20MIMO	Ant1	2412	4.50	7.69	11.14	15.64	≤30.00	PASS
11N20MIMO	Ant2	2412	12.90	62.96	2.01	14.91	≤30.00	PASS
11N20MIMO	total	2412	---	---	---	18.30	≤30.00	PASS
11N20MIMO	Ant1	2437	5.23	11.54	9.38	14.61	≤30.00	PASS
11N20MIMO	Ant2	2437	12.96	62.96	2.01	14.97	≤30.00	PASS
11N20MIMO	total	2437	---	---	---	17.80	≤30.00	PASS
11N20MIMO	Ant1	2462	6.44	11.54	9.38	15.82	≤30.00	PASS
11N20MIMO	Ant2	2462	13.26	61.54	2.11	15.37	≤30.00	PASS
11N20MIMO	total	2462	---	---	---	18.61	≤30.00	PASS
11AX20MIMO	Ant1	2412	12.59	58.33	2.34	14.93	≤30.00	PASS
11AX20MIMO	Ant2	2412	13.51	58.33	2.34	15.85	≤30.00	PASS
11AX20MIMO	total	2412	---	---	---	18.42	≤30.00	PASS
11AX20MIMO	Ant1	2437	12.79	56.52	2.48	15.27	≤30.00	PASS
11AX20MIMO	Ant2	2437	13.44	58.33	2.34	15.78	≤30.00	PASS
11AX20MIMO	total	2437	---	---	---	18.54	≤30.00	PASS
11AX20MIMO	Ant1	2462	12.97	58.33	2.34	15.31	≤30.00	PASS
11AX20MIMO	Ant2	2462	12.47	58.33	2.34	14.81	≤30.00	PASS
11AX20MIMO	total	2462	---	---	---	18.08	≤30.00	PASS

Note:

1. The Duty Cycle Factor($10 \cdot \log(1/D)$) and cable loss are compensated in the graph.
2. As Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}]$ dBi = $5.76 < 6$ dBi, so limit = 30 dBm.
3. NOTE: MIMO = $10 \cdot \text{LOG}((10^{ANT1/10}) + 10^{(ANT2/10)})$

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Tel: (86) 0755-26066440 Email: service@anbotek.com

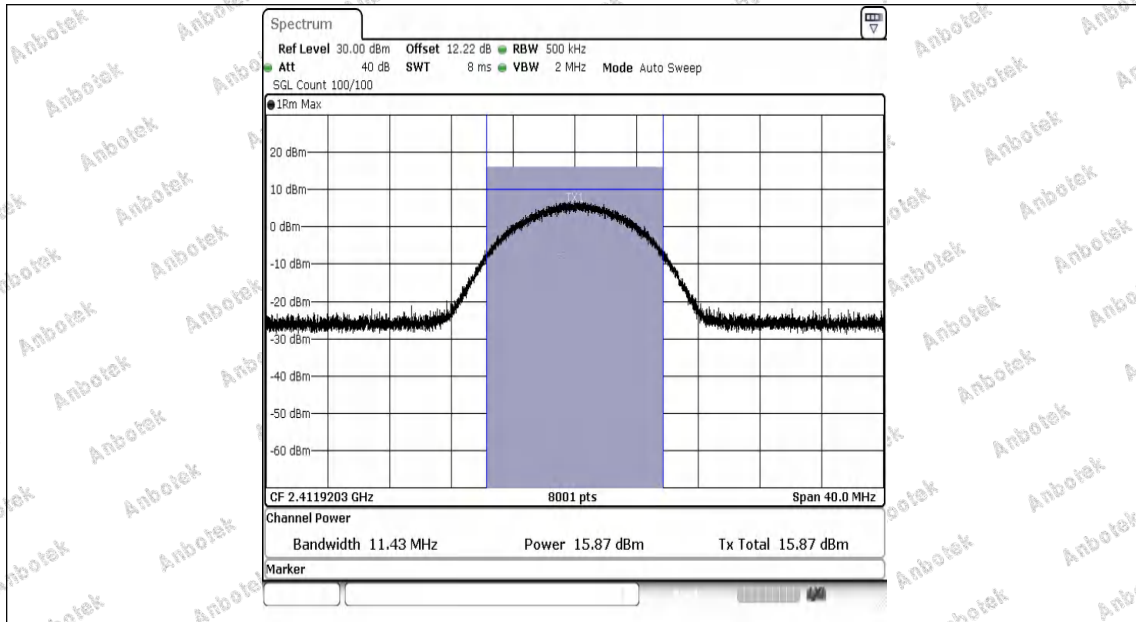


Hotline
400-003-0500

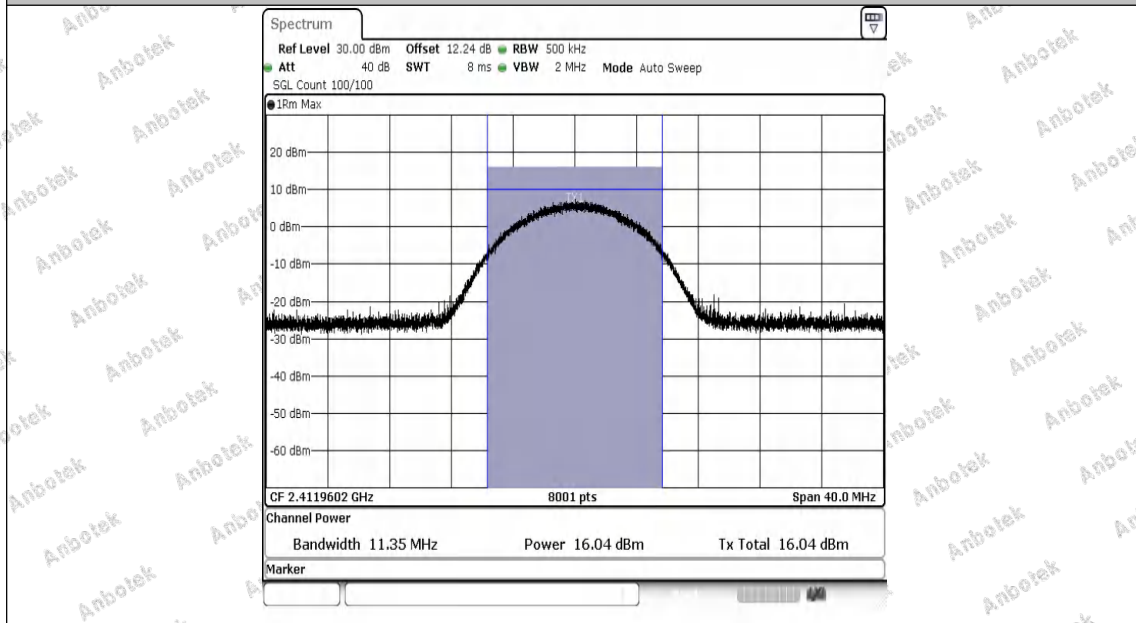
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Test Graphs Average

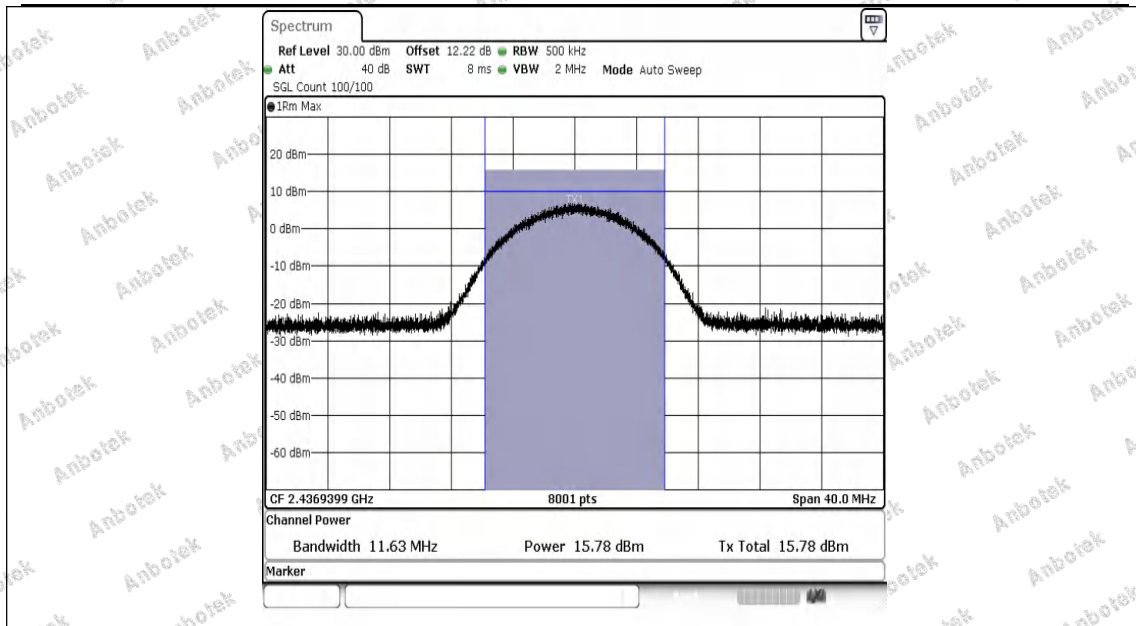


11B-Ant1-2412-PASS

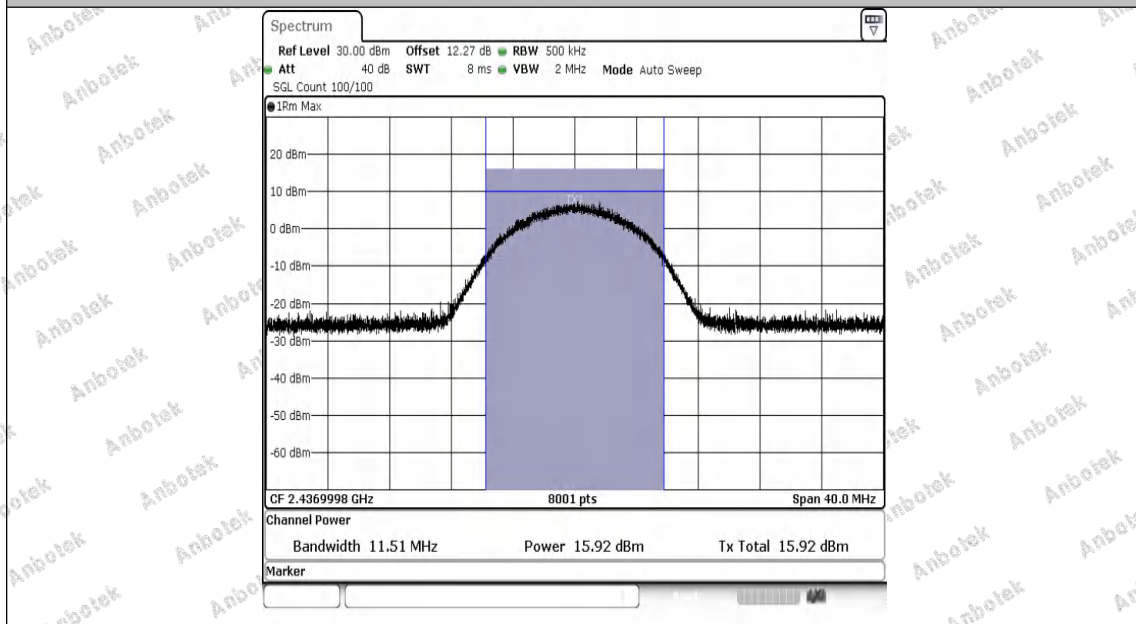


11B-Ant2-2412-PASS



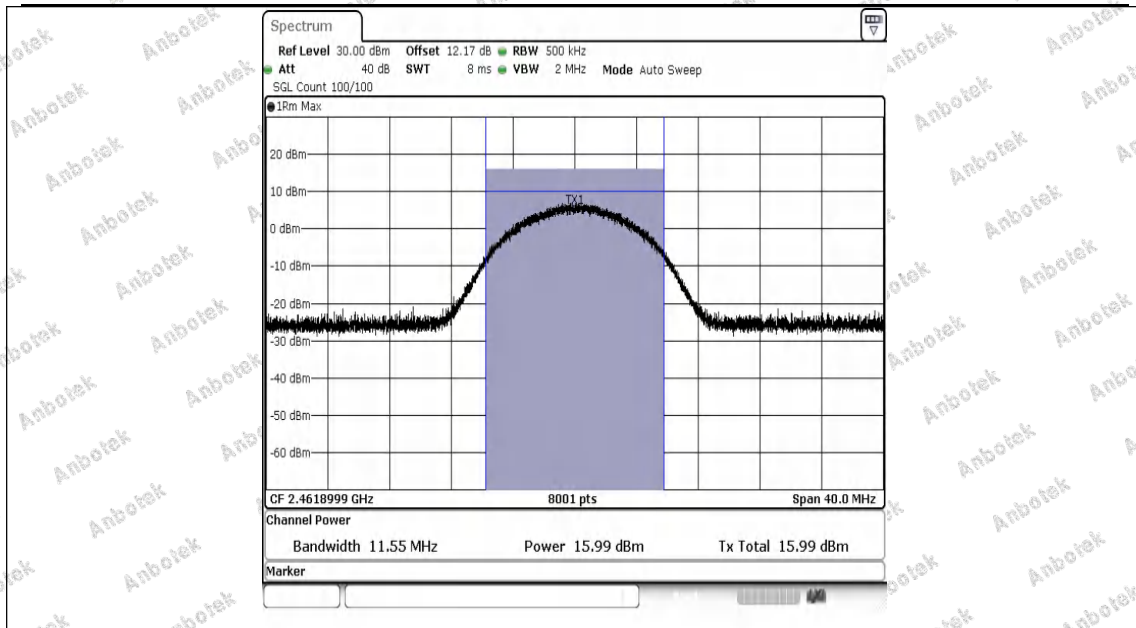


11B-Ant1-2437-PASS

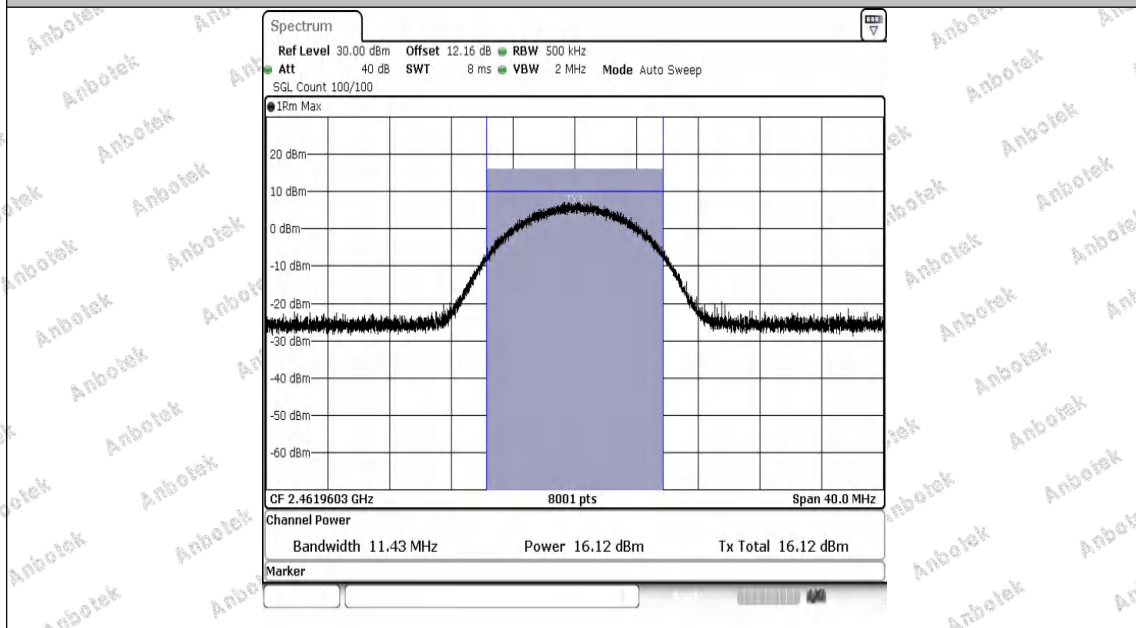


11B-Ant2-2437-PASS



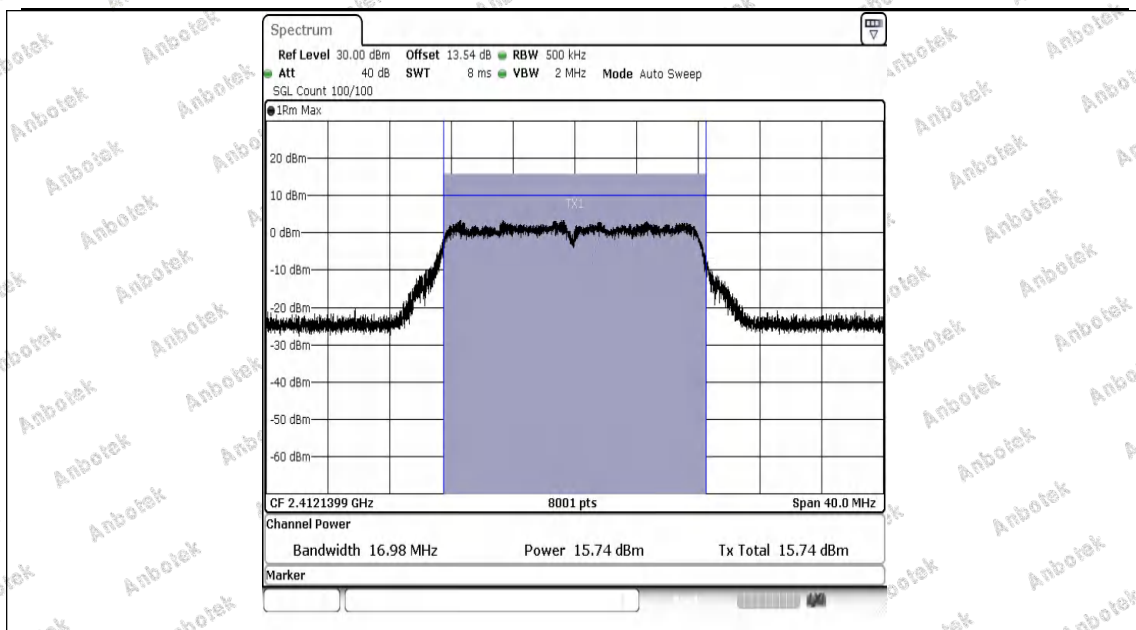


11B-Ant1-2462-PASS

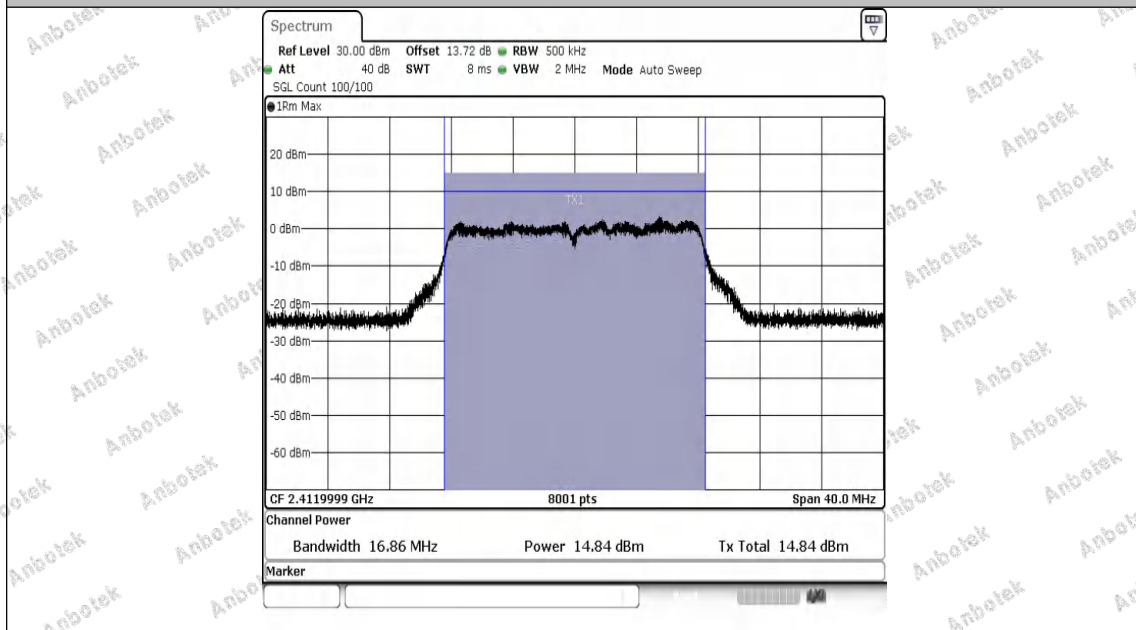


11B-Ant2-2462-PASS



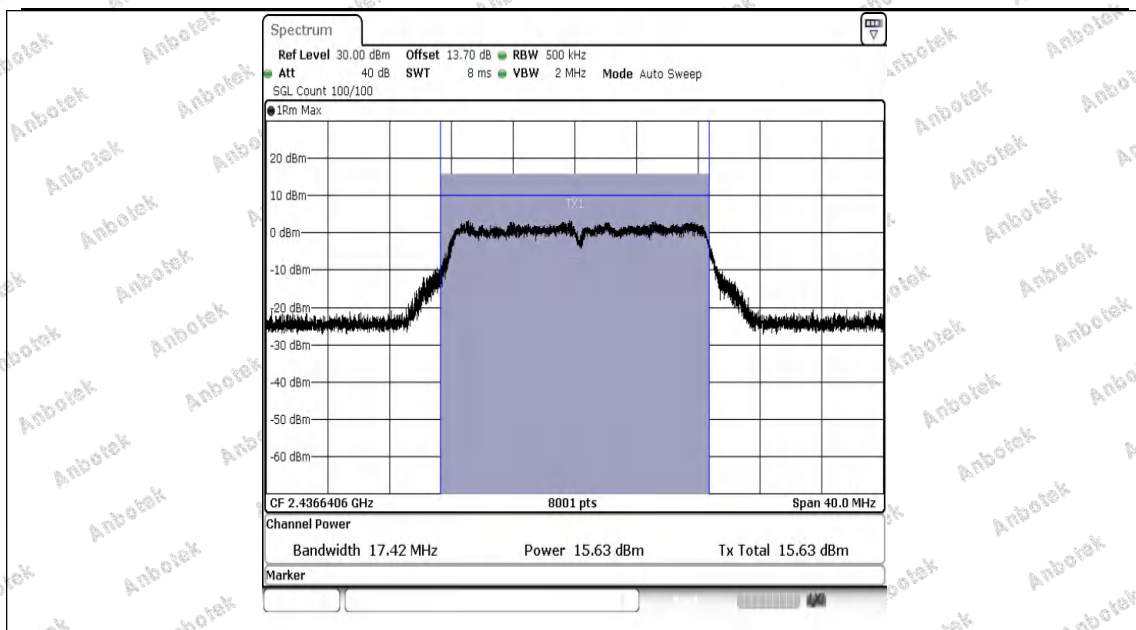


11G-Ant1-2412-PASS

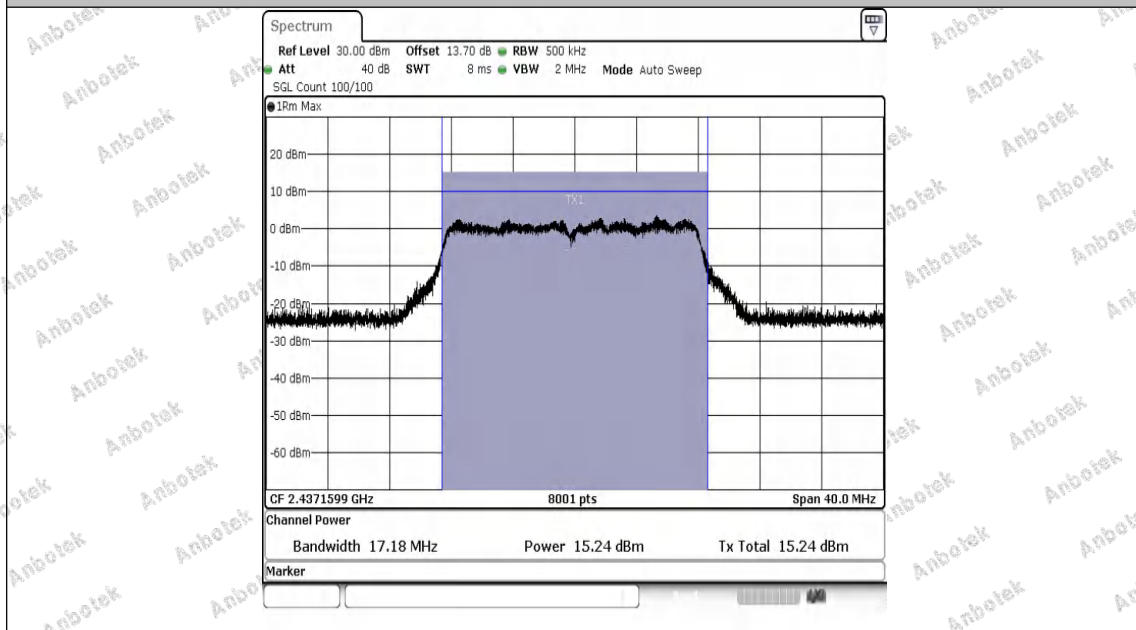


11G-Ant2-2412-PASS



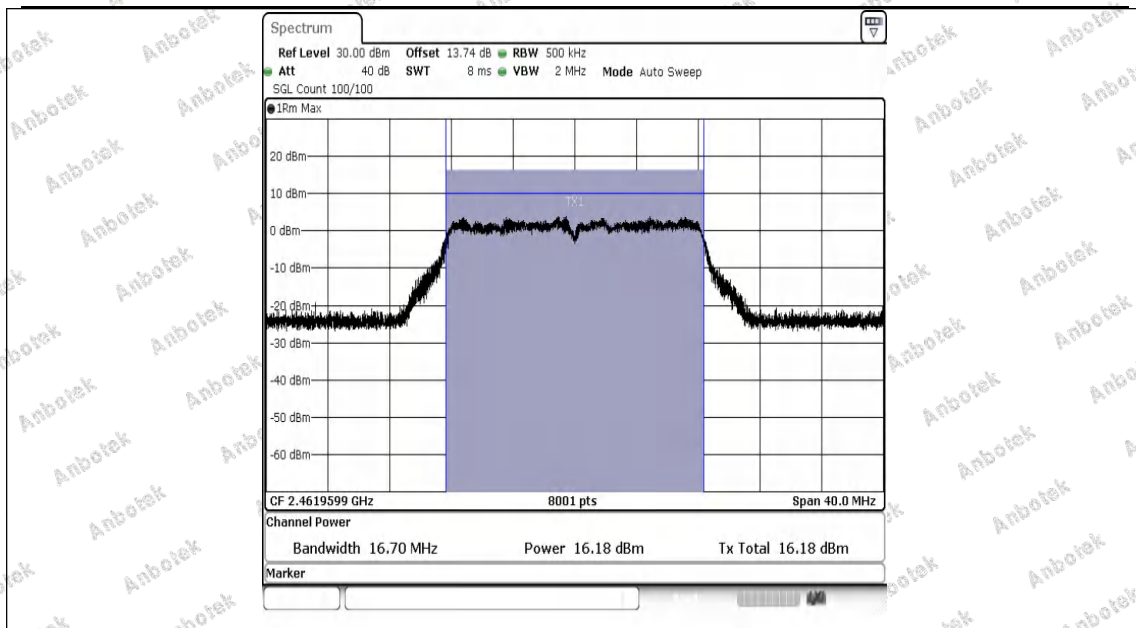


11G-Ant1-2437-PASS

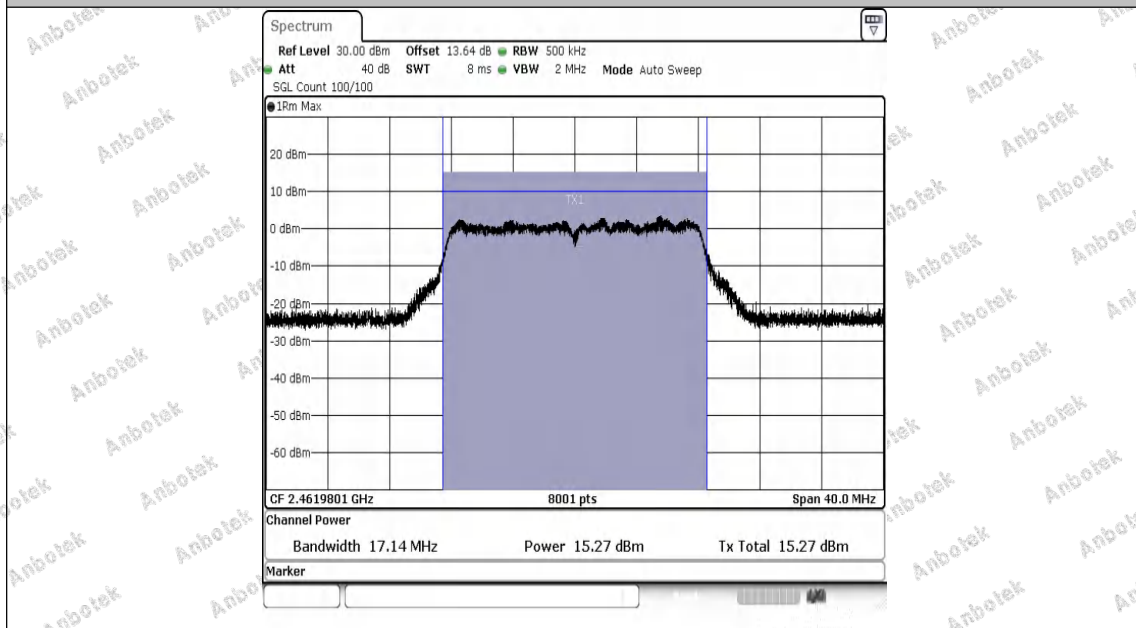


11G-Ant2-2437-PASS



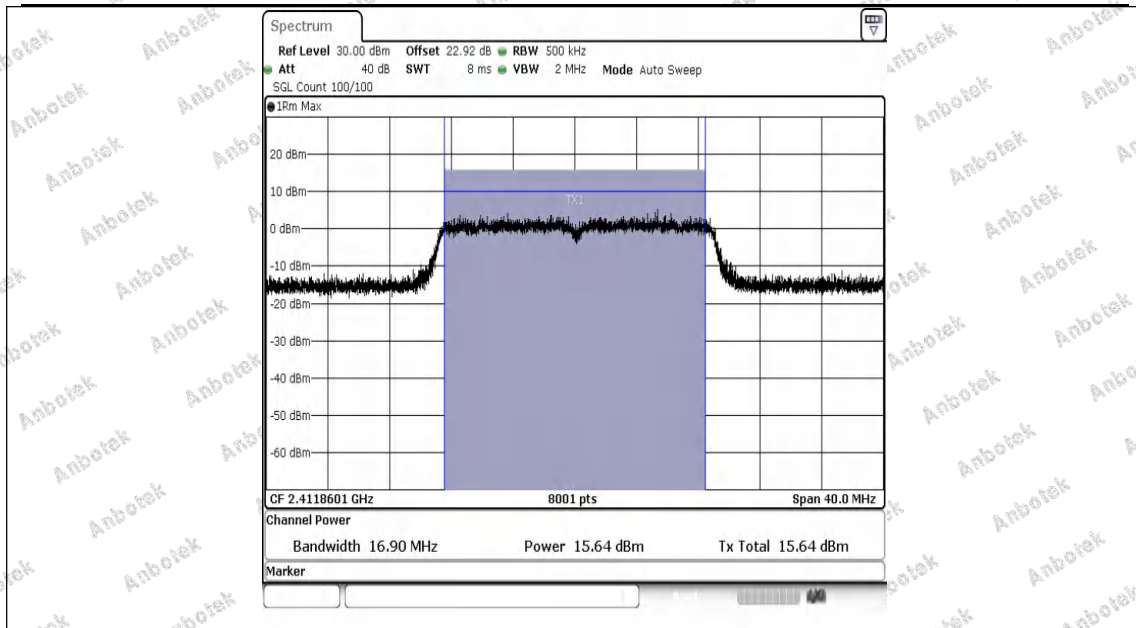


11G-Ant1-2462-PASS

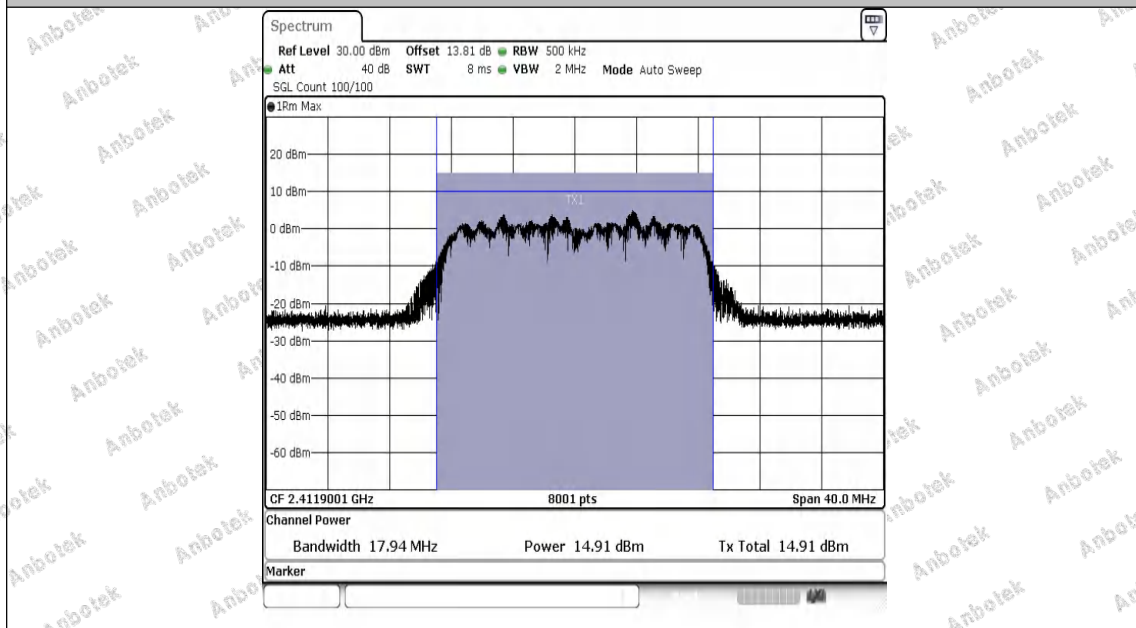


11G-Ant2-2462-PASS



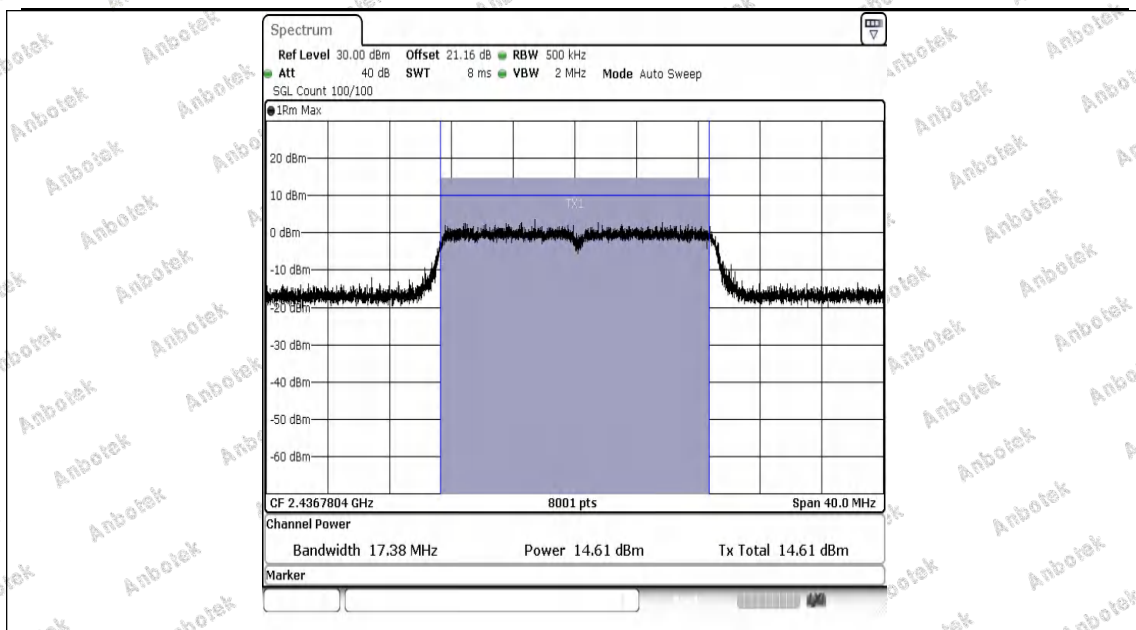


11N20MIMO-Ant1-2412-PASS

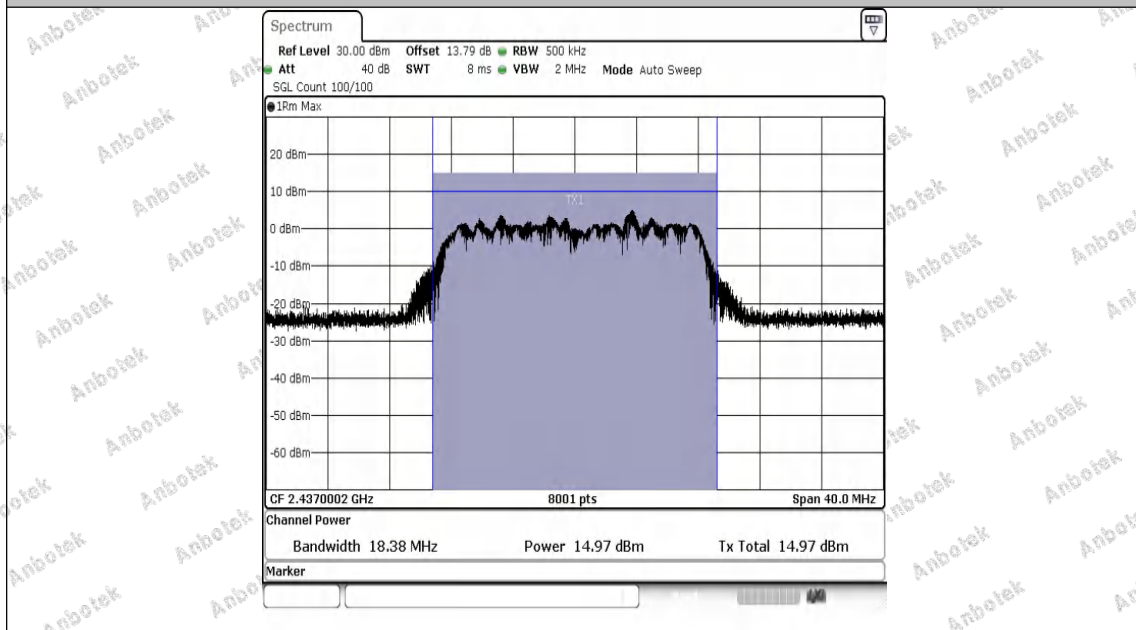


11N20MIMO-Ant2-2412-PASS



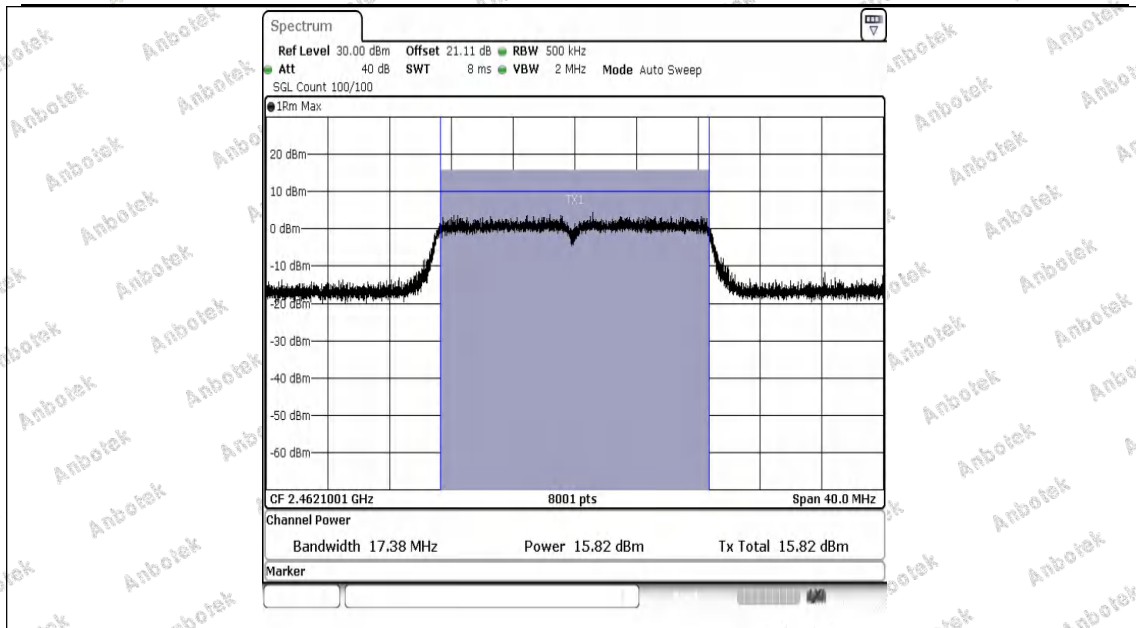


11N20MIMO-Ant1-2437-PASS

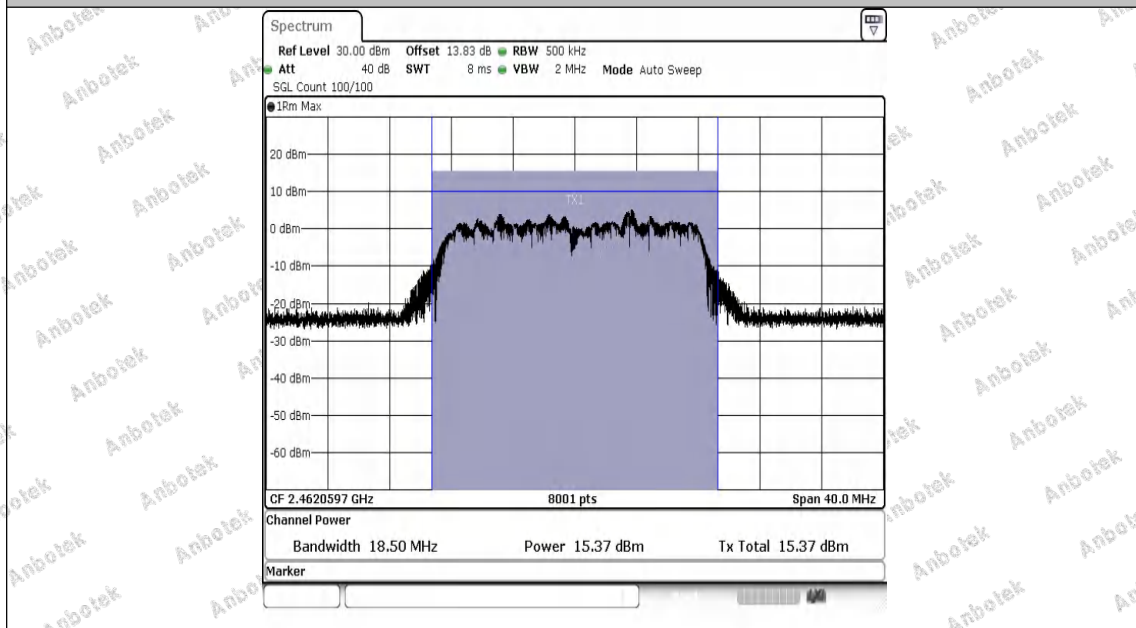


11N20MIMO-Ant2-2437-PASS



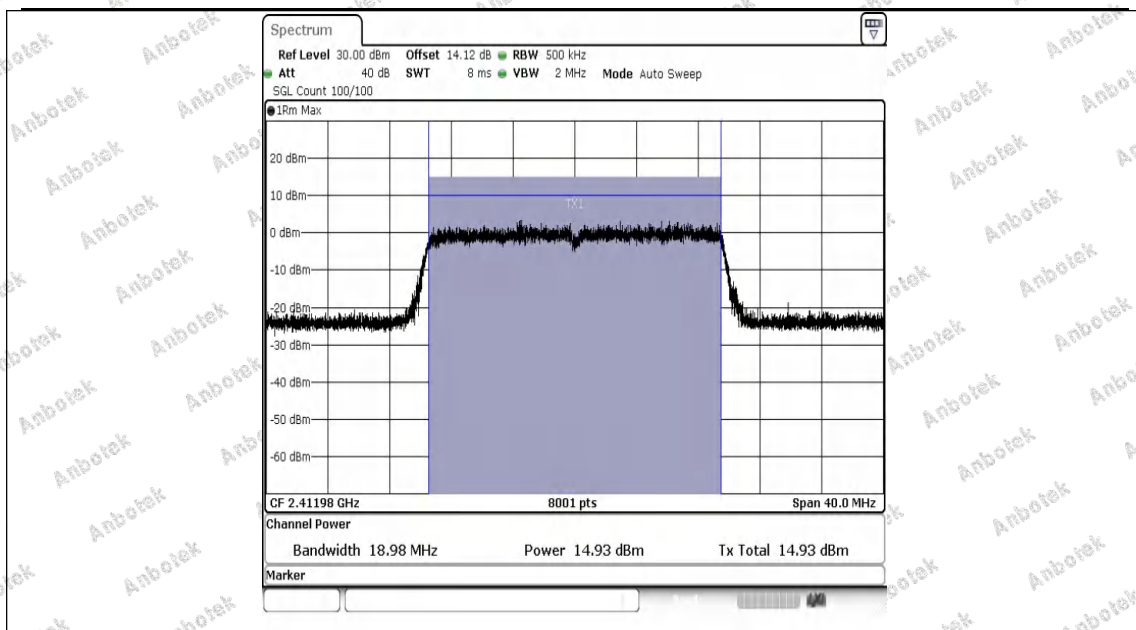


11N20MIMO-Ant1-2462-PASS

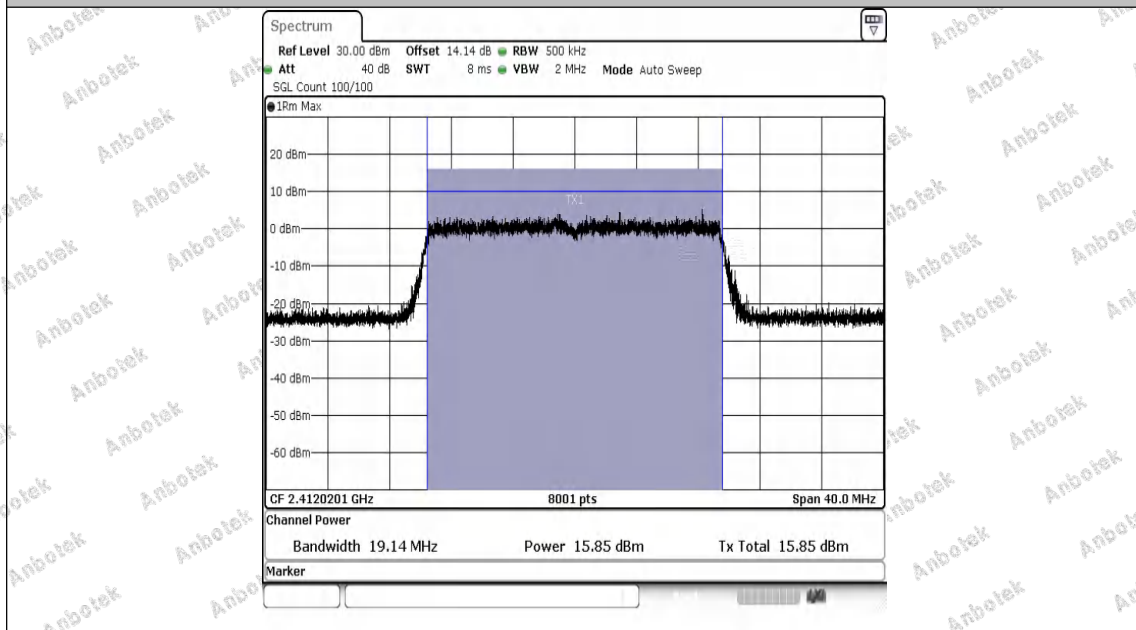


11N20MIMO-Ant2-2462-PASS



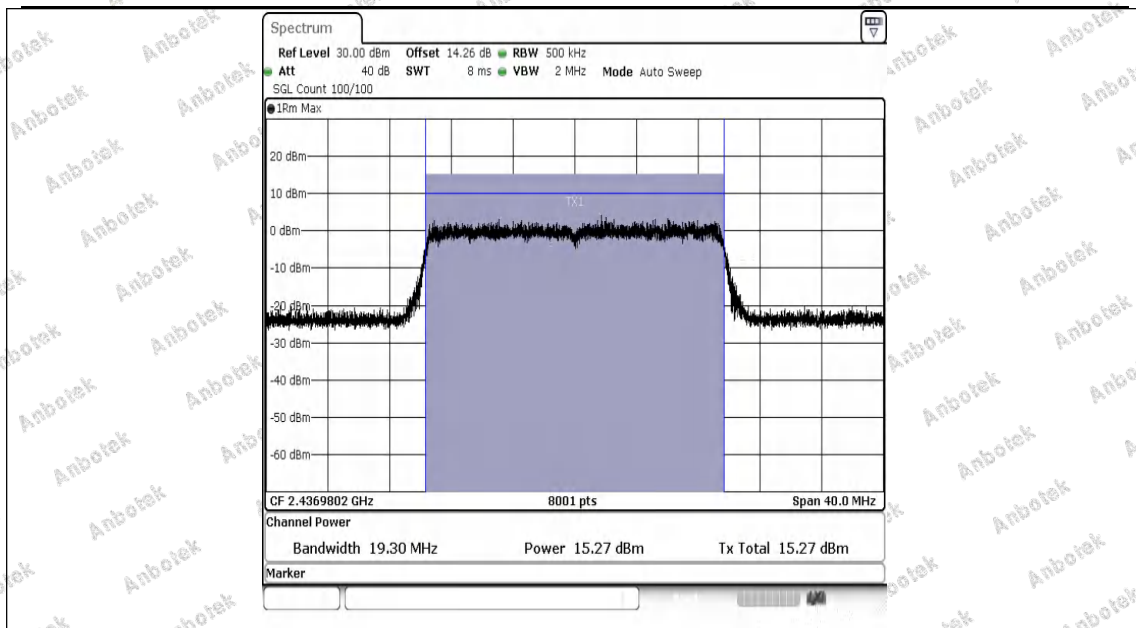


11AX20MIMO-Ant1-2412-PASS

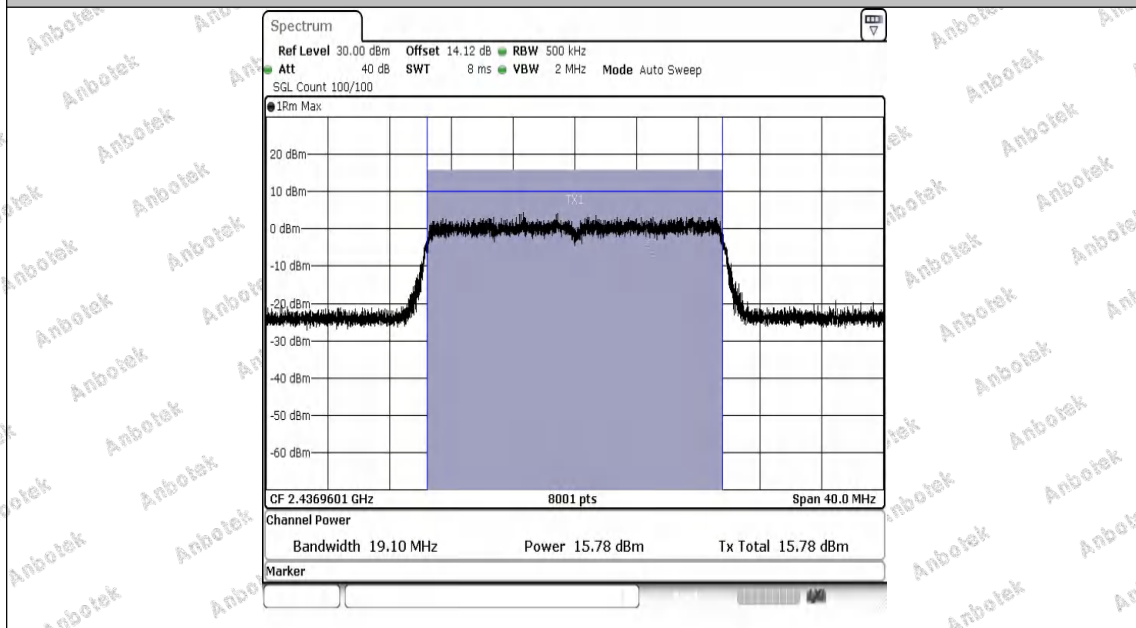


11AX20MIMO-Ant2-2412-PASS



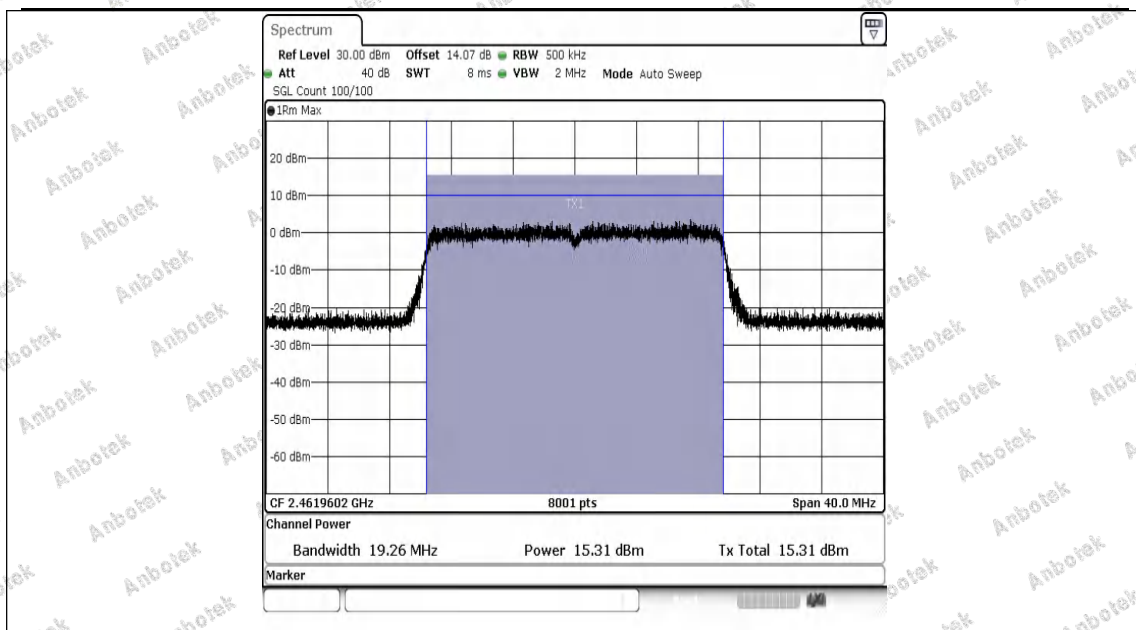


11AX20MIMO-Ant1-2437-PASS

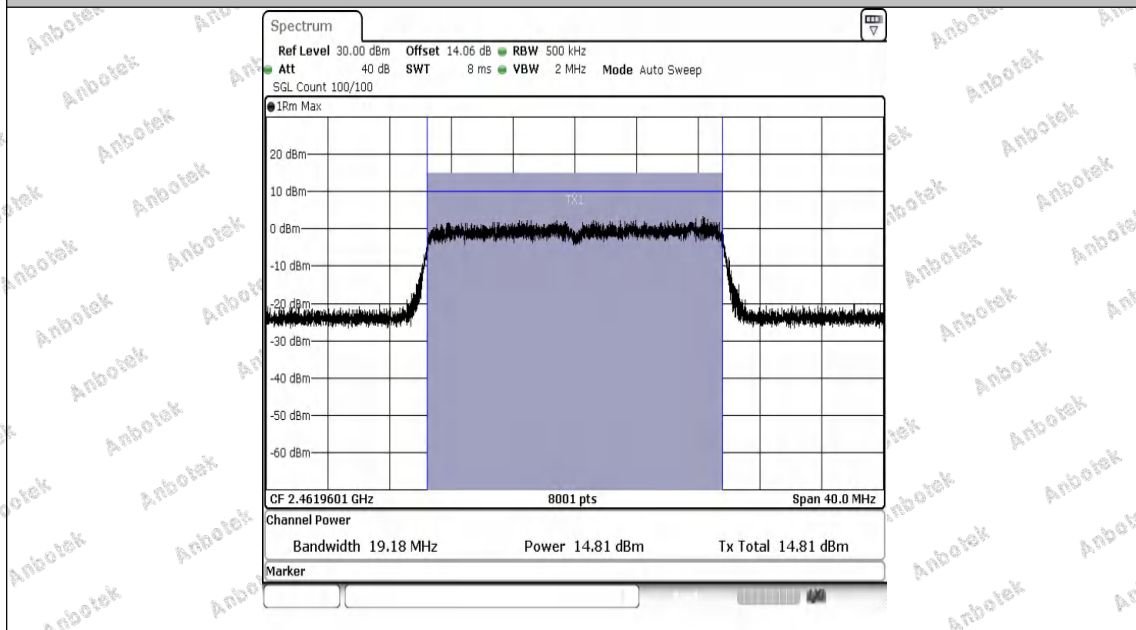


11AX20MIMO-Ant2-2437-PASS





11AX20MIMO-Ant1-2462-PASS



11AX20MIMO-Ant2-2462-PASS



Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result [dBm/30kHz]	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-10.58	-20.58	≤8.00	PASS
11B	Ant2	2412	-10.28	-20.28	≤8.00	PASS
11B	Ant1	2437	-10.05	-20.05	≤8.00	PASS
11B	Ant2	2437	-10.6	-20.60	≤8.00	PASS
11B	Ant1	2462	-10.51	-20.51	≤8.00	PASS
11B	Ant2	2462	-10.14	-20.14	≤8.00	PASS
11G	Ant1	2412	-13.17	-23.17	≤8.00	PASS
11G	Ant2	2412	-13.83	-23.83	≤8.00	PASS
11G	Ant1	2437	-13.13	-23.13	≤8.00	PASS
11G	Ant2	2437	-14	-24.00	≤8.00	PASS
11G	Ant1	2462	-13.03	-23.03	≤8.00	PASS
11G	Ant2	2462	-14.83	-24.83	≤8.00	PASS
11N20MIMO	Ant1	2412	-11.72	-21.72	≤8.00	PASS
11N20MIMO	Ant2	2412	-14.06	-24.06	≤8.00	PASS
11N20MIMO	total	2412	-9.72	-19.72	≤8.00	PASS
11N20MIMO	Ant1	2437	-14.24	-24.24	≤8.00	PASS
11N20MIMO	Ant2	2437	-14.53	-24.53	≤8.00	PASS
11N20MIMO	total	2437	-11.37	-21.37	≤8.00	PASS
11N20MIMO	Ant1	2462	-14.93	-24.93	≤8.00	PASS
11N20MIMO	Ant2	2462	-14.66	-24.66	≤8.00	PASS
11N20MIMO	total	2462	-11.78	-21.78	≤8.00	PASS
11AX20MIMO	Ant1	2412	-13.42	-23.42	≤8.00	PASS
11AX20MIMO	Ant2	2412	-15.65	-25.65	≤8.00	PASS
11AX20MIMO	total	2412	-11.38	-21.38	≤8.00	PASS
11AX20MIMO	Ant1	2437	-14.39	-24.39	≤8.00	PASS
11AX20MIMO	Ant2	2437	-15.17	-25.17	≤8.00	PASS
11AX20MIMO	total	2437	-11.75	-21.75	≤8.00	PASS
11AX20MIMO	Ant1	2462	-13.62	-23.62	≤8.00	PASS
11AX20MIMO	Ant2	2462	-14.84	-24.84	≤8.00	PASS
11AX20MIMO	total	2462	-11.18	-21.18	≤8.00	PASS

Note:

1. The Duty Cycle Factor($10 \cdot \log(1/D)$) and cable loss are compensated in the graph.
2. $PSD(dBm/3kHz) = PSD(dBm/30kHz) - (10 \cdot \log(30/3))$
3. As Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}]$ dBi = 5.76 < 6dBi, so limit=8dBm/3kHz.
4. NOTE: MIMO = $10 \cdot \log((10^{ANT1/10}) + 10^{(ANT2/10)})$

Shenzhen Anbotek Compliance Laboratory Limited

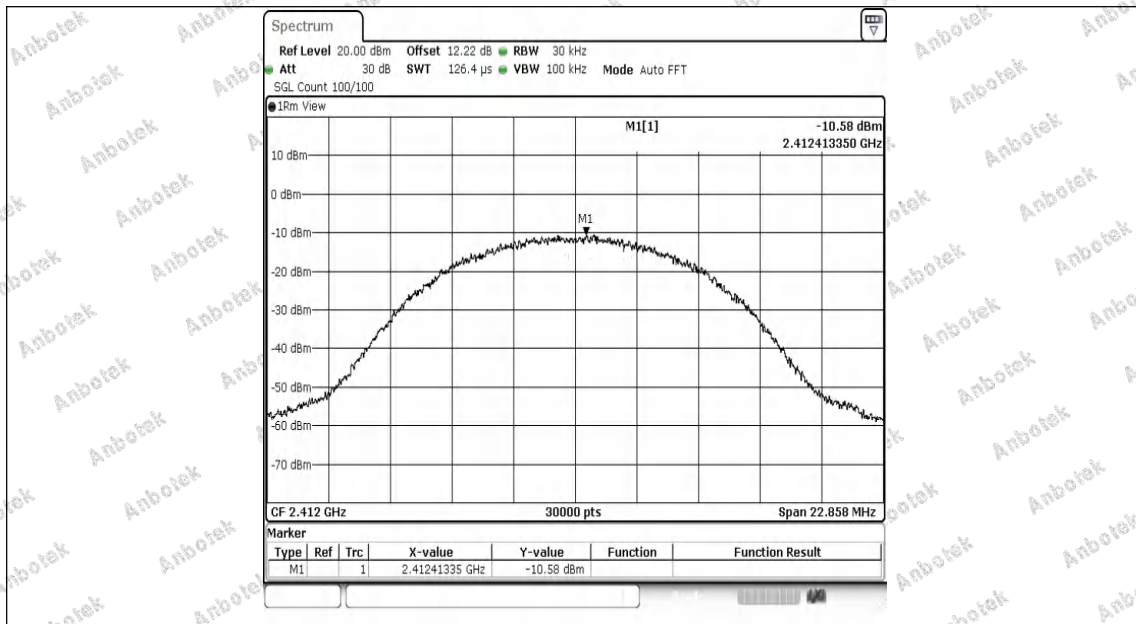
Address: Sogood Industrial Zone Laboratory & 1/F. of Building D, Sogood Science and Technology Park, Sanwei Community, Hahgcheng Subdistrict, Bao'an District, Shenzhen, Guangdong, China.
Tel: (86)0755-26066440 Email: service@anbotek.com



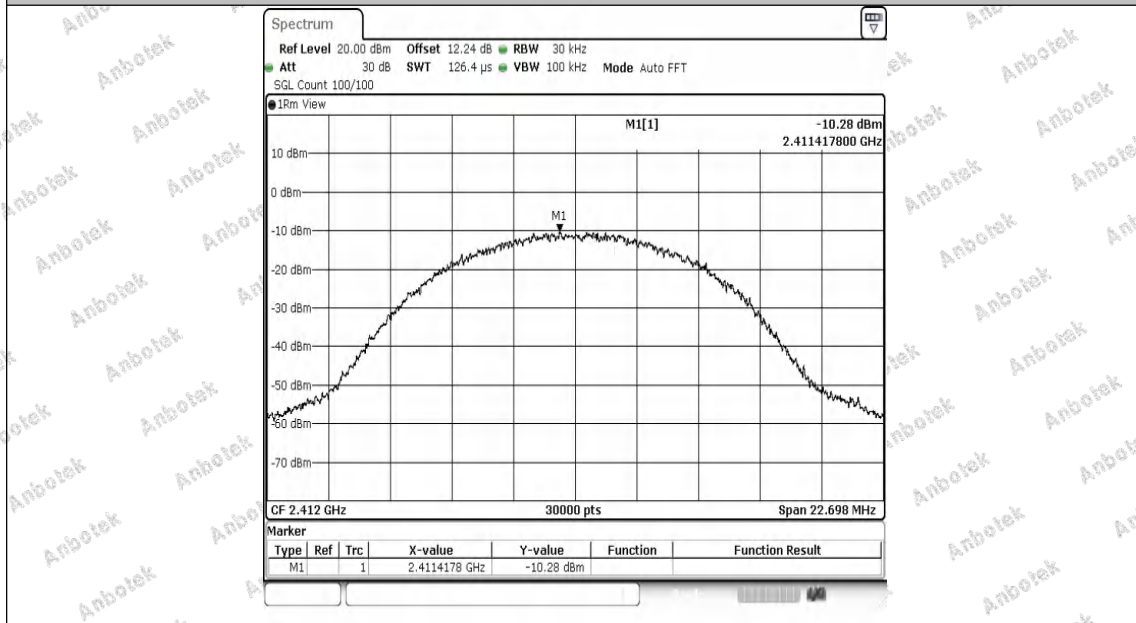
Hotline
400-003-0500
www.anbotek.com



Test Graphs

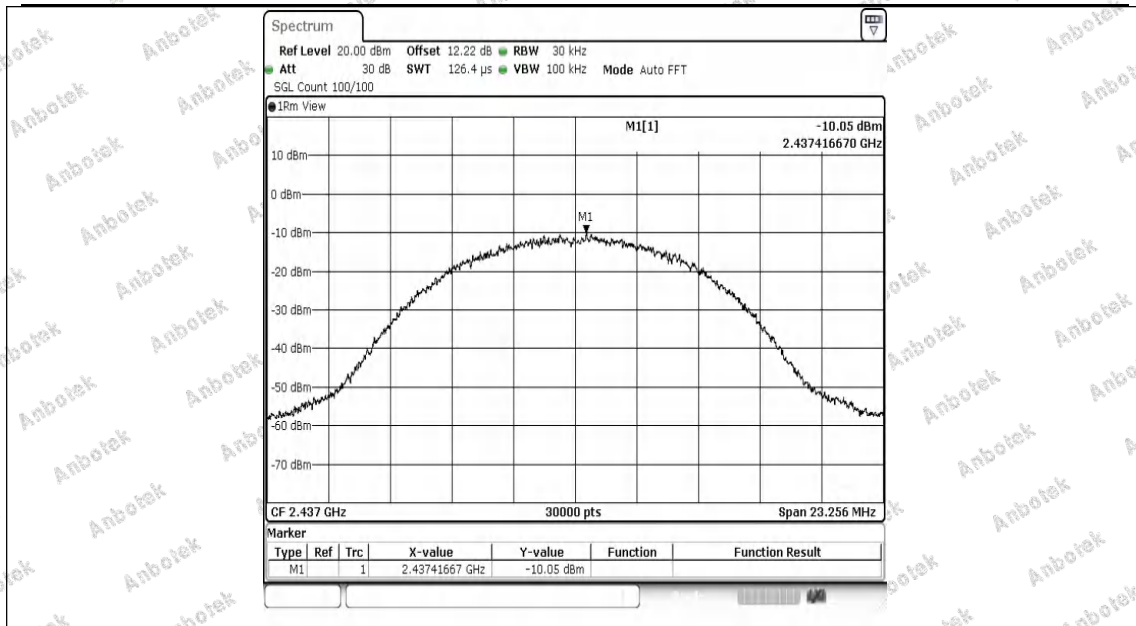


11B-Ant1-2412-PASS

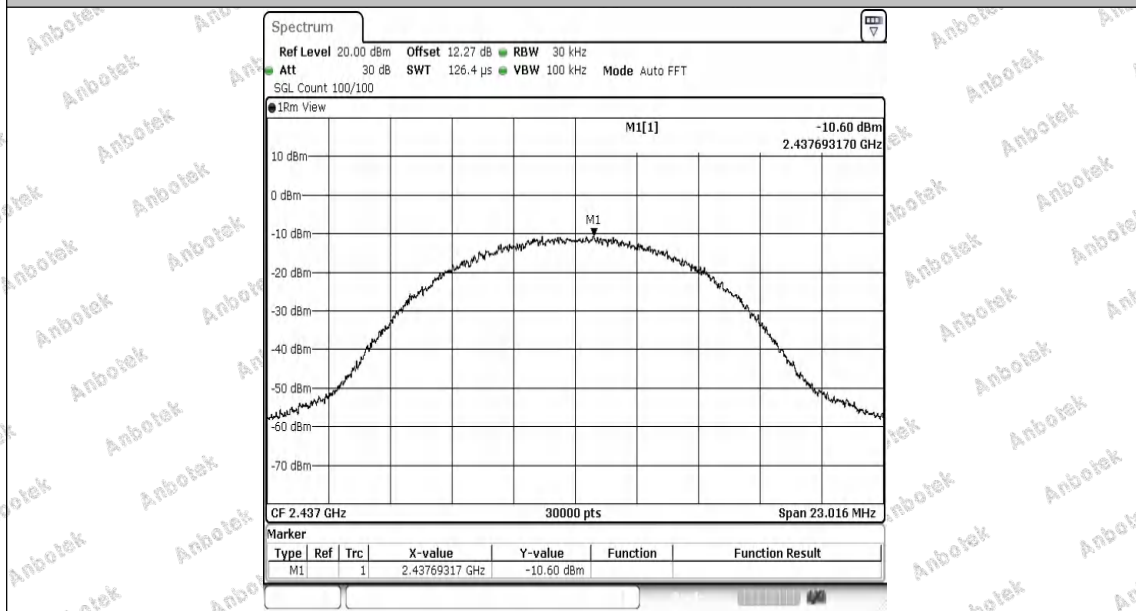


11B-Ant2-2412-PASS



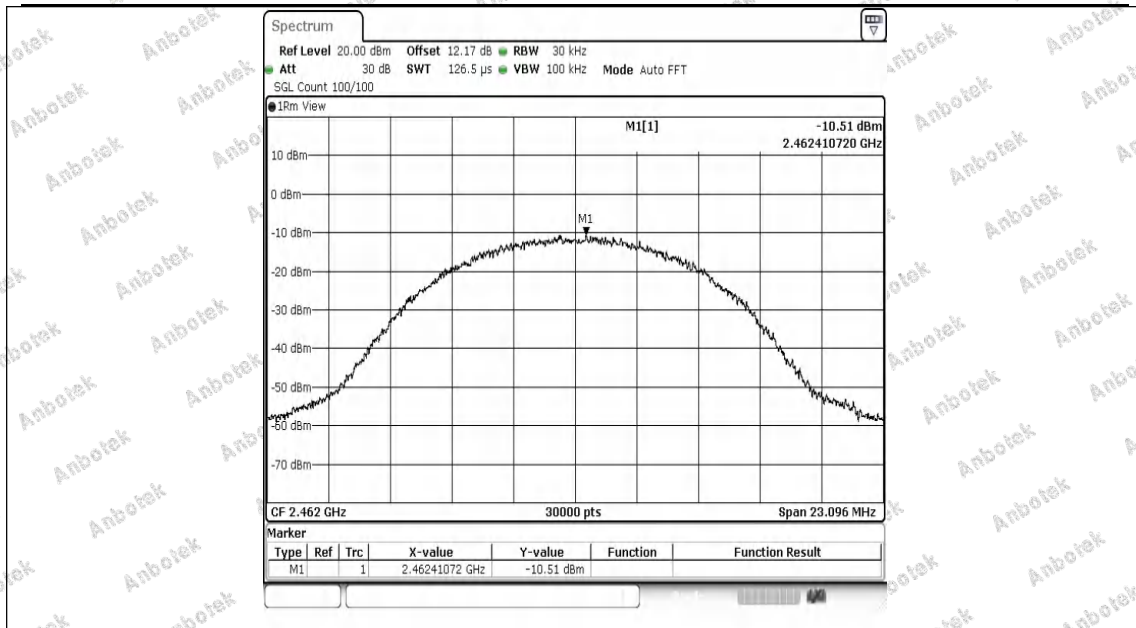


11B-Ant1-2437-PASS

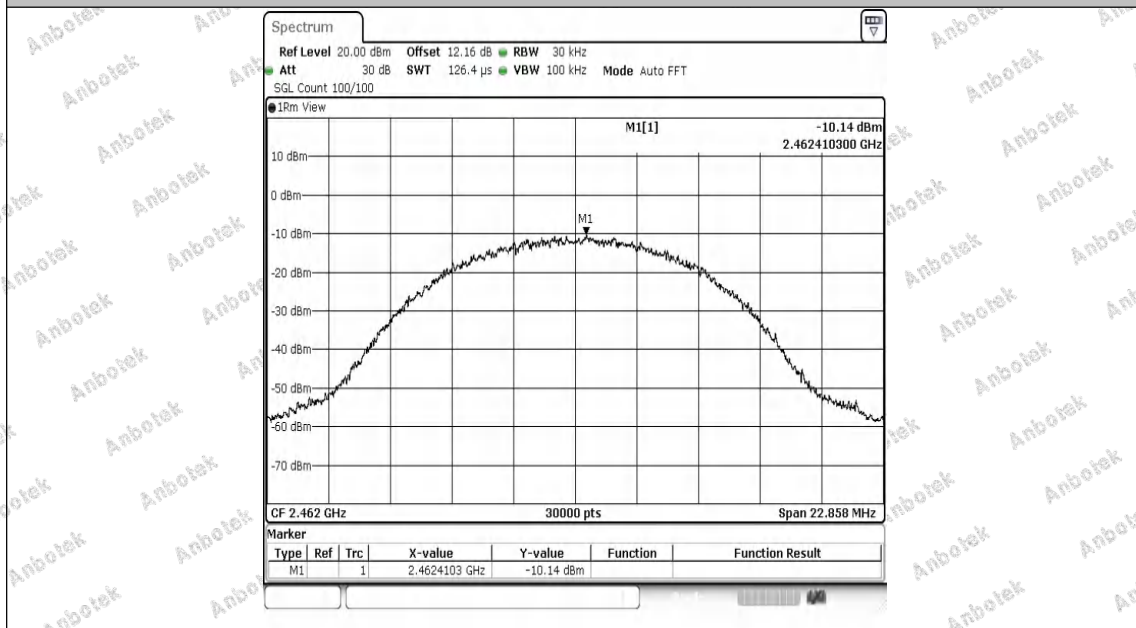


11B-Ant2-2437-PASS



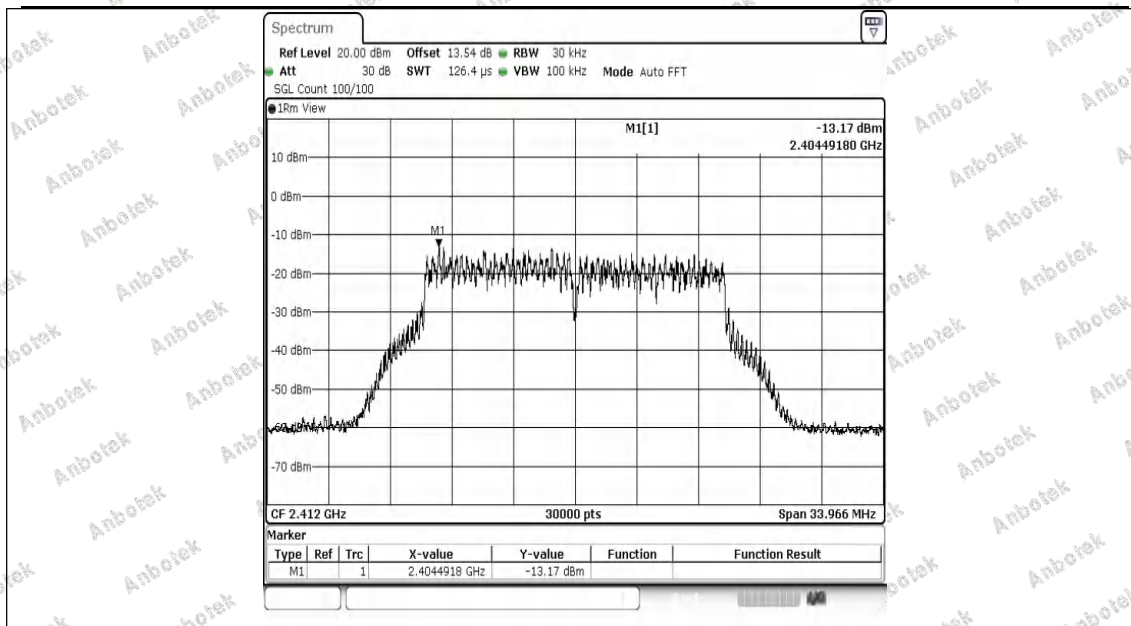


11B-Ant1-2462-PASS

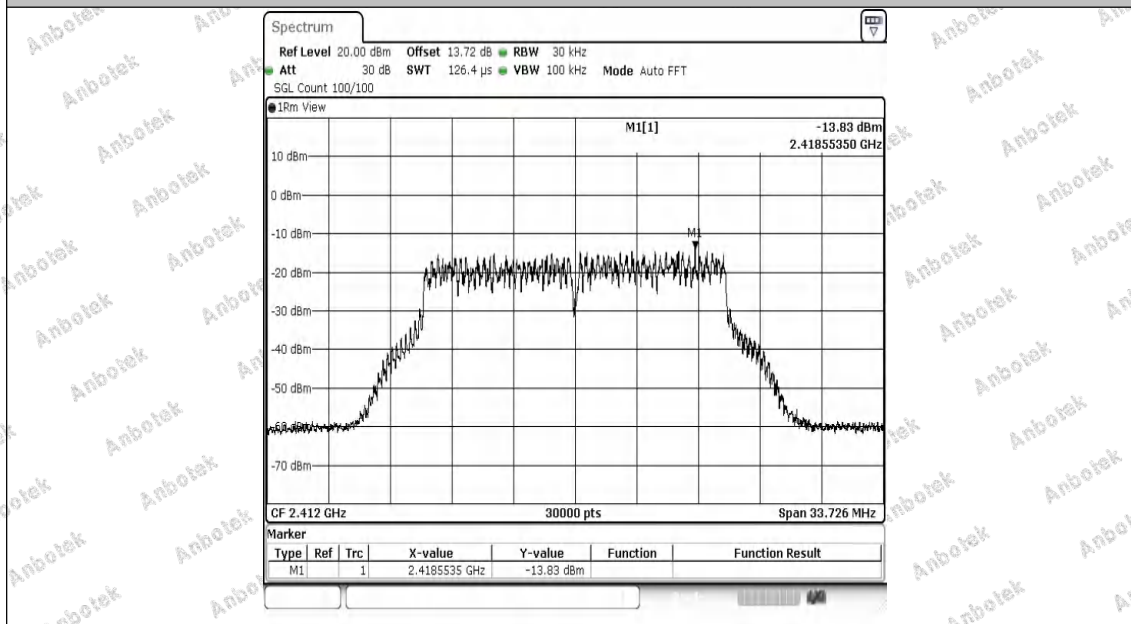


11B-Ant2-2462-PASS



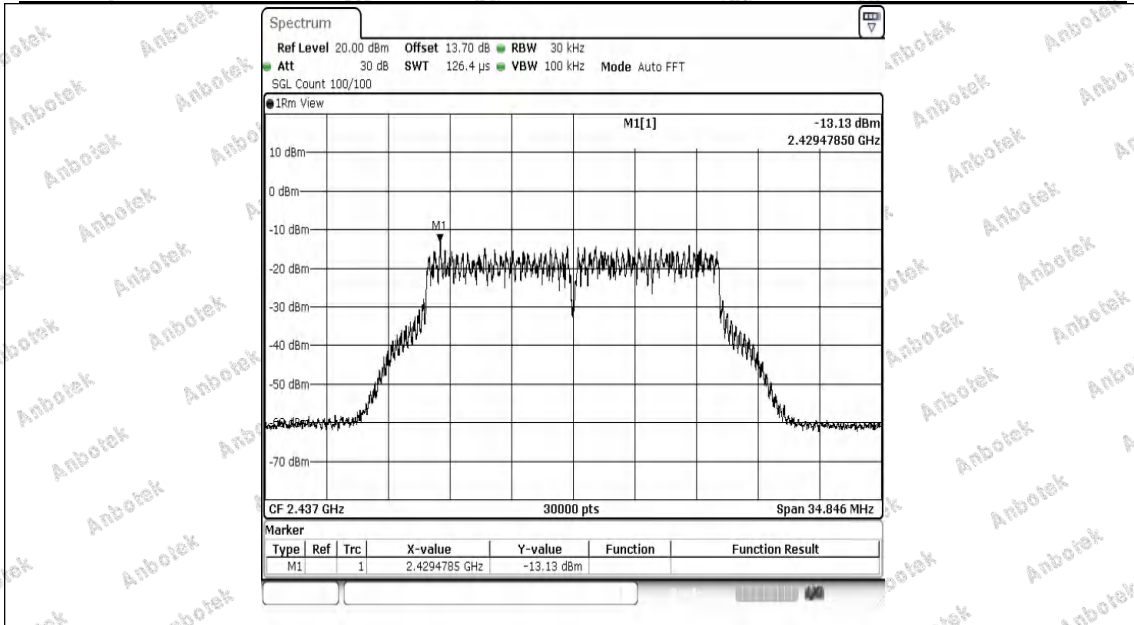


11G-Ant1-2412-PASS

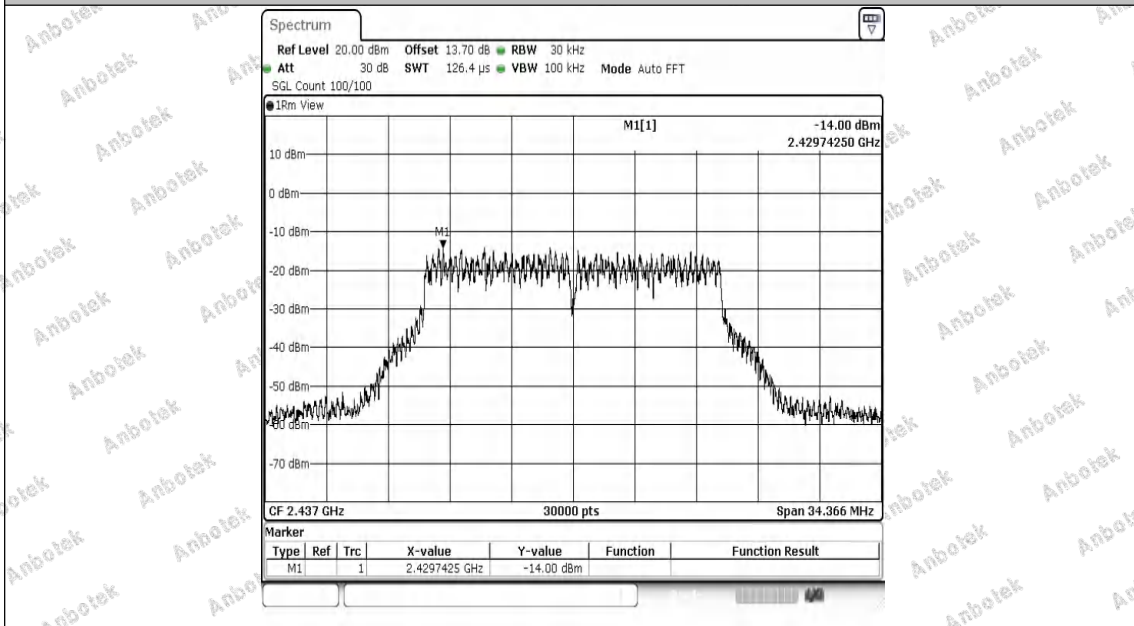


11G-Ant2-2412-PASS



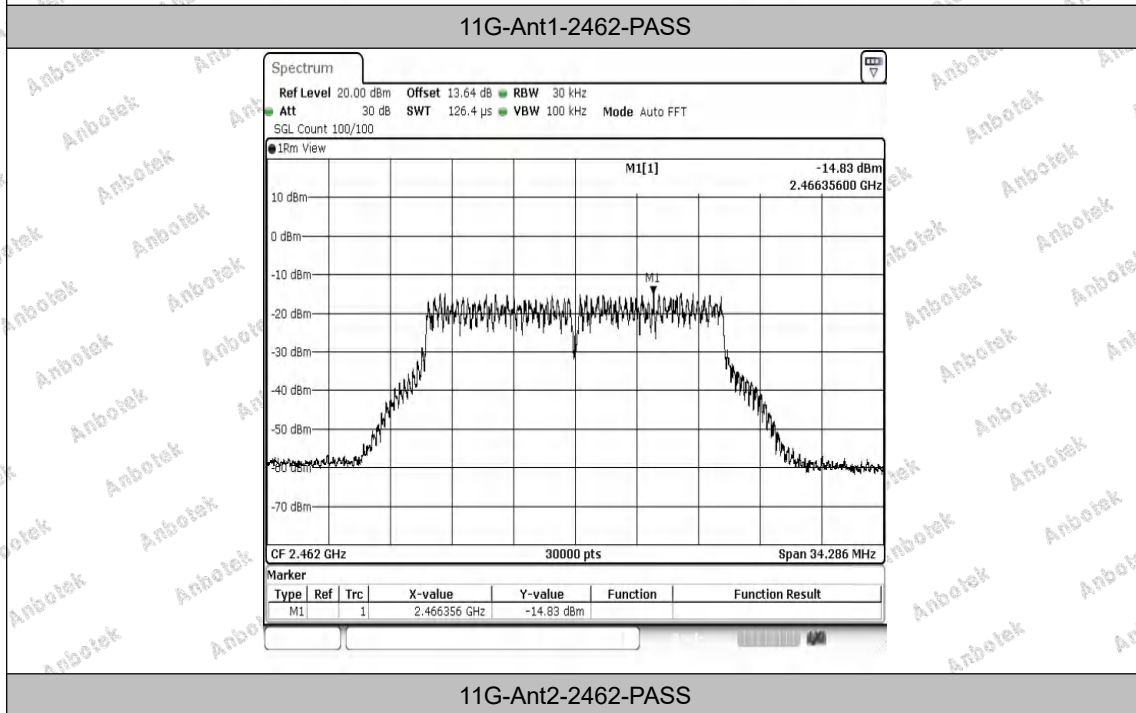
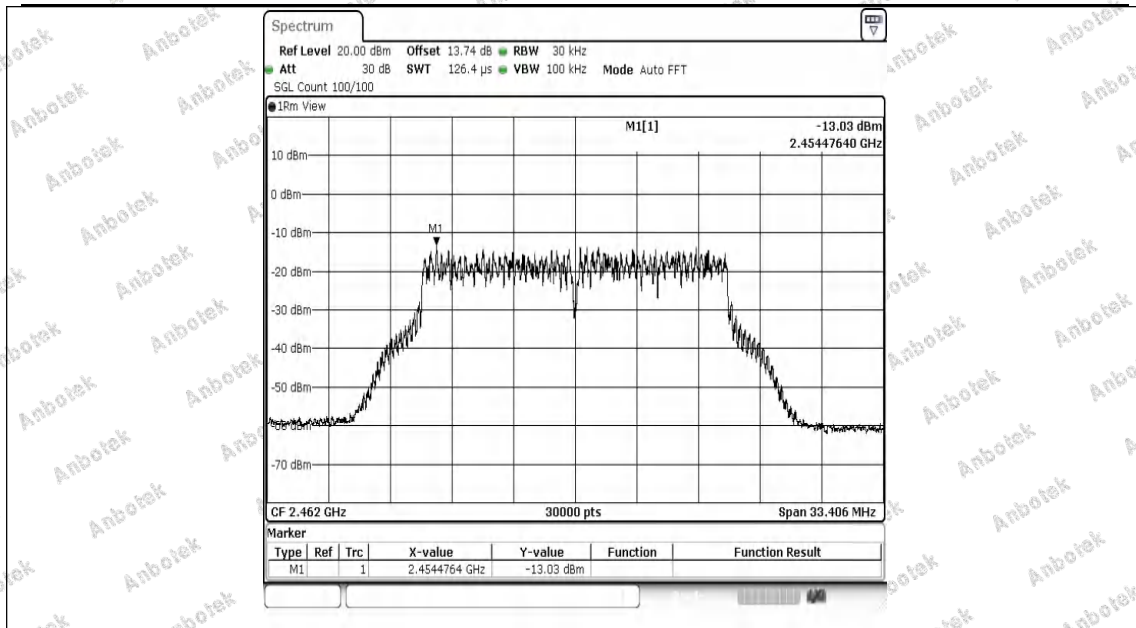


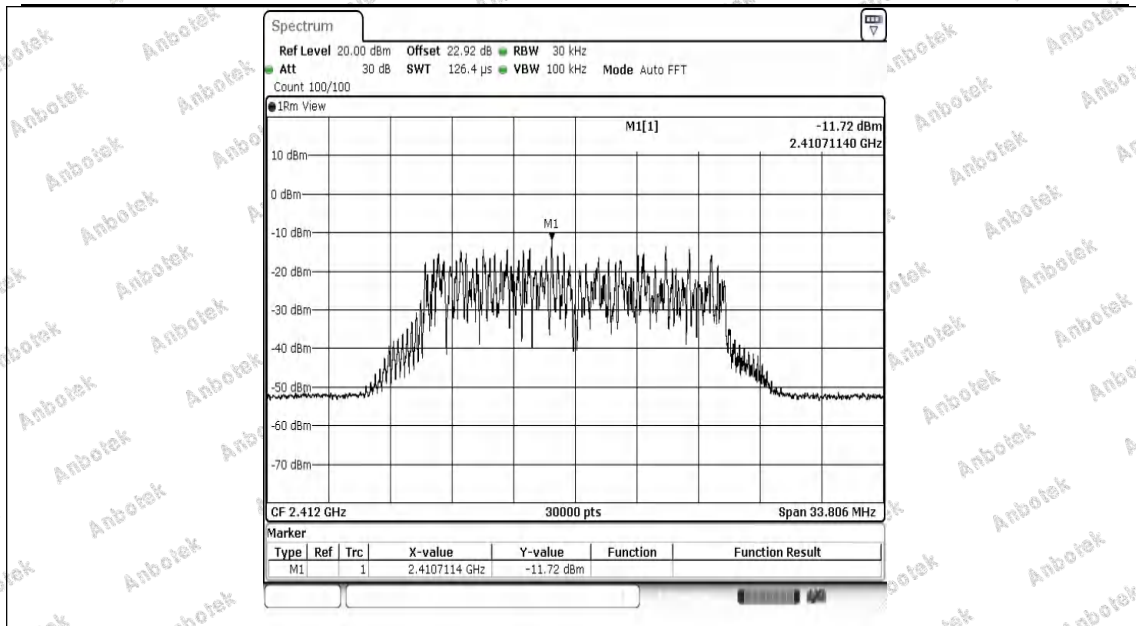
11G-Ant1-2437-PASS



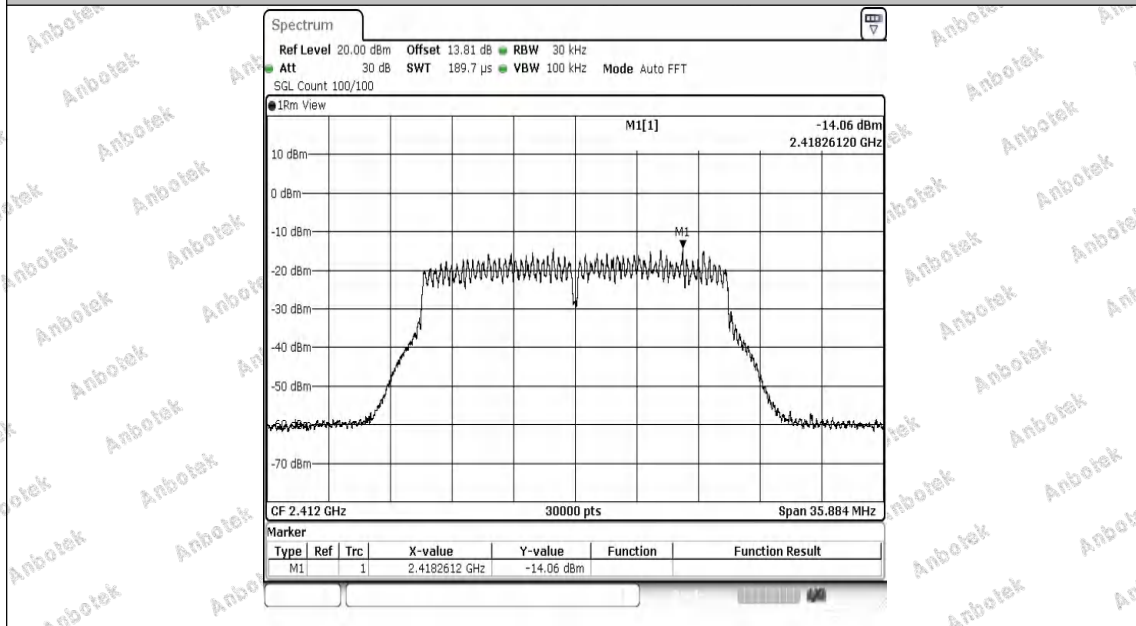
11G-Ant2-2437-PASS





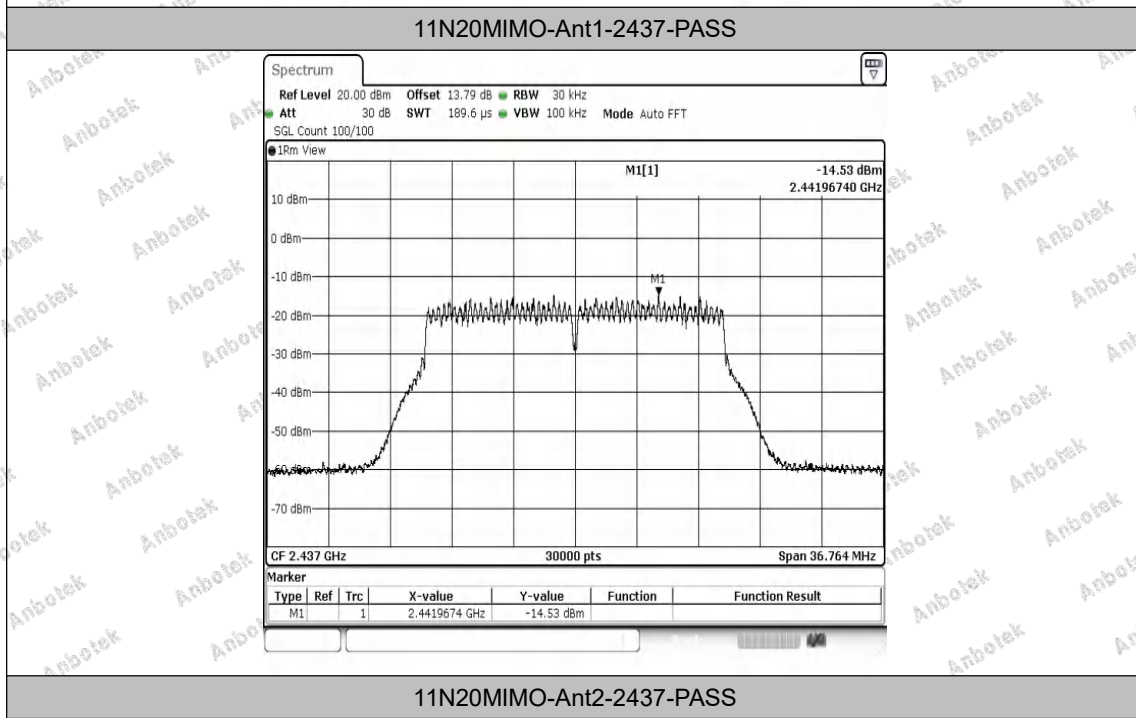
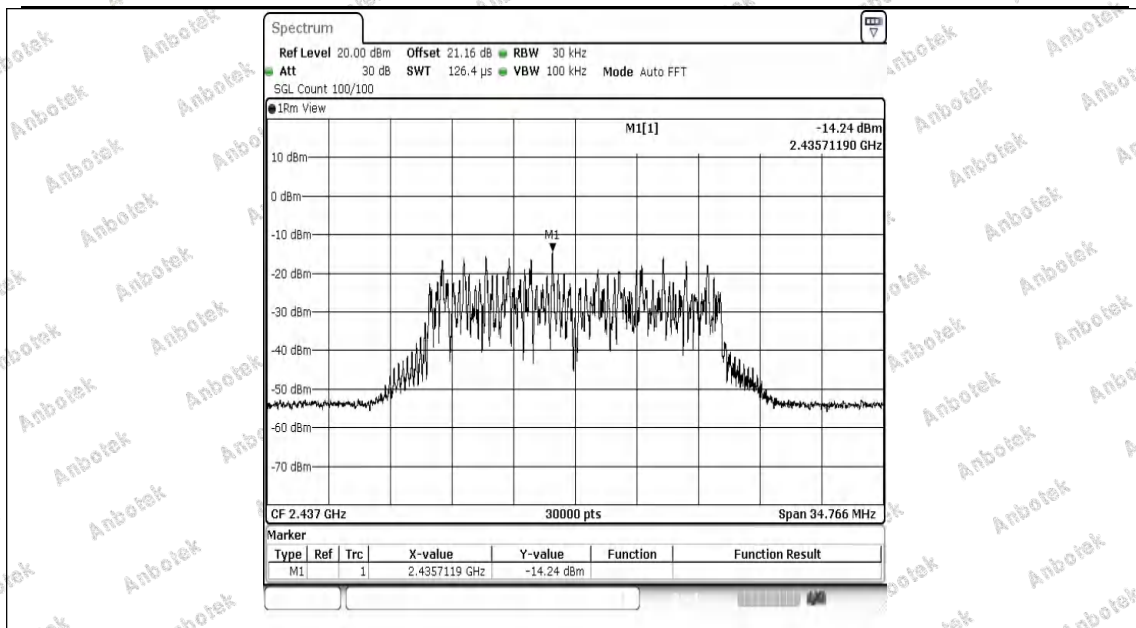


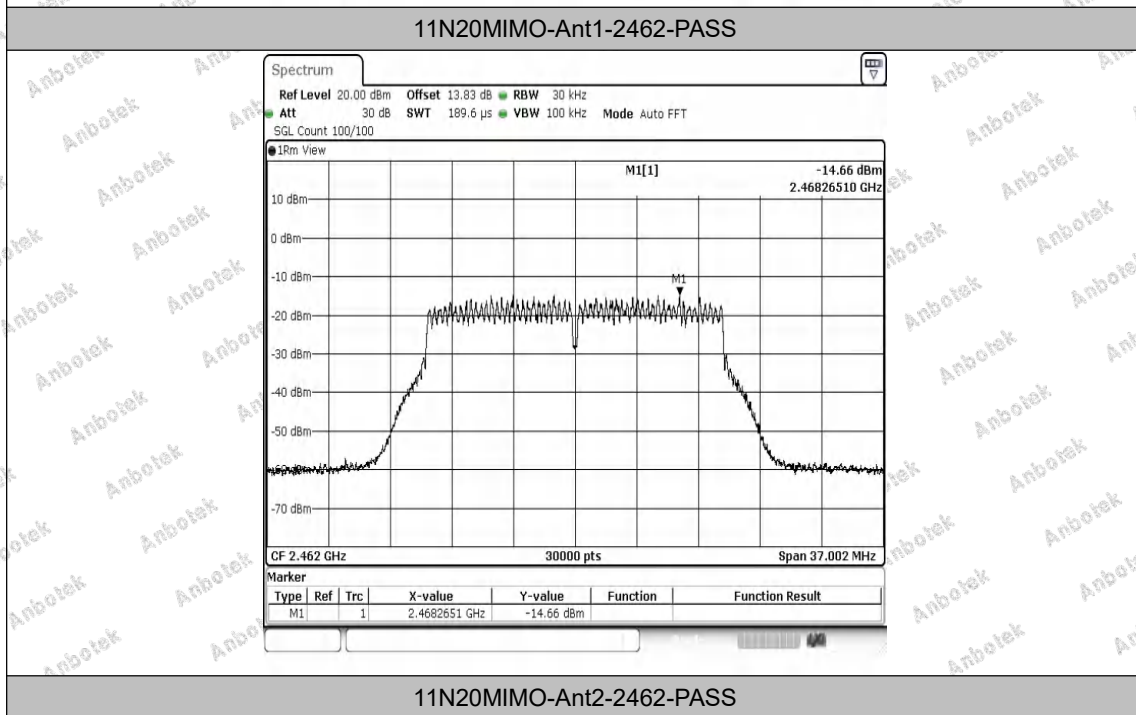
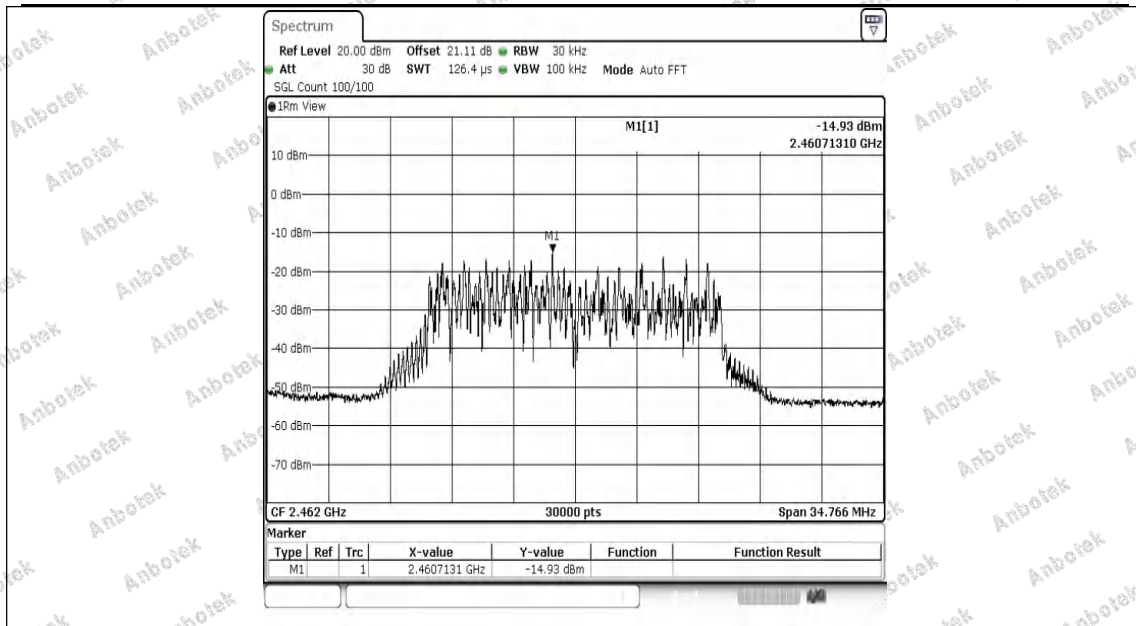
11N20MIMO-Ant1-2412-PASS

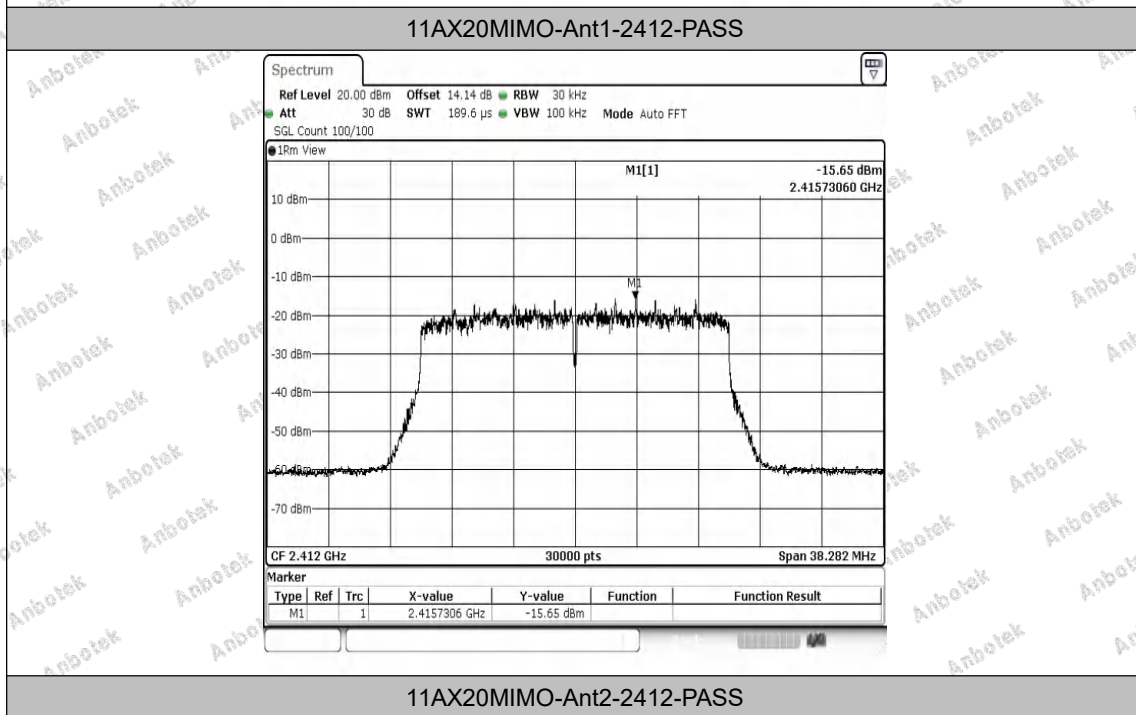
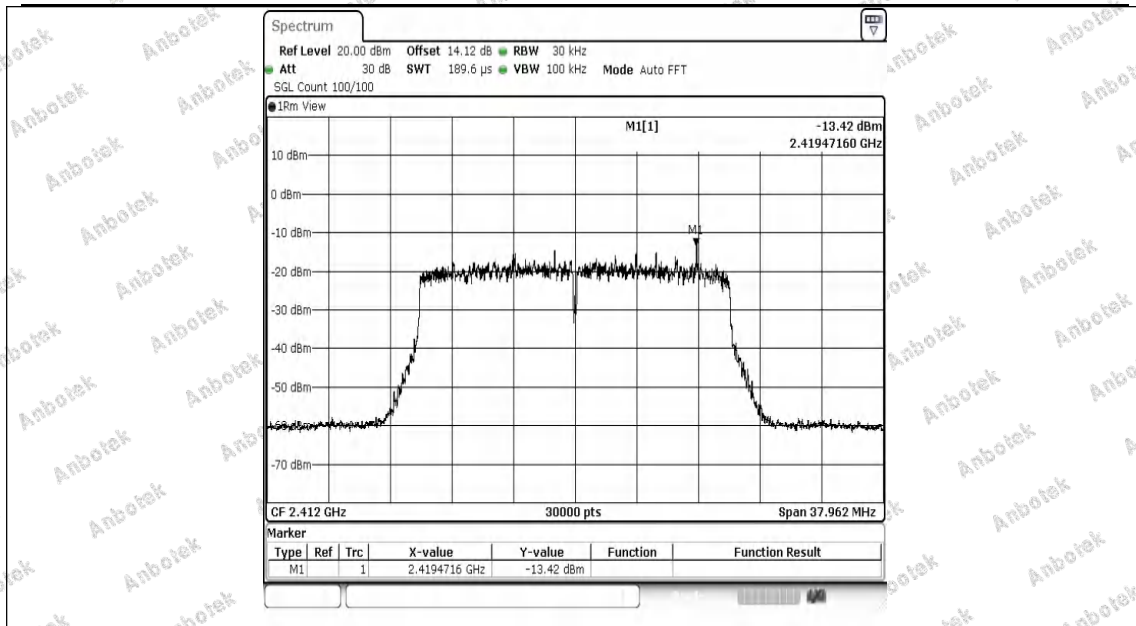


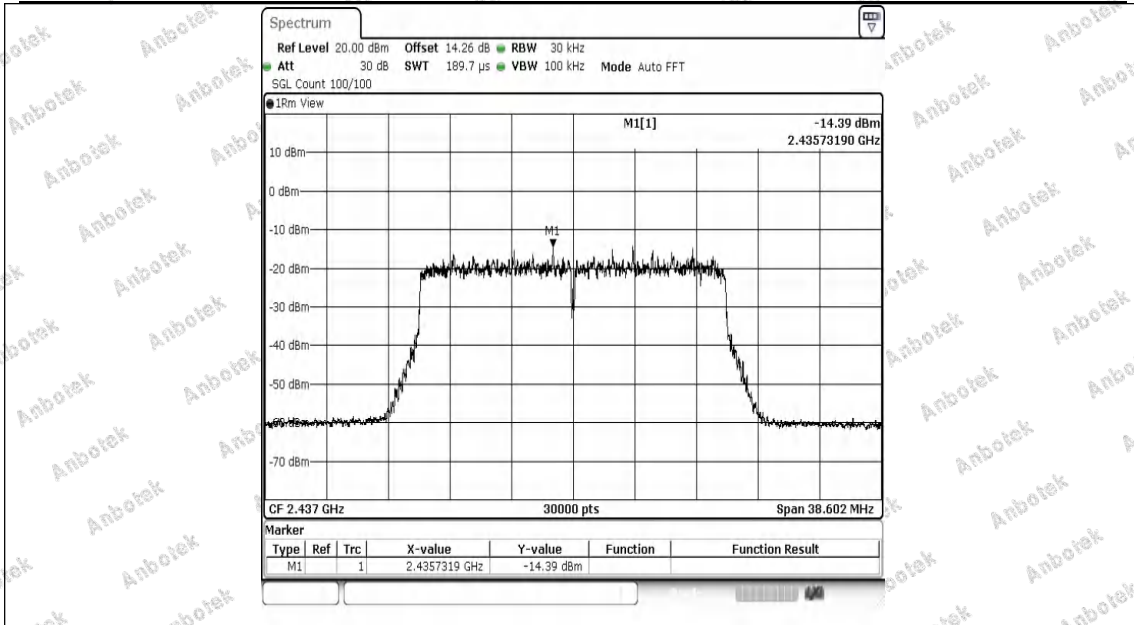
11N20MIMO-Ant2-2412-PASS



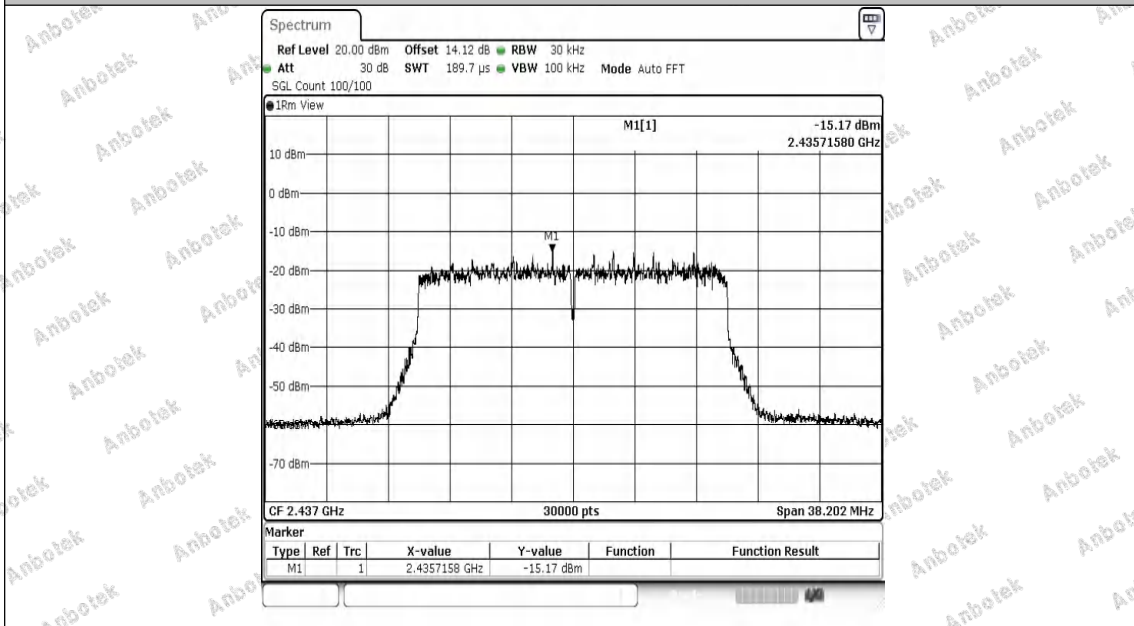






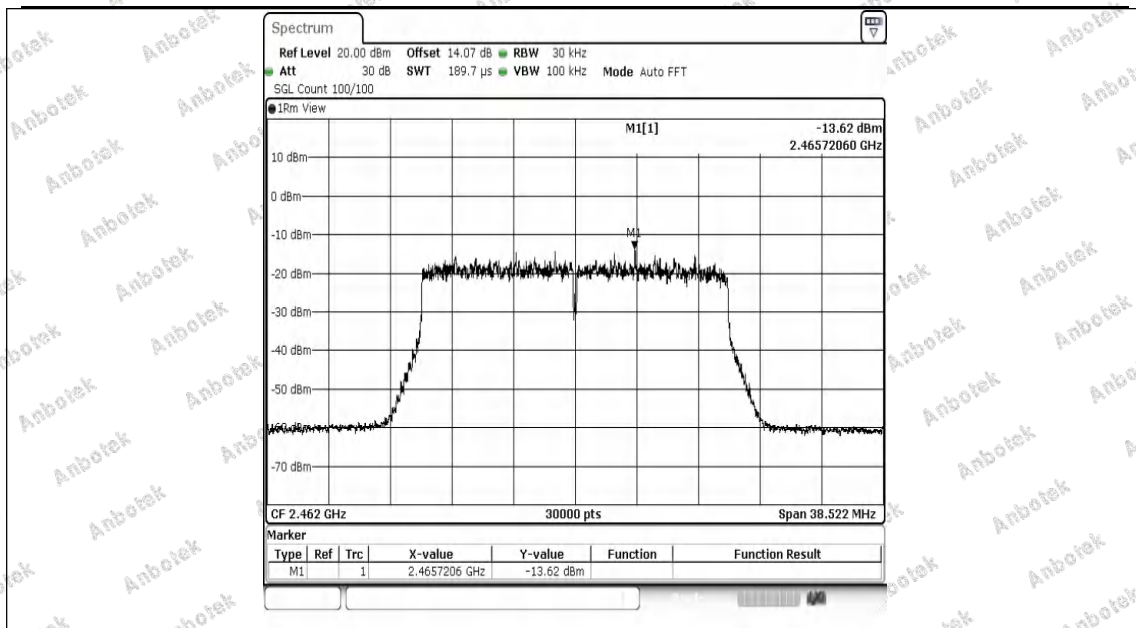


11AX20MIMO-Ant1-2437-PASS

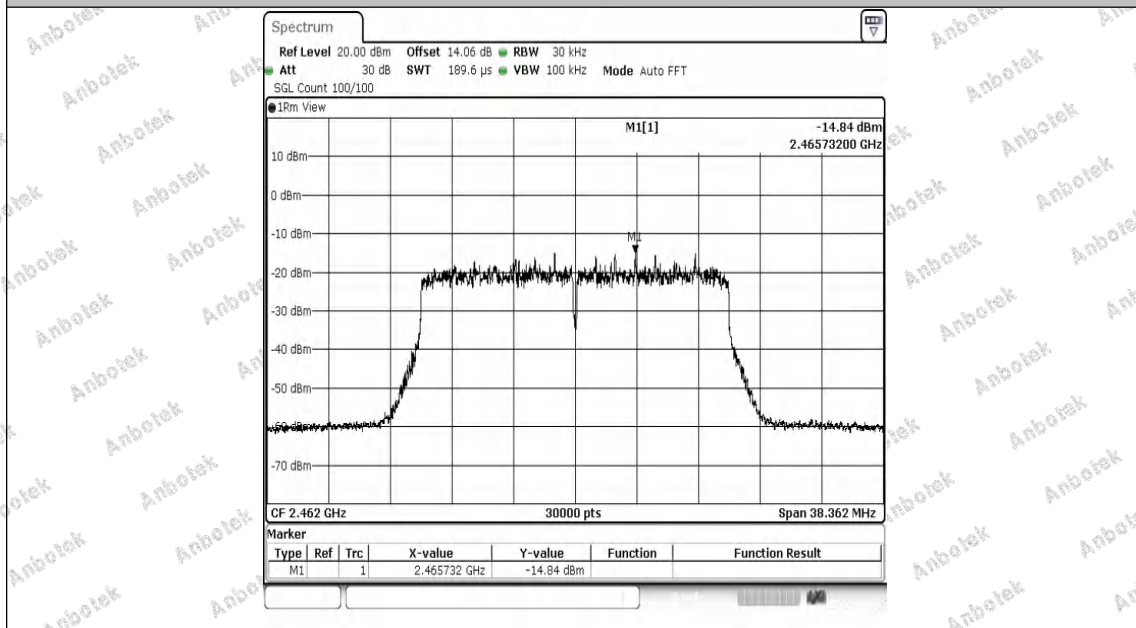


11AX20MIMO-Ant2-2437-PASS





11AX20MIMO-Ant1-2462-PASS



11AX20MIMO-Ant2-2462-PASS



Appendix E: Band edge measurements

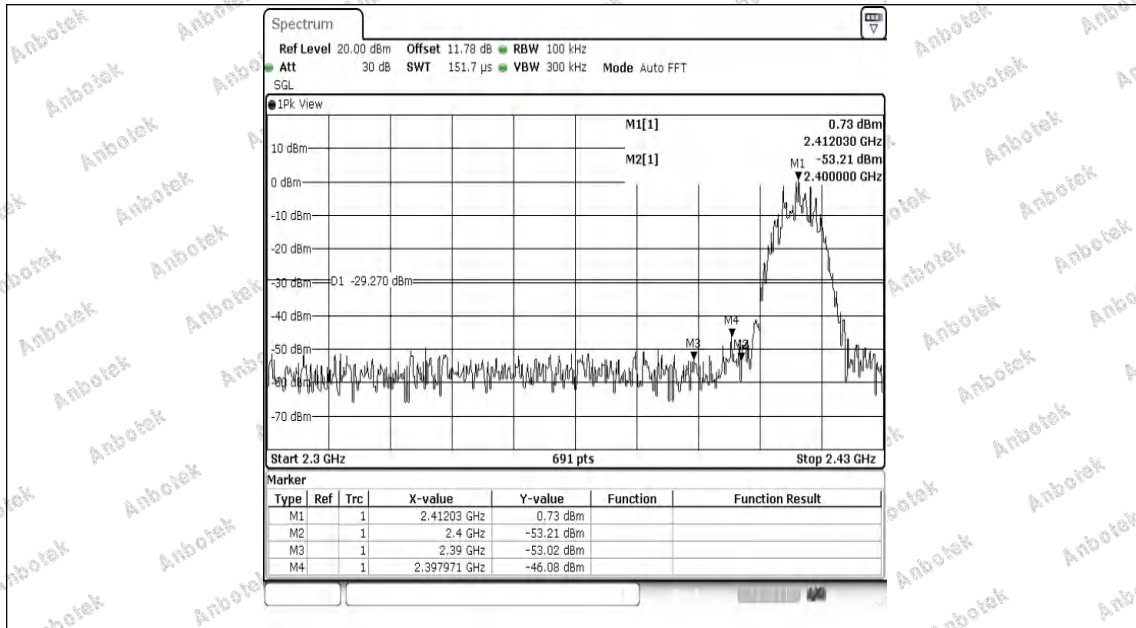
Test Result

TestMode	Antenna	ChName	Frequency [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	0.73	-46.08	≤-29.27	PASS
11B	Ant2	Low	2412	-0.58	-47.81	≤-30.58	PASS
11B	Ant1	High	2462	0.32	-47.07	≤-29.68	PASS
11B	Ant2	High	2462	-1.19	-47.49	≤-31.19	PASS
11G	Ant2	Low	2412	-7.13	-50.06	≤-37.13	PASS
11G	Ant1	Low	2412	-6.46	-49.35	≤-36.46	PASS
11G	Ant1	High	2462	-5.33	-49.29	≤-35.33	PASS
11G	Ant2	High	2462	-6.67	-48.2	≤-36.67	PASS
11N20MIMO	Ant1	Low	2412	-13.13	-48.58	≤-43.13	PASS
11N20MIMO	Ant2	Low	2412	-6.08	-49.07	≤-36.08	PASS
11N20MIMO	Ant1	High	2462	-11.55	-49.38	≤-41.55	PASS
11N20MIMO	Ant2	High	2462	-6.20	-48.84	≤-36.2	PASS
11AX20MIMO	Ant1	Low	2412	-8.25	-49.39	≤-38.25	PASS
11AX20MIMO	Ant2	Low	2412	-9.39	-49.62	≤-39.39	PASS
11AX20MIMO	Ant1	High	2462	-11.05	-48.8	≤-41.05	PASS
11AX20MIMO	Ant2	High	2462	-7.64	-49.21	≤-37.64	PASS

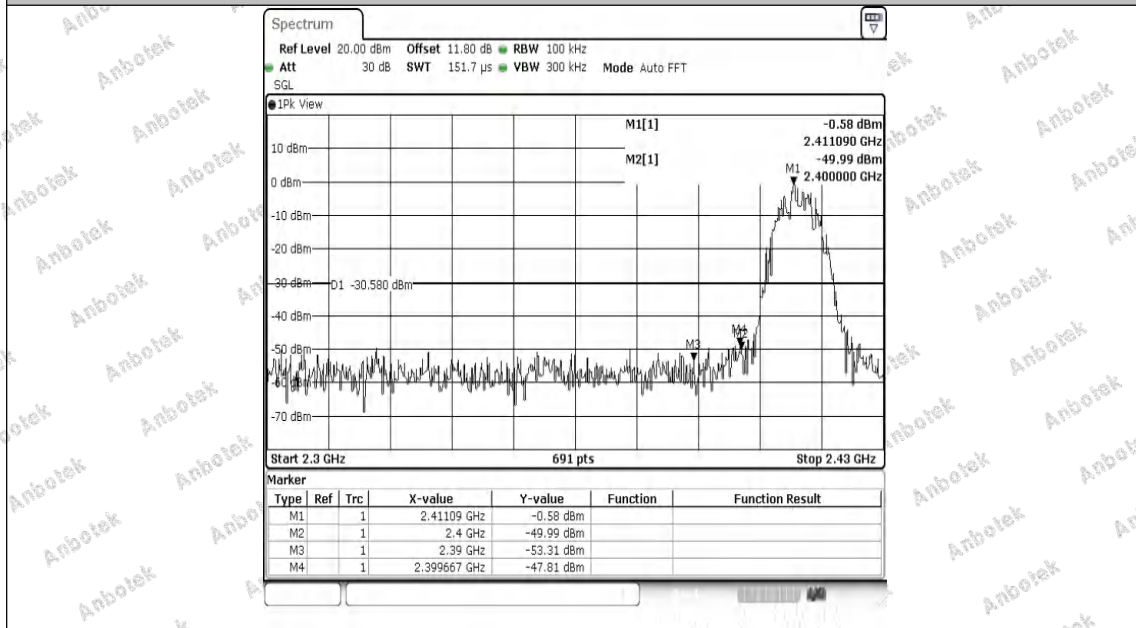
Note: 11N20 and 11AX20 support MIMO mode, with sufficient margin, and increasing the MIMO calculation value also meets the limit requirements.



Test Graphs

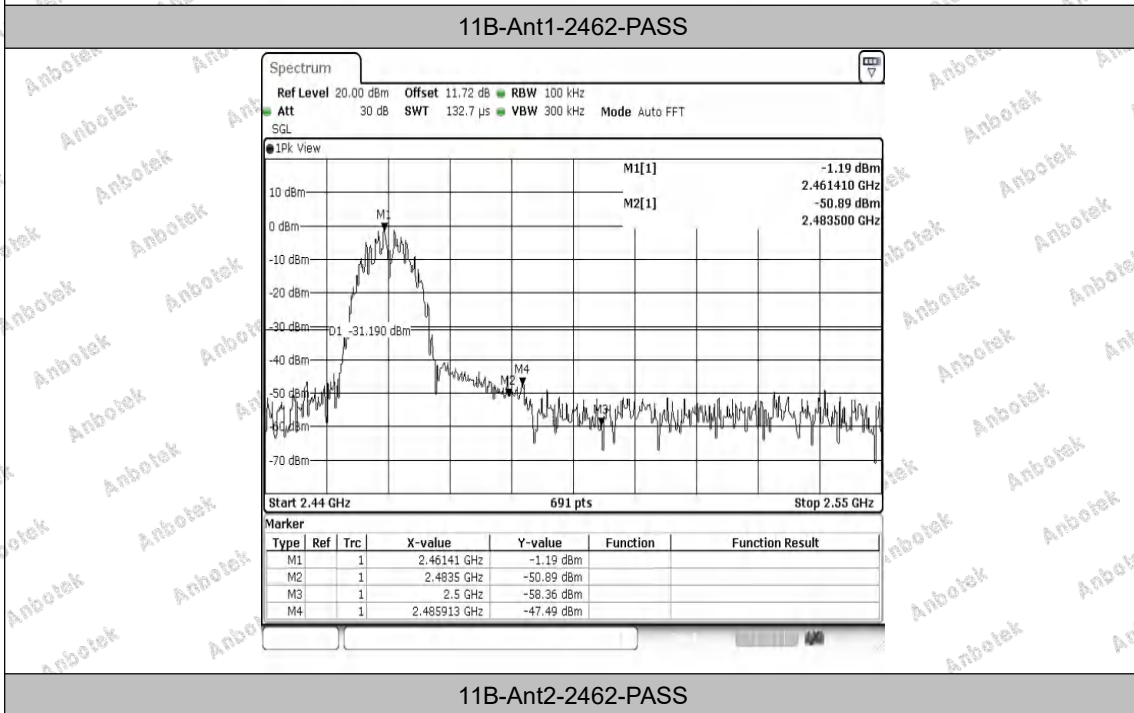
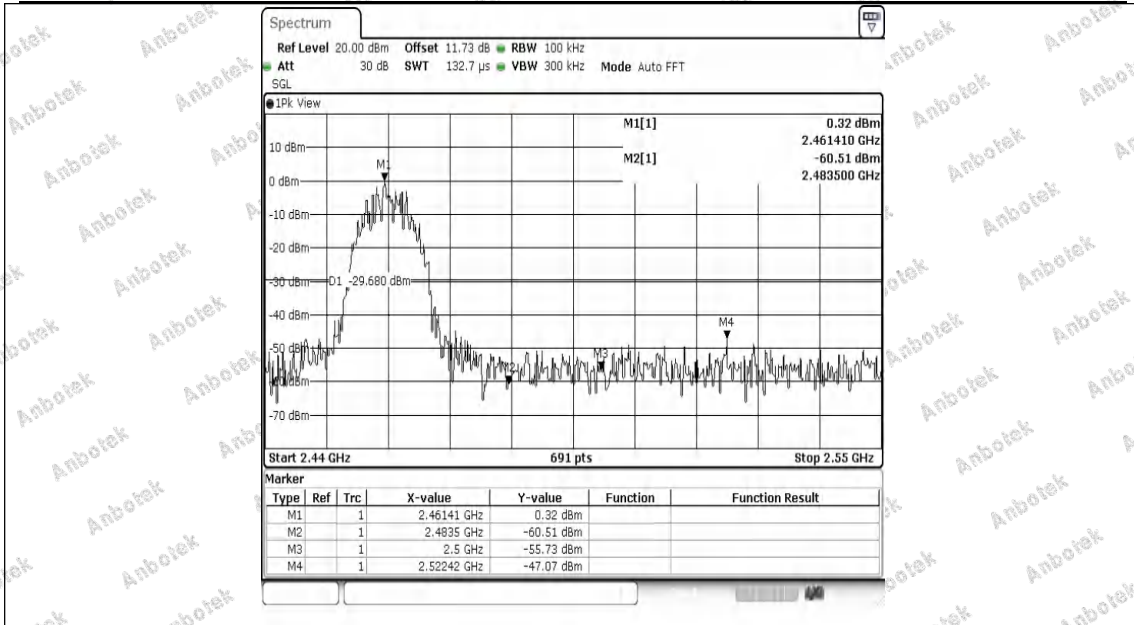


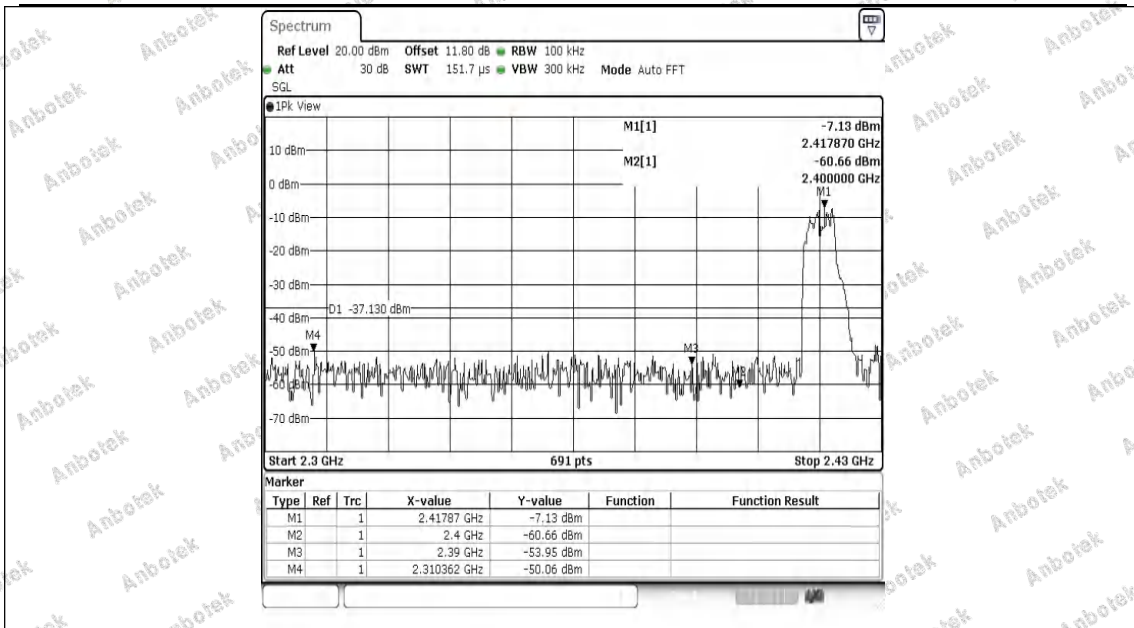
11B-Ant1-2412-PASS



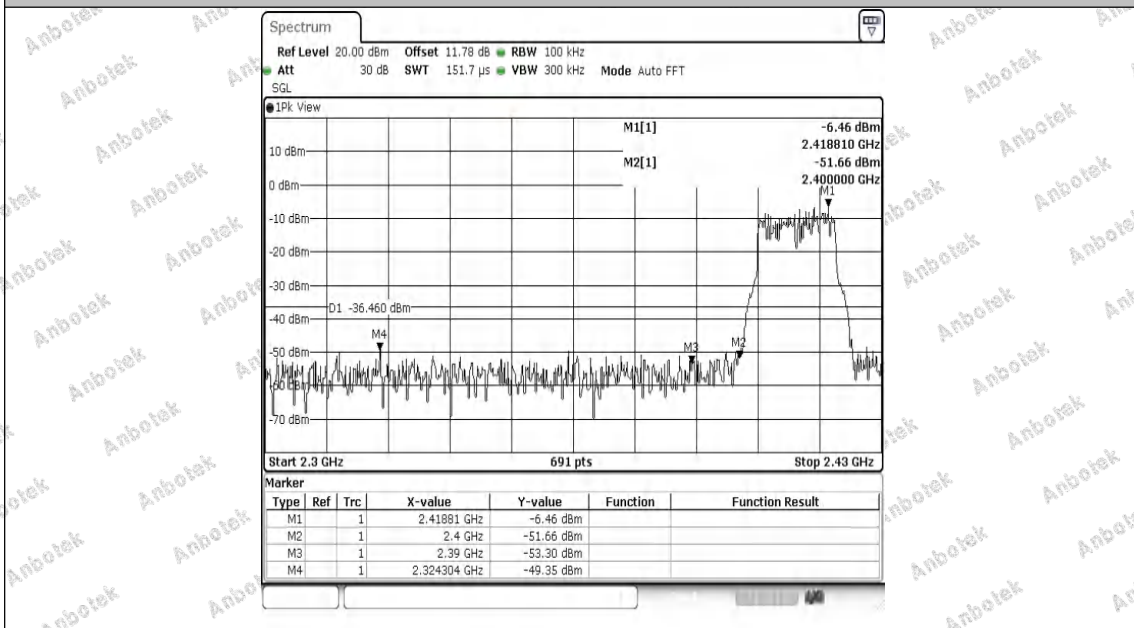
11B-Ant2-2412-PASS







11G-Ant2-2412-PASS



11G-Ant1-2412-PASS

