

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

General Description of EUT	
Product Name:	Wi-Fi 6 AX1800 Dual-Radio In-Wall AP
Test Model:	MI13
Sample ID:	202206-0131-3-2#
Environmental Conditions	
Temperature:	24.4°C
Relative Humidity:	42%
Test Voltage:	DC 56V
Test Engineer:	Haiting Zhou
Note: For a more detailed features description, please refer to the report TBR-C-202206-0131-14.	

Contents

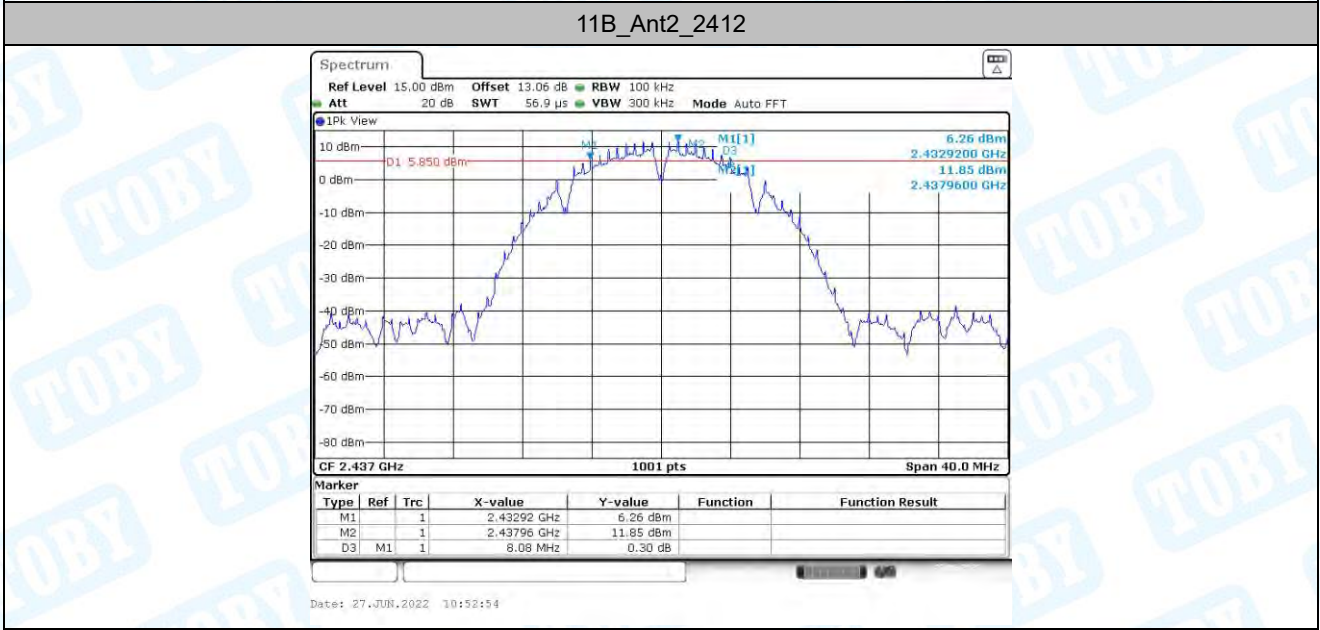
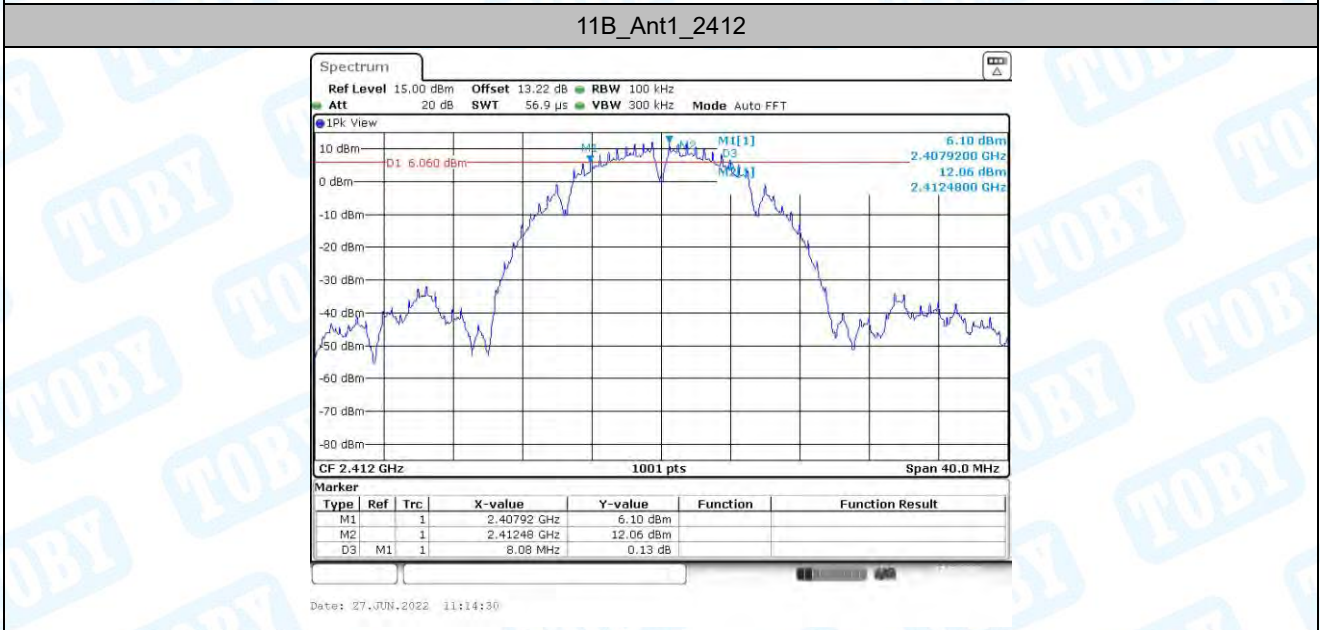
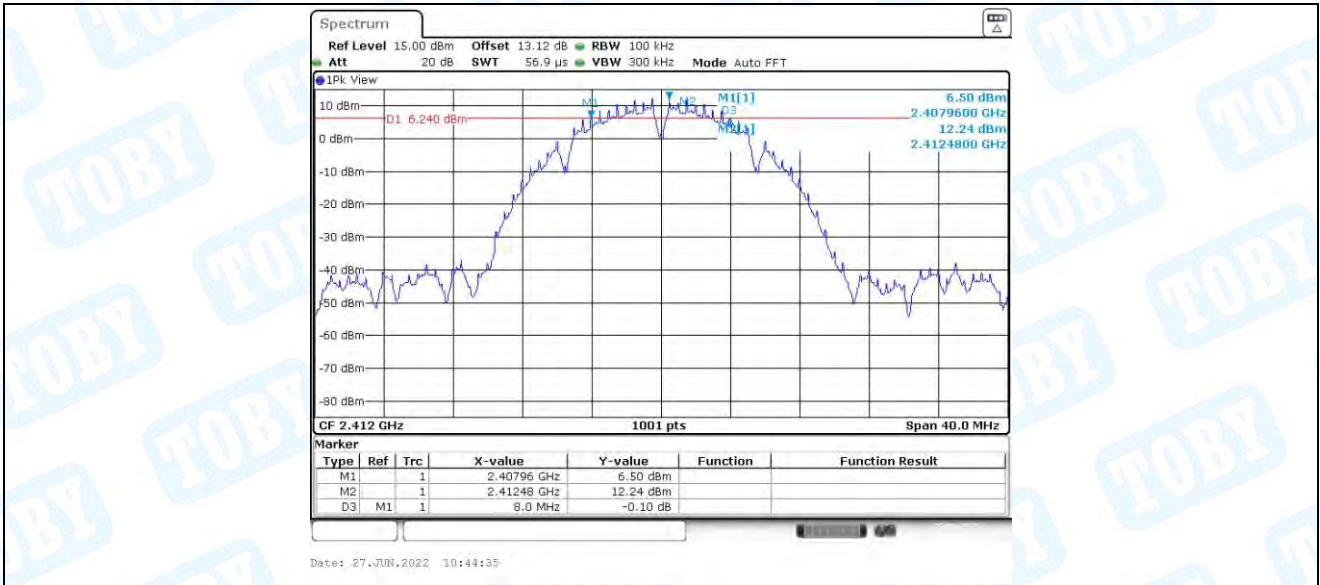
1. DTS Bandwidth.....	3
1.1. Test Result.....	3
1.2. Test Graphs	4
2. Occupied Channel Bandwidth.....	16
2.1. Test Result.....	16
2.2. Test Graphs	17
3. Maximum conducted output power.....	29
4. Maximum power spectral density	30
4.1. Test Result.....	30
4.2. Test Graphs	31
5. Band edge measurements	43
5.1. Test Result.....	43
5.2. Test Graphs	44
6. Conducted Spurious Emission.....	52
6.1. Test Result.....	52
6.2. Test Graphs	55
7. Duty Cycle	91
7.1. Test Result.....	91
7.2. Test Graphs	92

1. DTS Bandwidth

1.1. Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.00	2407.96	2415.96	0.5	PASS
	Ant2	2412	8.08	2407.92	2416.00	0.5	PASS
	Ant1	2437	8.08	2432.92	2441.00	0.5	PASS
	Ant2	2437	8.08	2432.92	2441.00	0.5	PASS
	Ant1	2462	8.08	2457.92	2466.00	0.5	PASS
	Ant2	2462	8.08	2457.92	2466.00	0.5	PASS
11G	Ant1	2412	15.32	2404.40	2419.72	0.5	PASS
	Ant2	2412	15.12	2404.40	2419.52	0.5	PASS
	Ant1	2437	15.12	2429.40	2444.52	0.5	PASS
	Ant2	2437	15.12	2429.40	2444.52	0.5	PASS
	Ant1	2462	16.32	2453.80	2470.12	0.5	PASS
	Ant2	2462	15.08	2454.44	2469.52	0.5	PASS
11N20MIMO	Ant1	2412	15.12	2404.40	2419.52	0.5	PASS
	Ant2	2412	16.08	2404.40	2420.48	0.5	PASS
	Ant1	2437	15.12	2429.40	2444.52	0.5	PASS
	Ant2	2437	16.32	2429.40	2445.72	0.5	PASS
	Ant1	2462	15.96	2454.40	2470.36	0.5	PASS
	Ant2	2462	15.92	2454.40	2470.32	0.5	PASS
11N40MIMO	Ant1	2422	35.12	2404.40	2439.52	0.5	PASS
	Ant2	2422	35.04	2404.48	2439.52	0.5	PASS
	Ant1	2437	35.12	2419.40	2454.52	0.5	PASS
	Ant2	2437	35.12	2419.40	2454.52	0.5	PASS
	Ant1	2452	35.12	2434.40	2469.52	0.5	PASS
	Ant2	2452	35.12	2434.40	2469.52	0.5	PASS
11AX20MIMO	Ant1	2412	18.04	2403.24	2421.28	0.5	PASS
	Ant2	2412	18.04	2403.20	2421.24	0.5	PASS
	Ant1	2437	18.40	2427.84	2446.24	0.5	PASS
	Ant2	2437	17.96	2428.52	2446.48	0.5	PASS
	Ant1	2462	18.92	2452.48	2471.40	0.5	PASS
	Ant2	2462	18.56	2452.96	2471.52	0.5	PASS
11AX40MIMO	Ant1	2422	36.32	2404.40	2440.72	0.5	PASS
	Ant2	2422	36.32	2404.40	2440.72	0.5	PASS
	Ant1	2437	37.36	2418.36	2455.72	0.5	PASS
	Ant2	2437	36.40	2419.40	2455.80	0.5	PASS
	Ant1	2452	37.04	2433.68	2470.72	0.5	PASS
	Ant2	2452	36.40	2434.40	2470.80	0.5	PASS

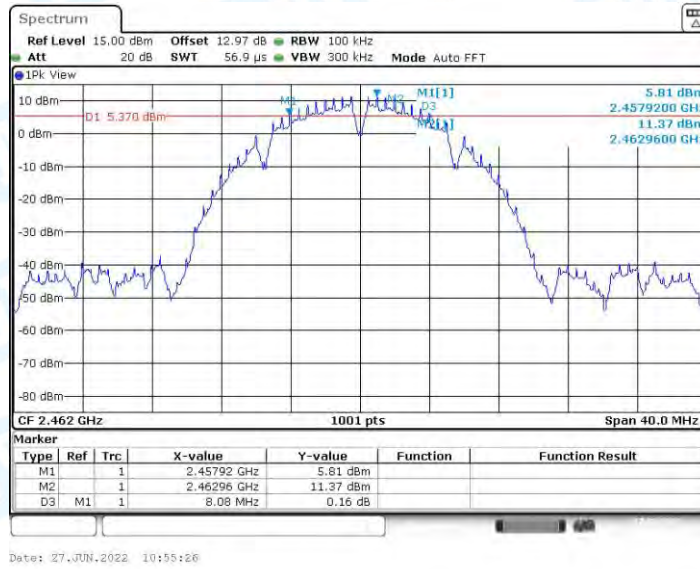
1.2. Test Graphs



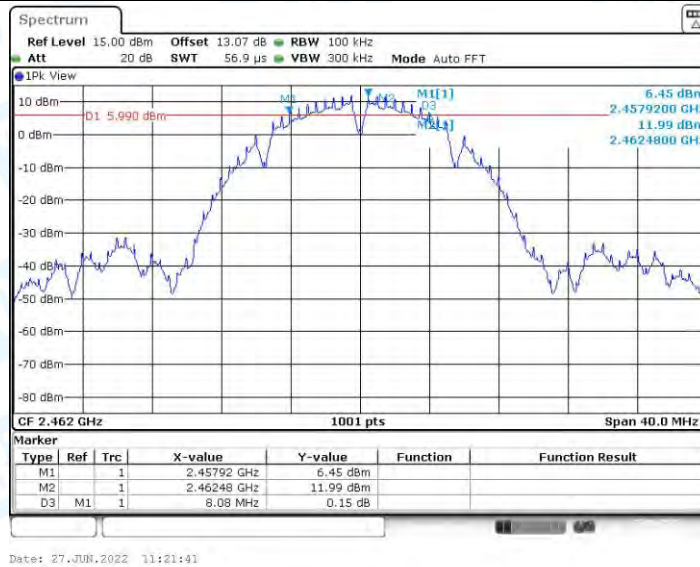
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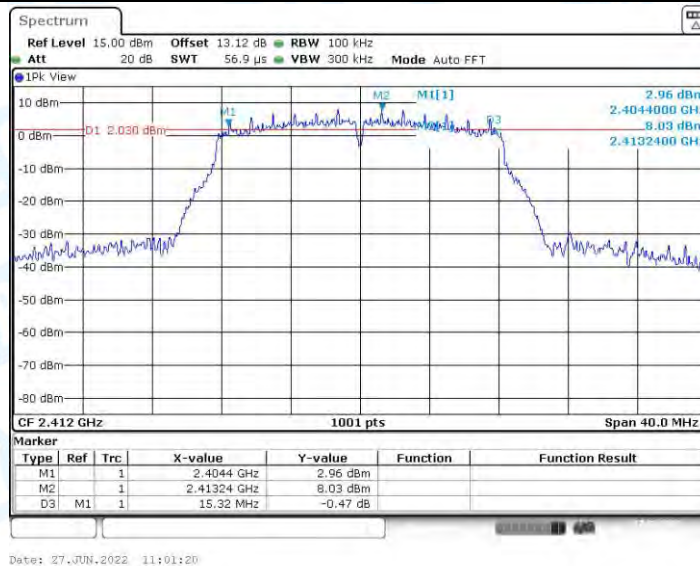
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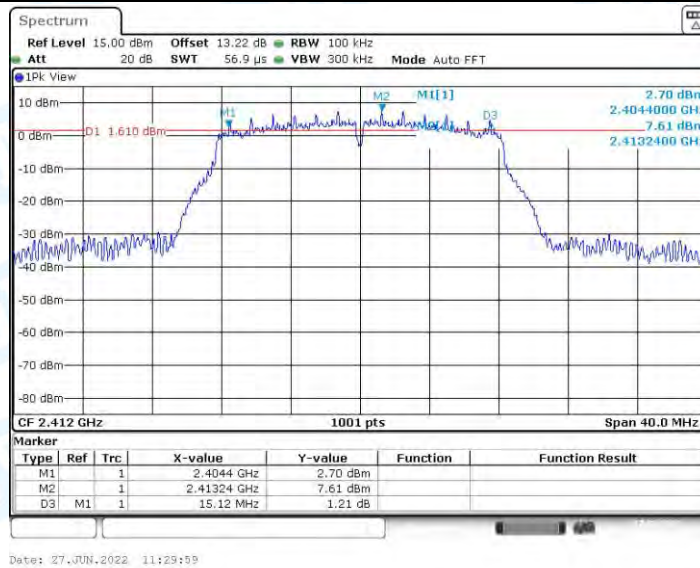
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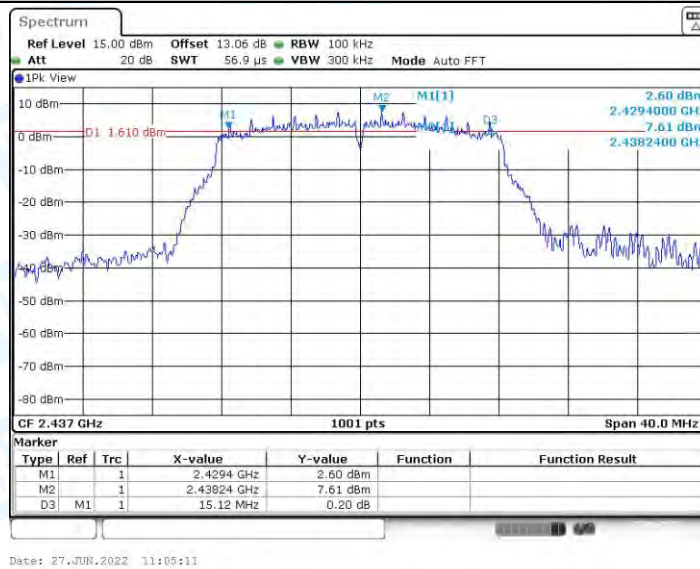
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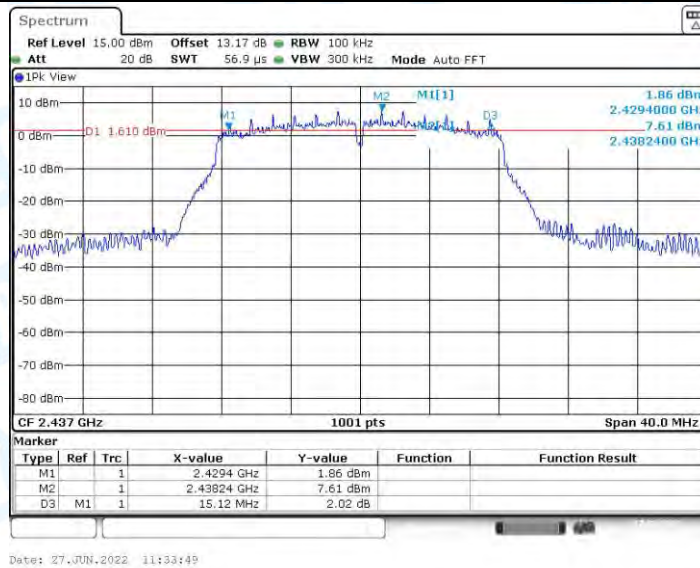
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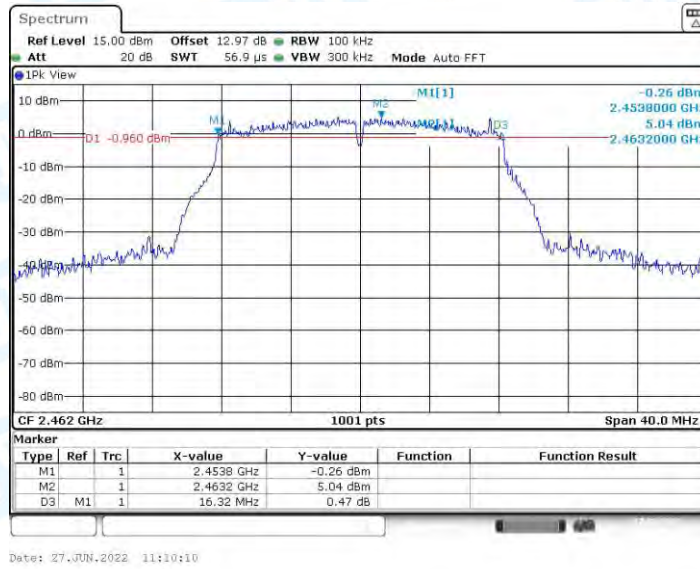
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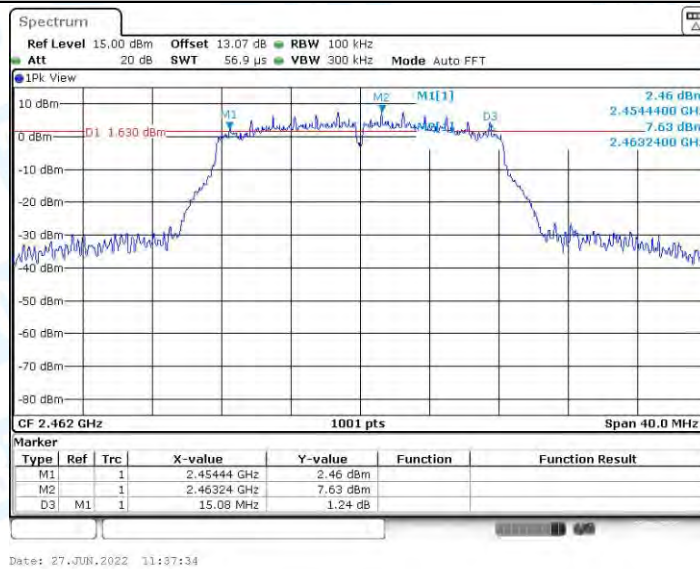
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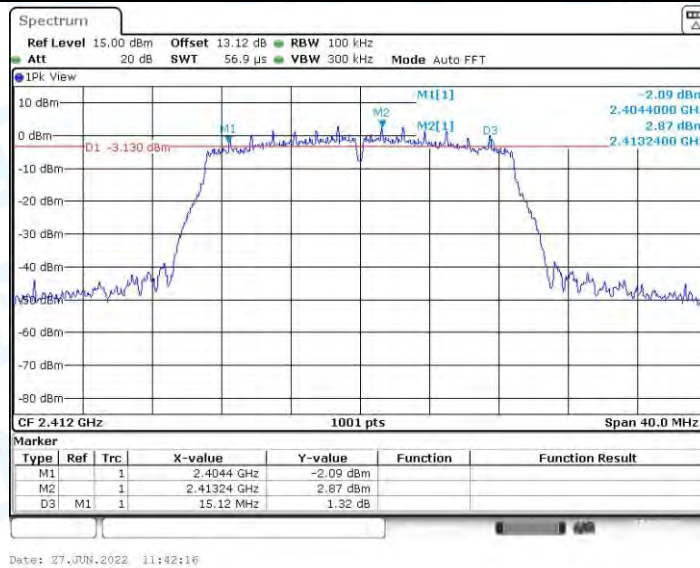
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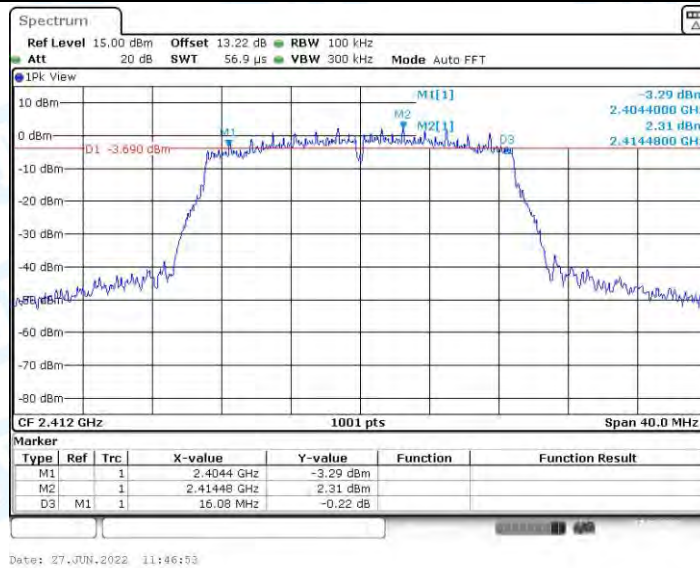
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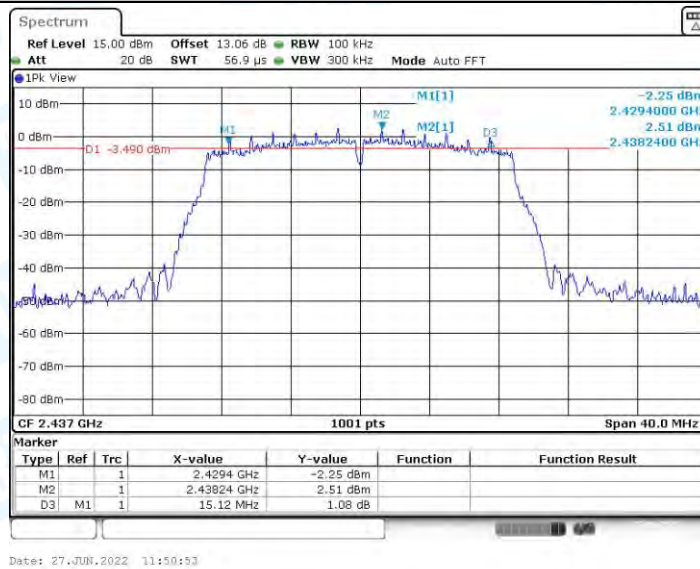
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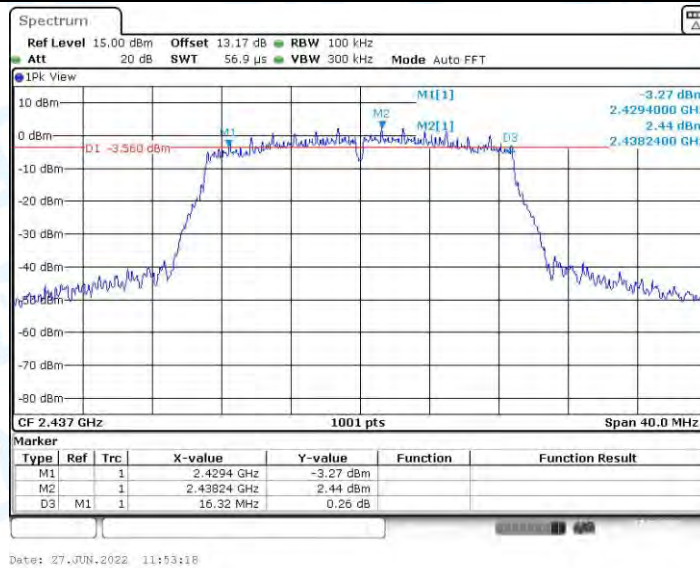
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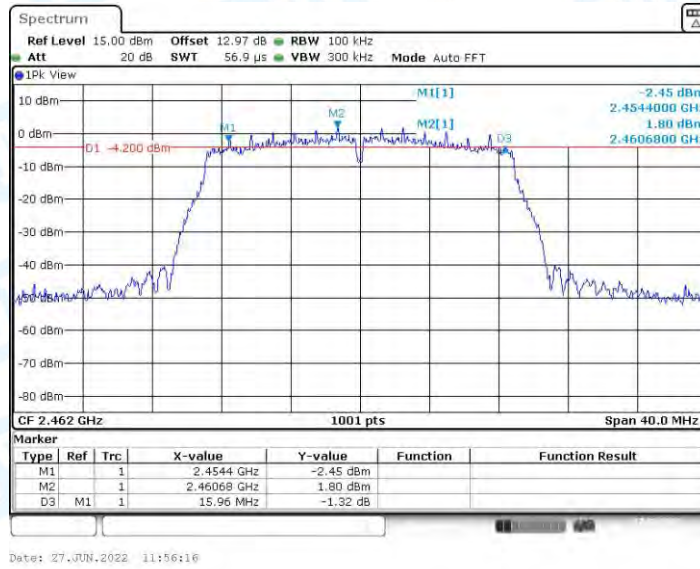
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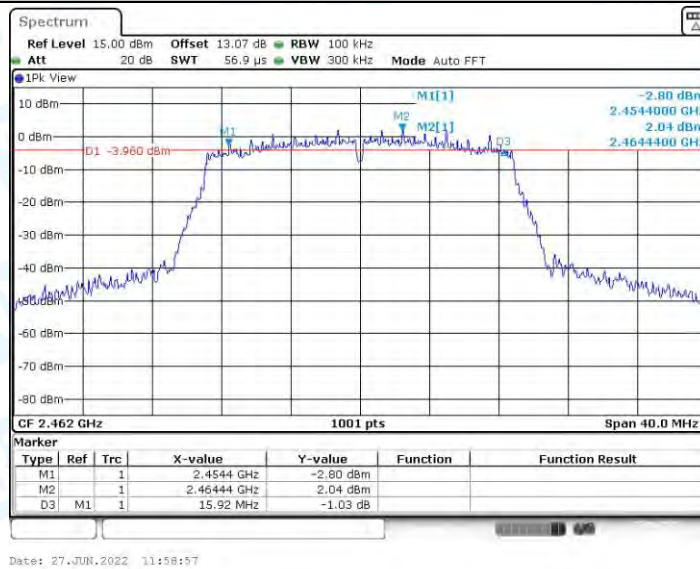
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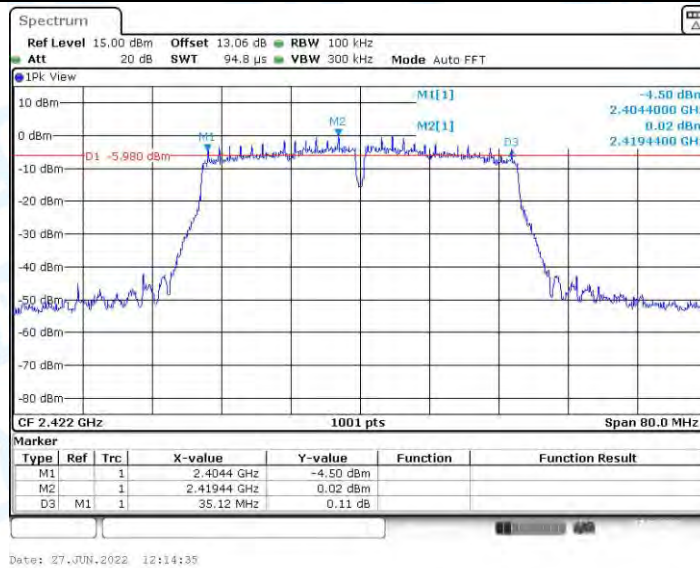
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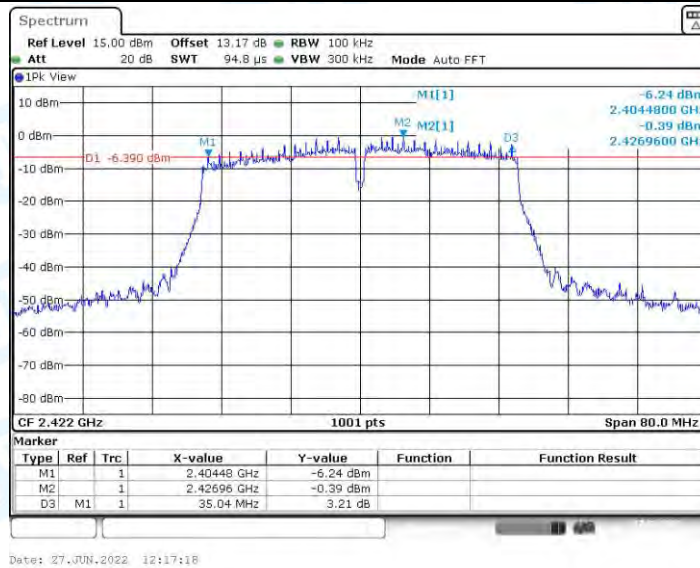
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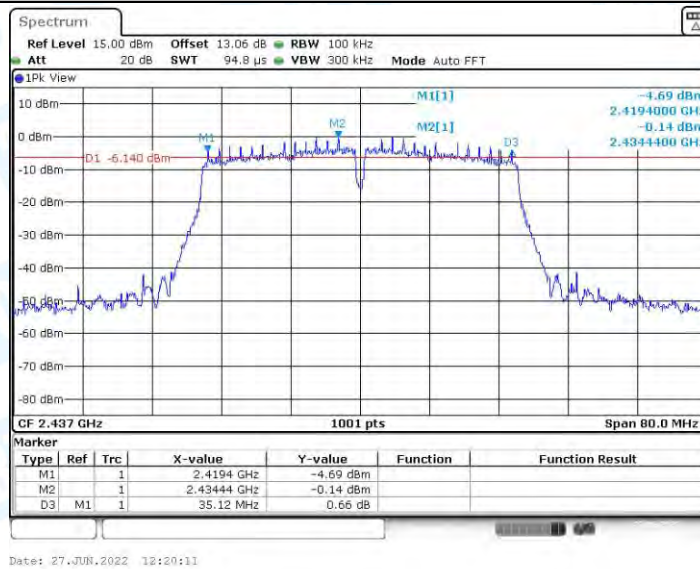
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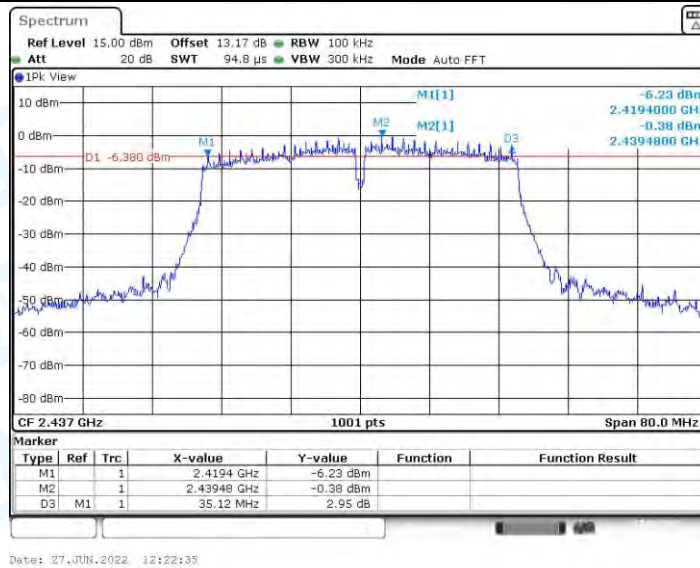
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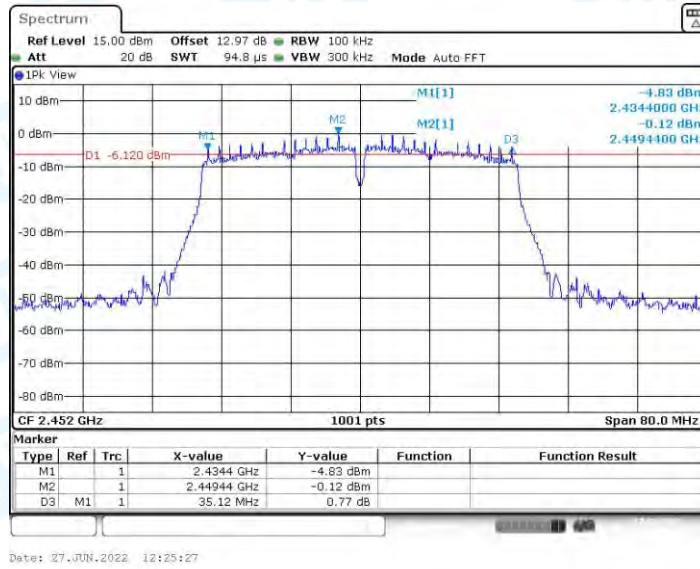
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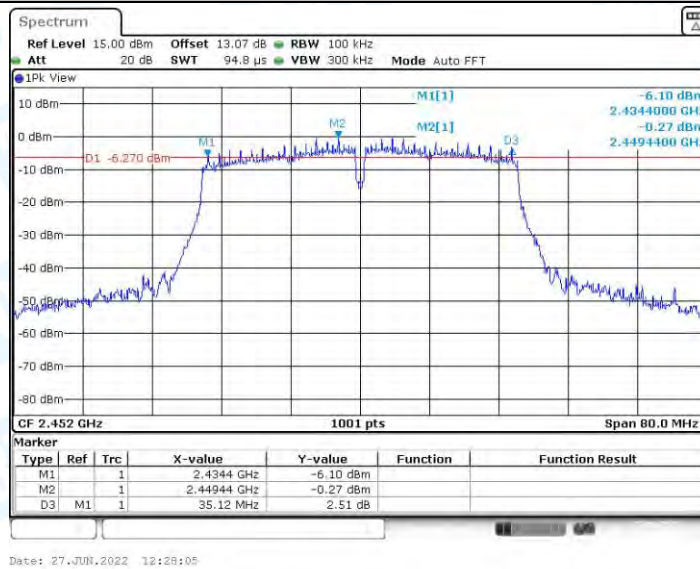
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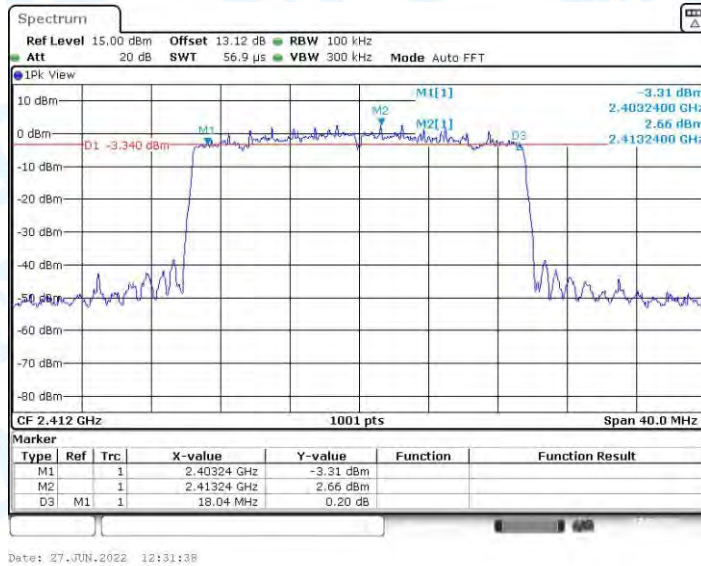
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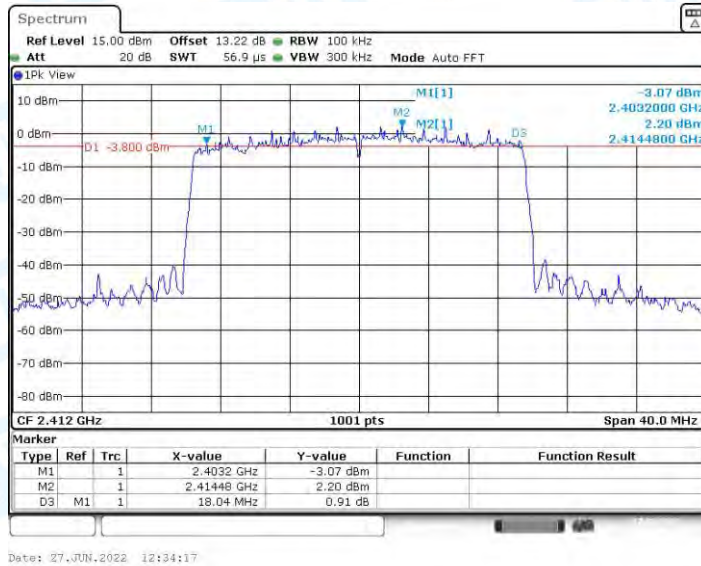
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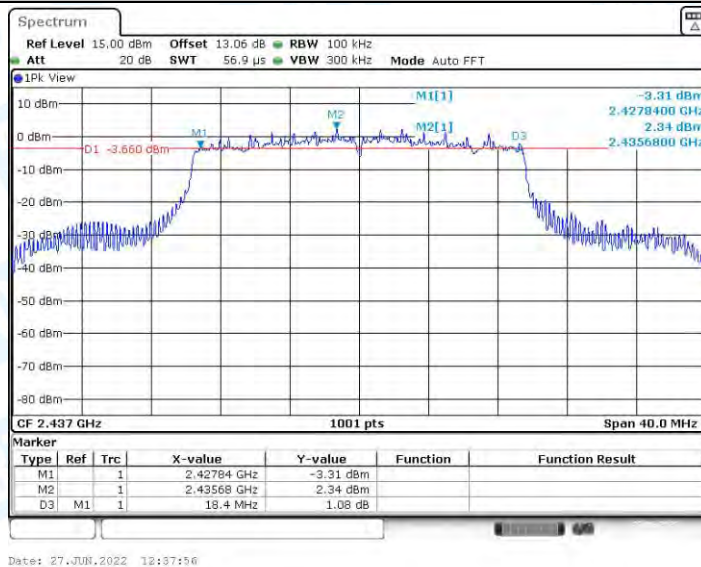
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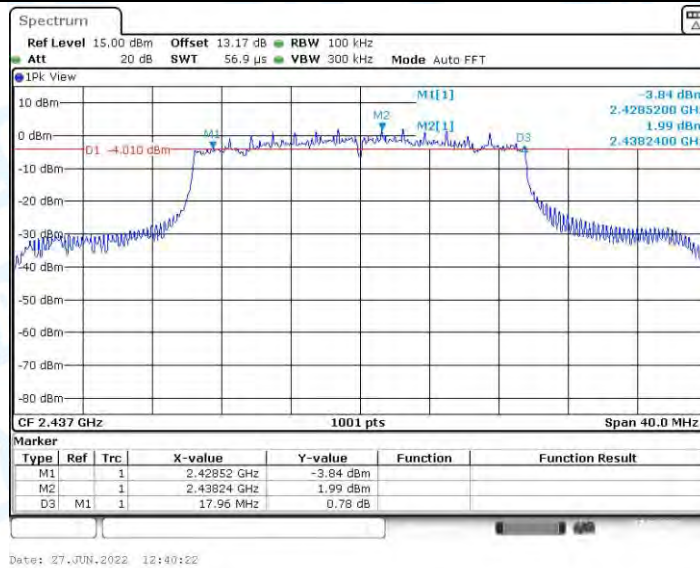
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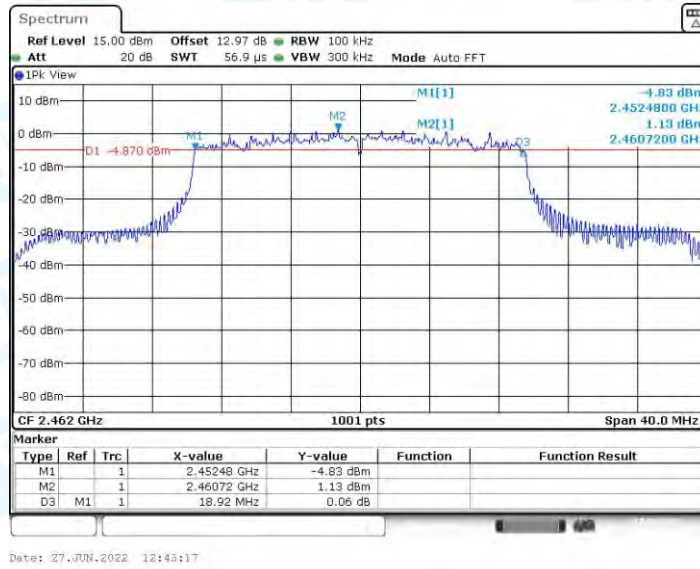
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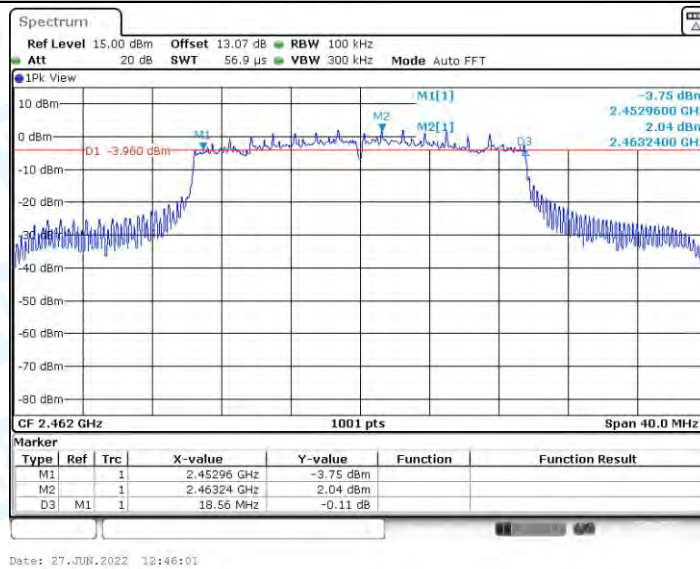
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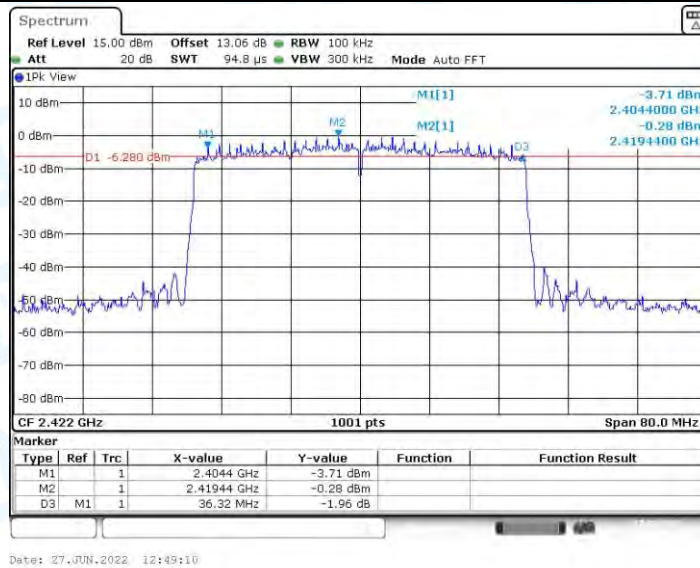
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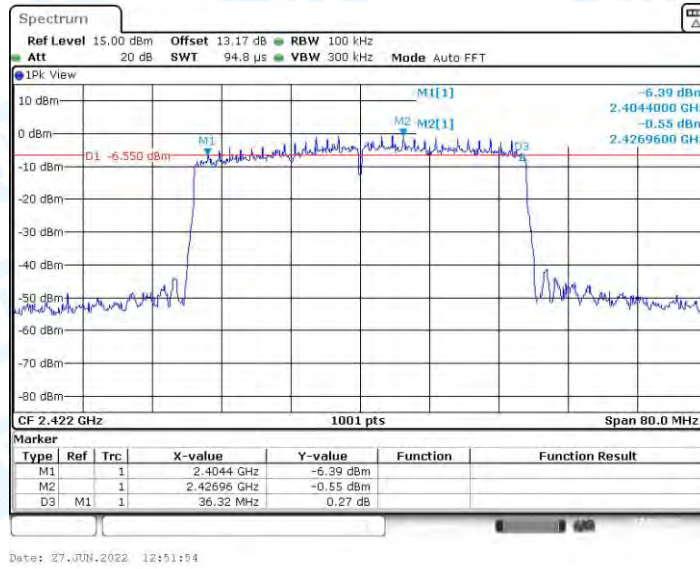
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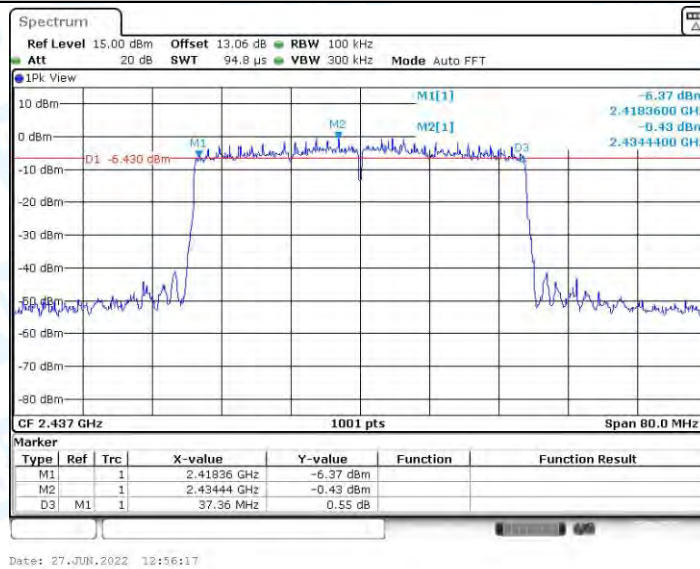
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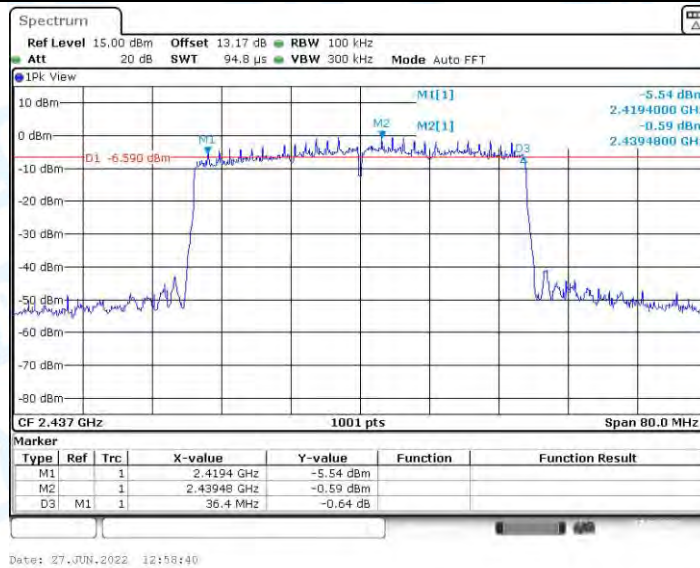
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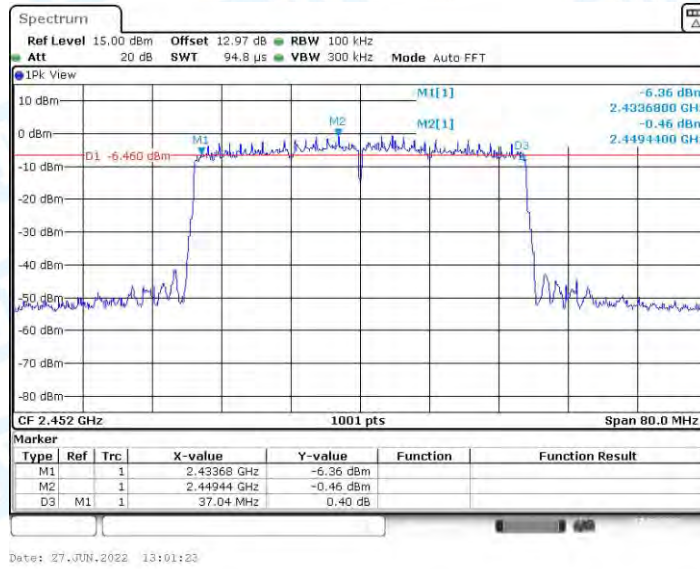
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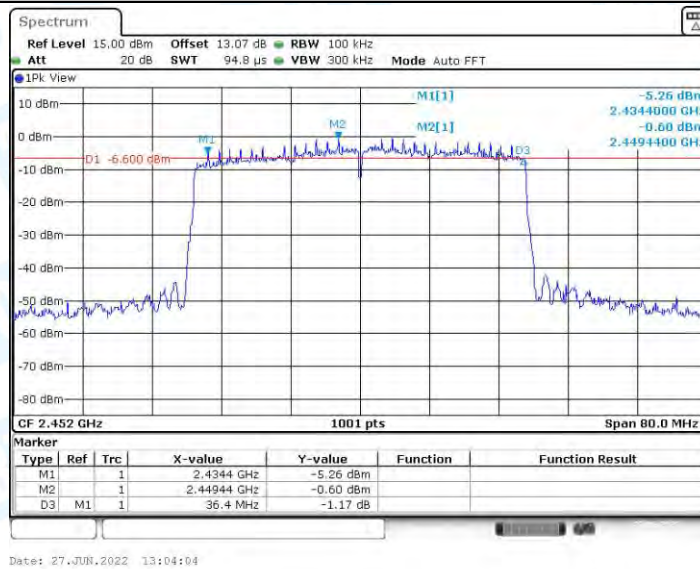
11AX40MIMO_Ant1_2437



11AX40MIMO_Ant2_2437



11AX40MIMO_Ant1_2452



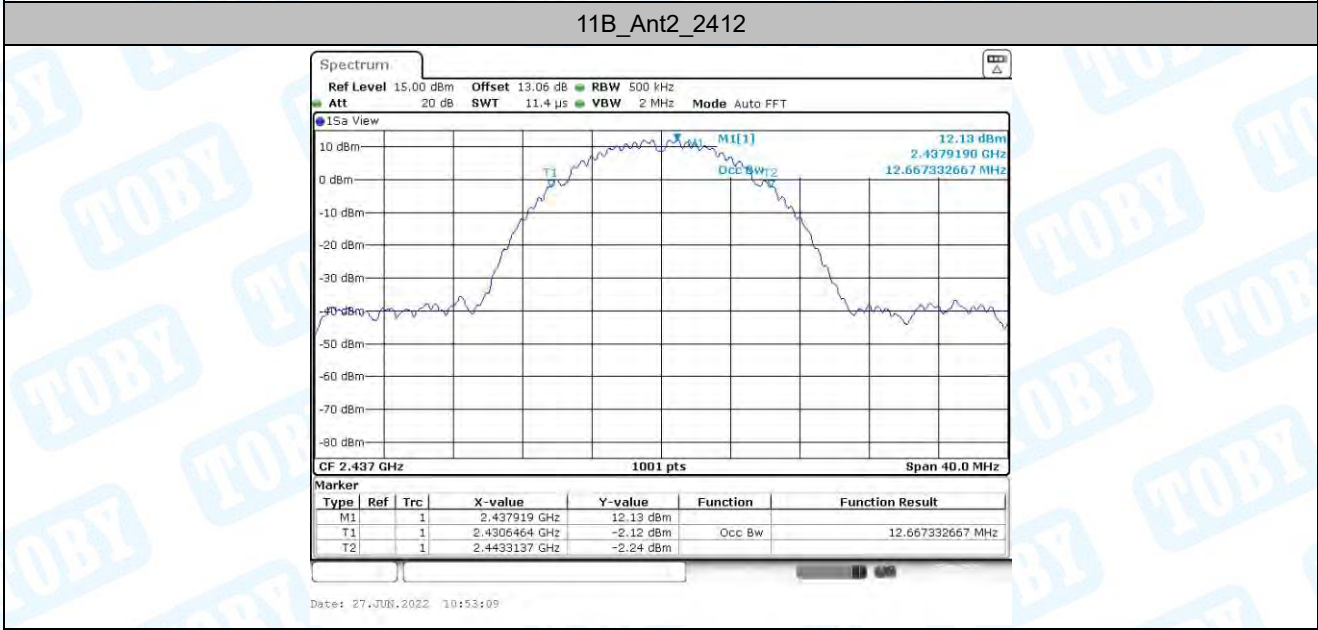
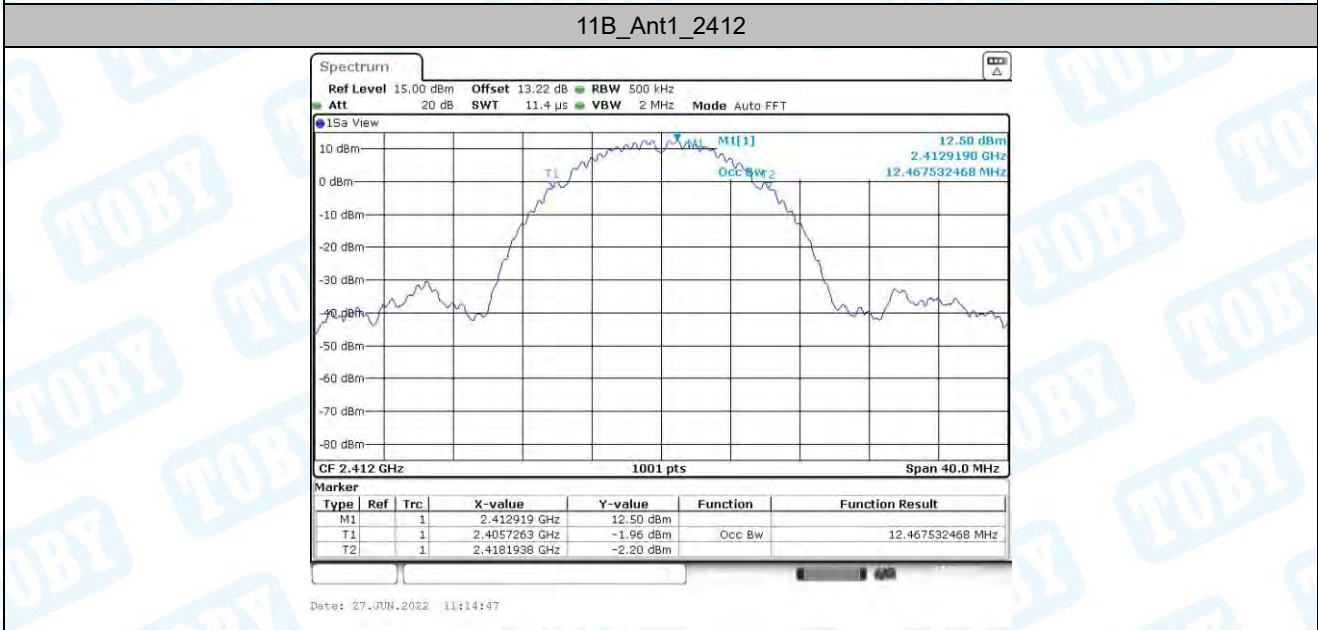
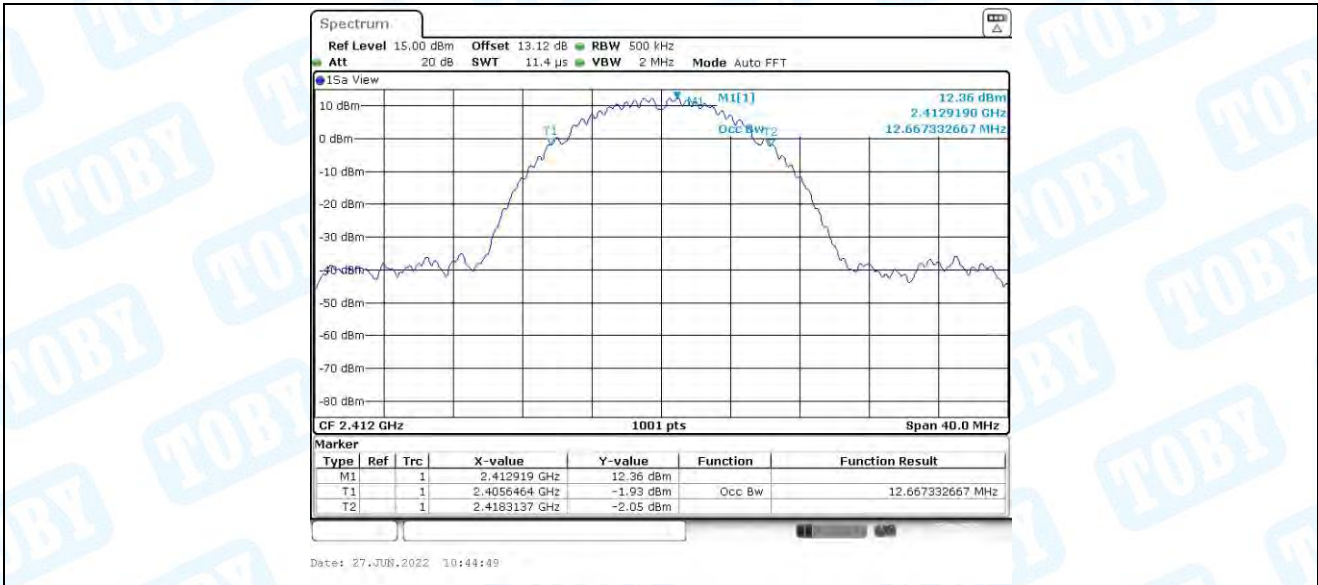
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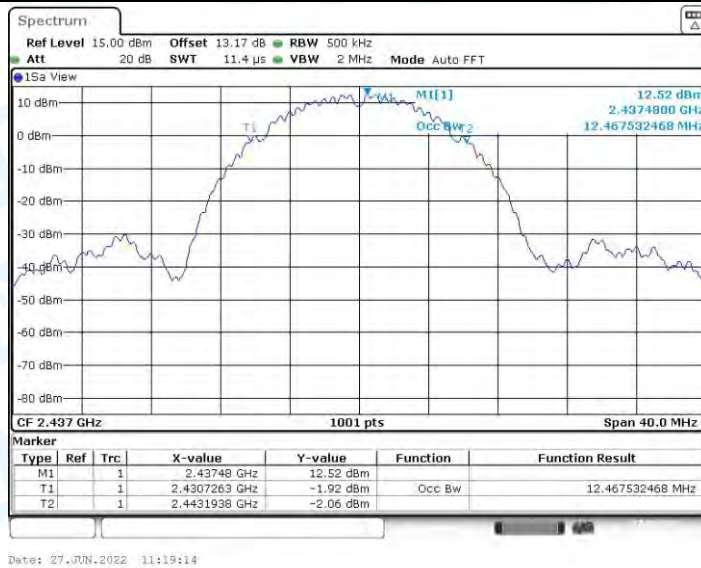
2. Occupied Channel Bandwidth

2.1. Test Result

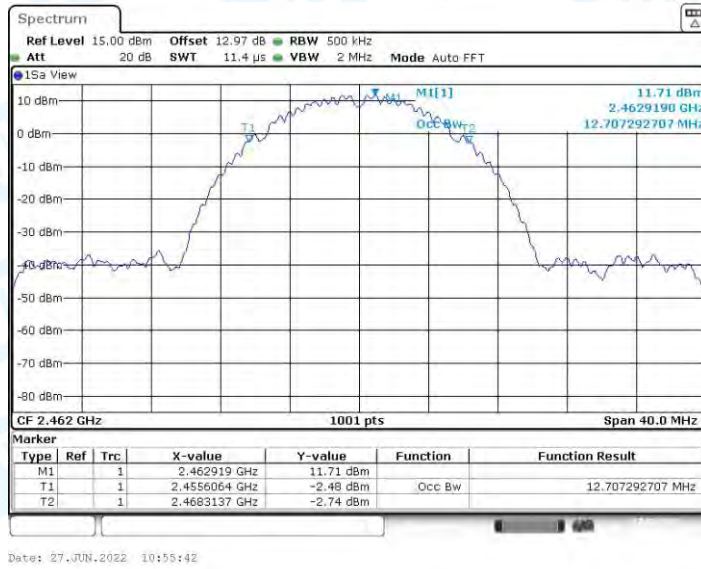
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.667	2405.646	2418.314	---	---
	Ant2	2412	12.468	2405.726	2418.194	---	---
	Ant1	2437	12.667	2430.646	2443.314	---	---
	Ant2	2437	12.468	2430.726	2443.194	---	---
	Ant1	2462	12.707	2455.606	2468.314	---	---
	Ant2	2462	12.507	2455.726	2468.234	---	---
11G	Ant1	2412	16.863	2403.608	2420.472	---	---
	Ant2	2412	17.063	2403.528	2420.591	---	---
	Ant1	2437	17.103	2428.409	2445.511	---	---
	Ant2	2437	16.903	2428.528	2445.432	---	---
	Ant1	2462	17.023	2453.409	2470.432	---	---
	Ant2	2462	17.063	2453.409	2470.472	---	---
11N20MIMO	Ant1	2412	17.942	2402.969	2420.911	---	---
	Ant2	2412	17.742	2403.169	2420.911	---	---
	Ant1	2437	17.982	2428.009	2445.991	---	---
	Ant2	2437	17.702	2428.209	2445.911	---	---
	Ant1	2462	17.982	2453.009	2470.991	---	---
	Ant2	2462	17.782	2453.129	2470.911	---	---
11N40MIMO	Ant1	2422	36.364	2403.778	2440.142	---	---
	Ant2	2422	36.044	2404.098	2440.142	---	---
	Ant1	2437	36.284	2418.778	2455.062	---	---
	Ant2	2437	36.124	2419.018	2455.142	---	---
	Ant1	2452	36.044	2433.938	2469.982	---	---
	Ant2	2452	35.884	2434.098	2469.982	---	---
11AX20MIMO	Ant1	2412	18.901	2402.490	2421.391	---	---
	Ant2	2412	18.821	2402.609	2421.431	---	---
	Ant1	2437	19.421	2427.290	2446.710	---	---
	Ant2	2437	19.141	2427.370	2446.510	---	---
	Ant1	2462	19.461	2452.210	2471.670	---	---
	Ant2	2462	19.181	2452.410	2471.590	---	---
11AX40MIMO	Ant1	2422	37.802	2403.059	2440.861	---	---
	Ant2	2422	37.722	2403.299	2441.021	---	---
	Ant1	2437	37.642	2418.139	2455.781	---	---
	Ant2	2437	37.642	2418.219	2455.861	---	---
	Ant1	2452	37.722	2433.059	2470.781	---	---
	Ant2	2452	37.562	2433.219	2470.781	---	---

2.2. Test Graphs





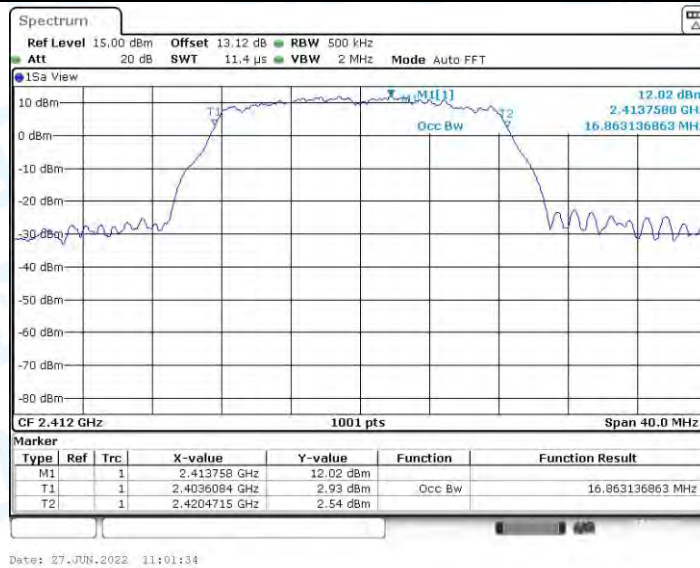
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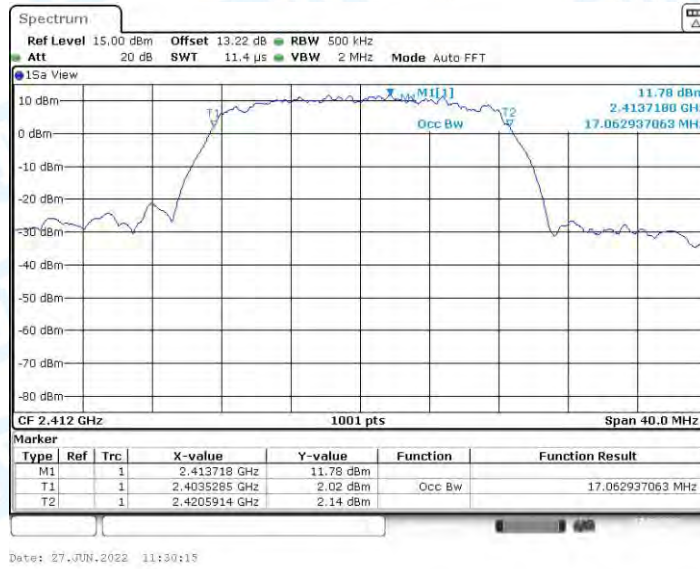
11B_Ant1_2462



11B_Ant2_2462



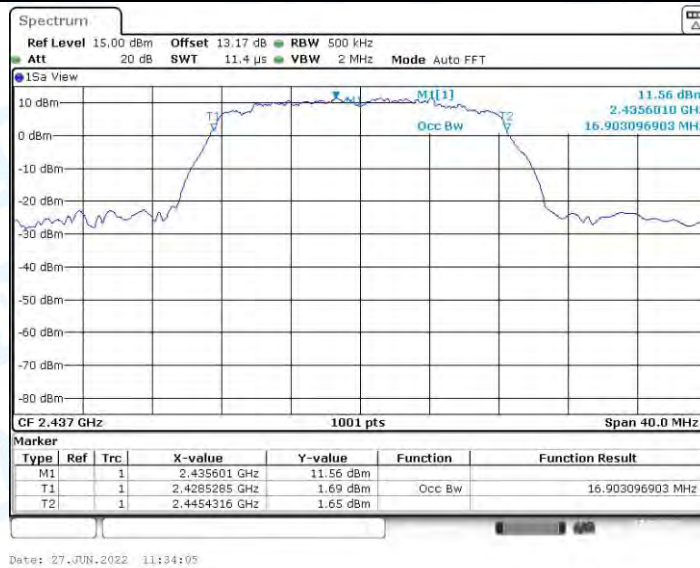
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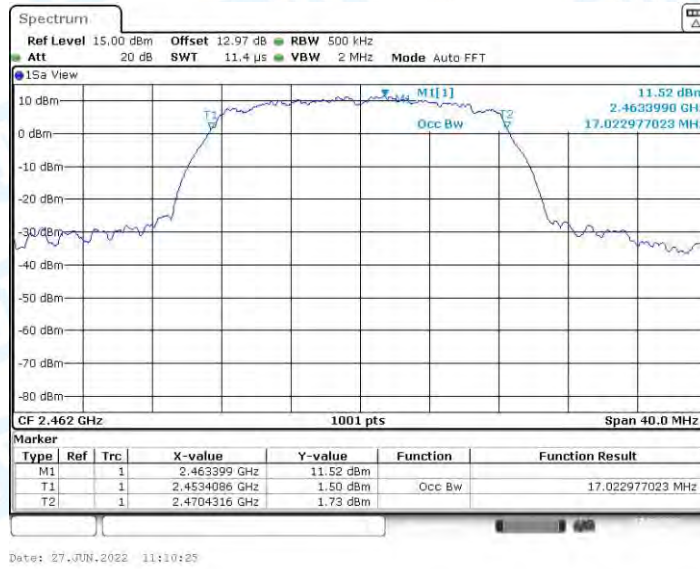
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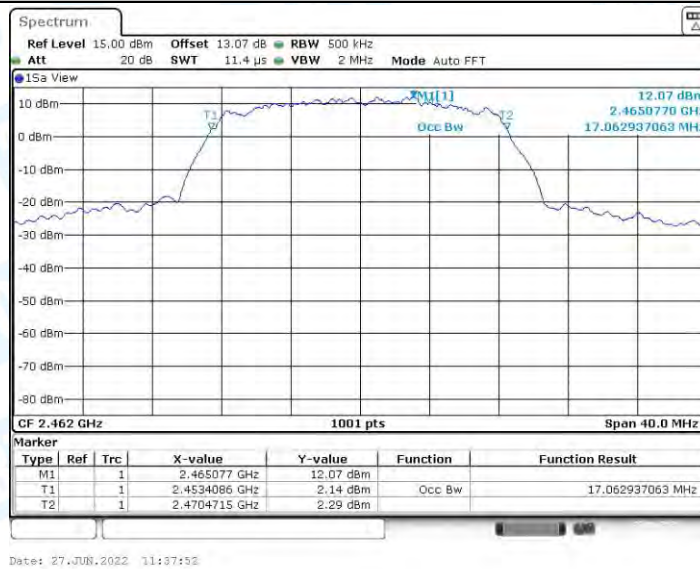
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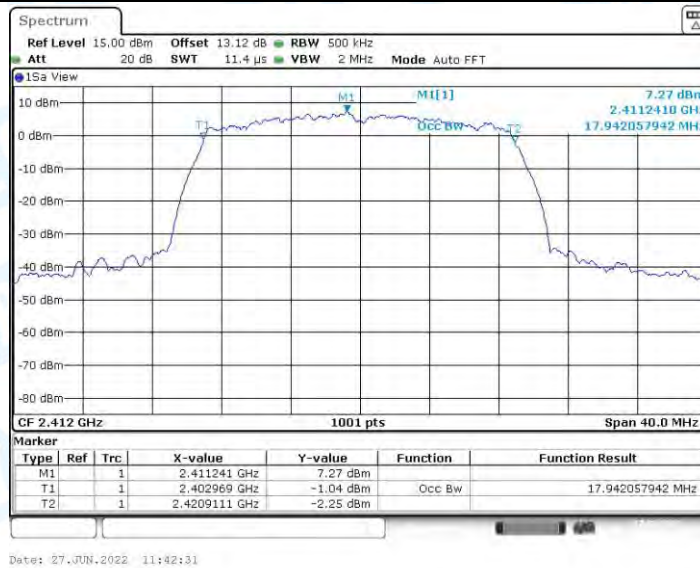
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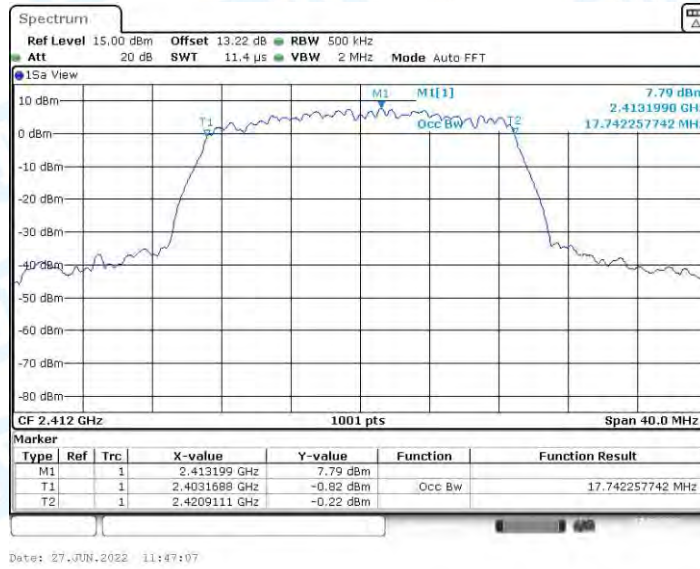
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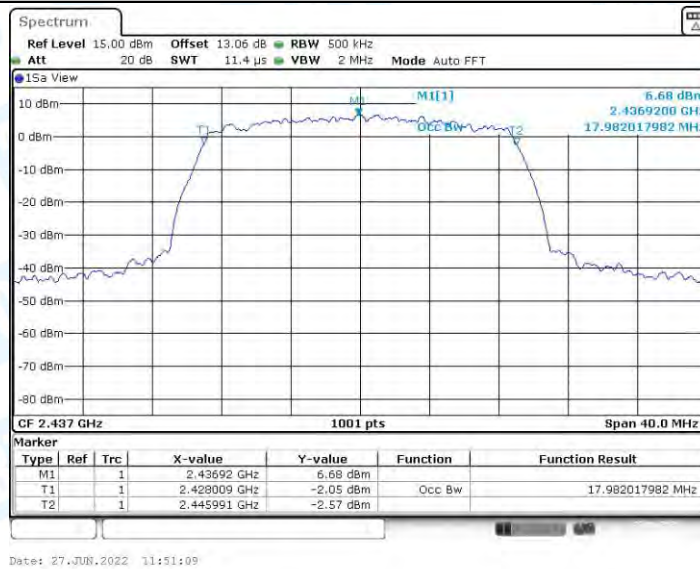
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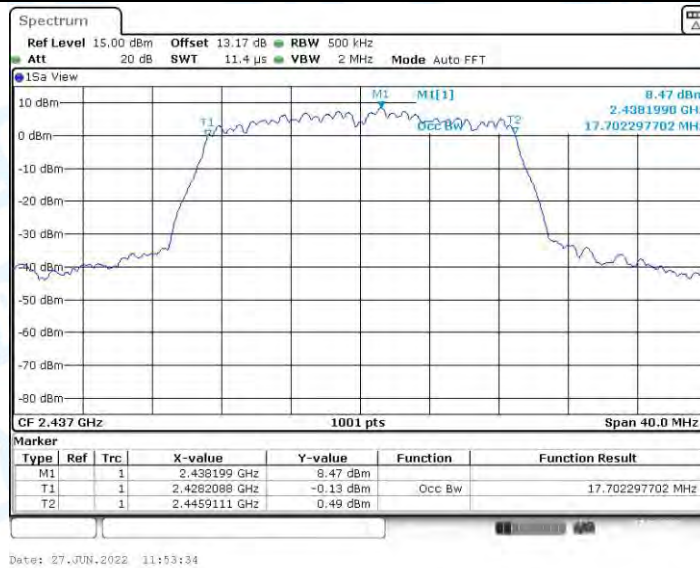
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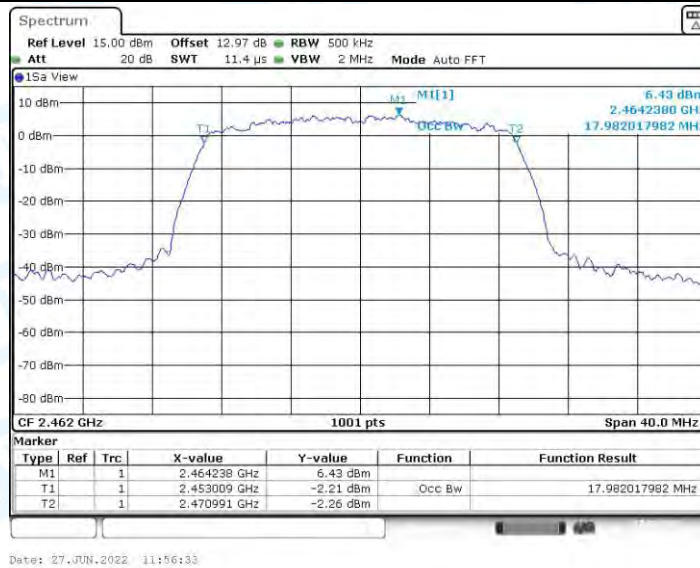
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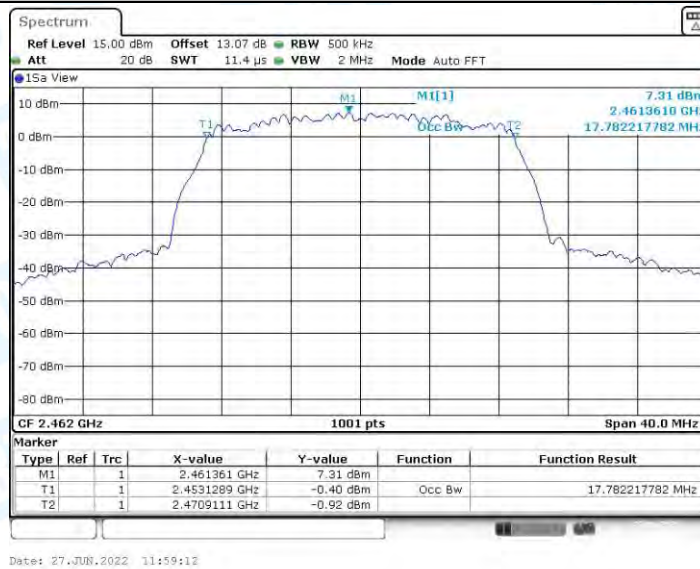
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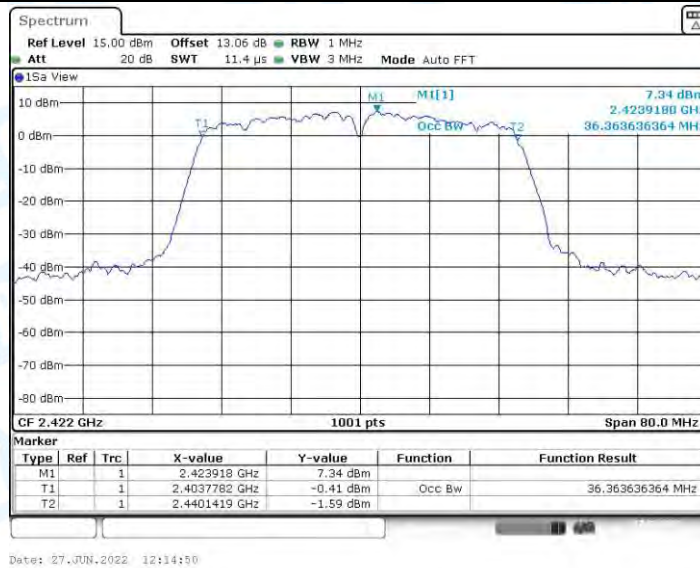
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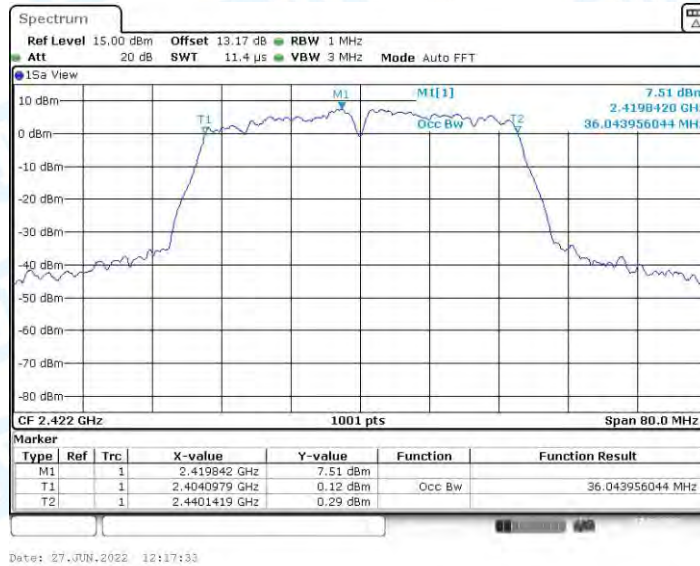
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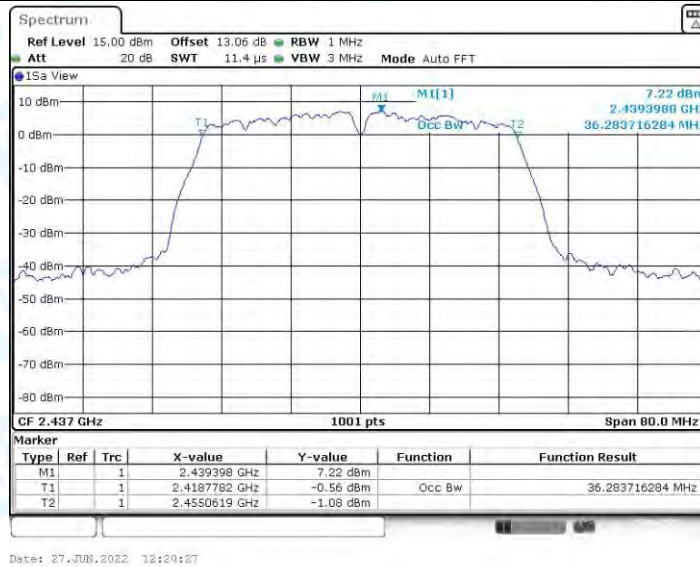
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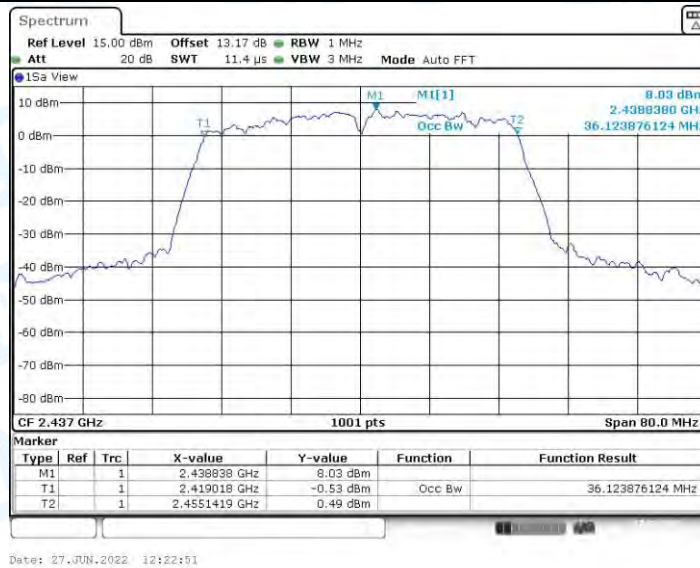
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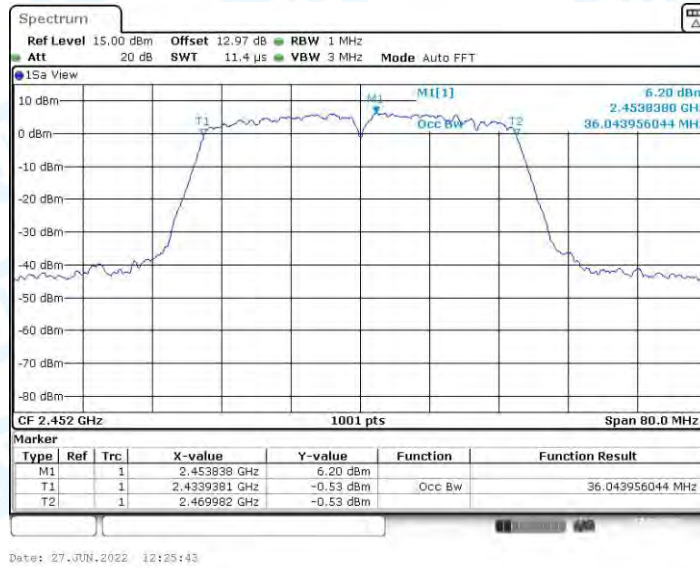
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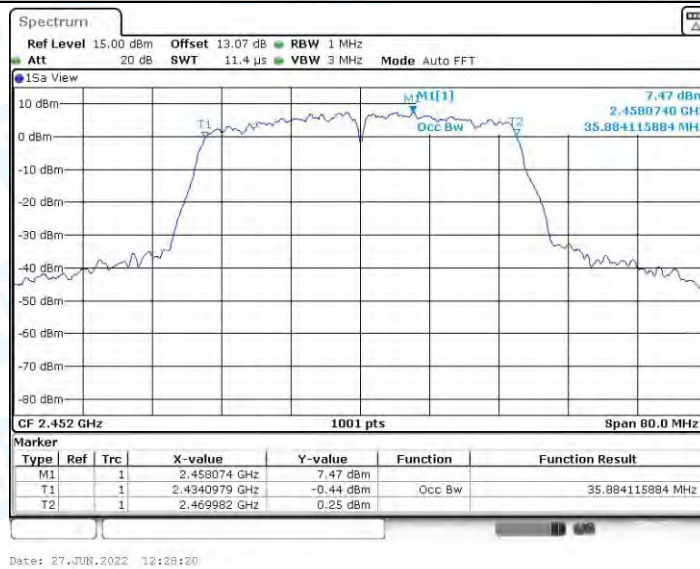
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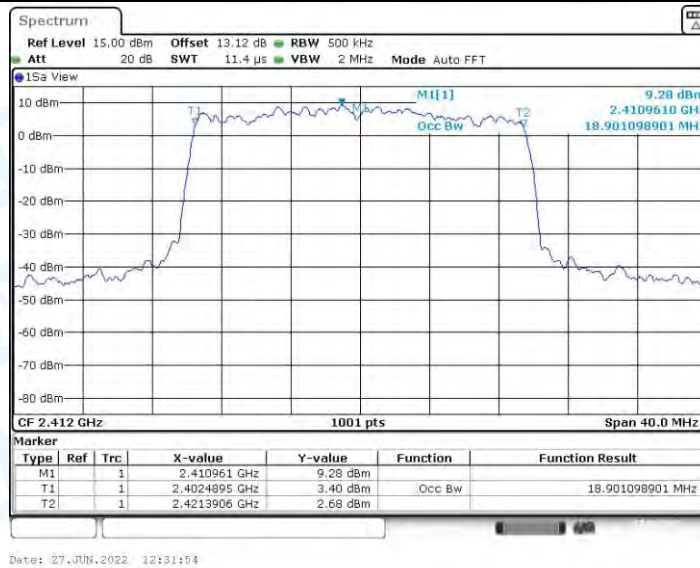
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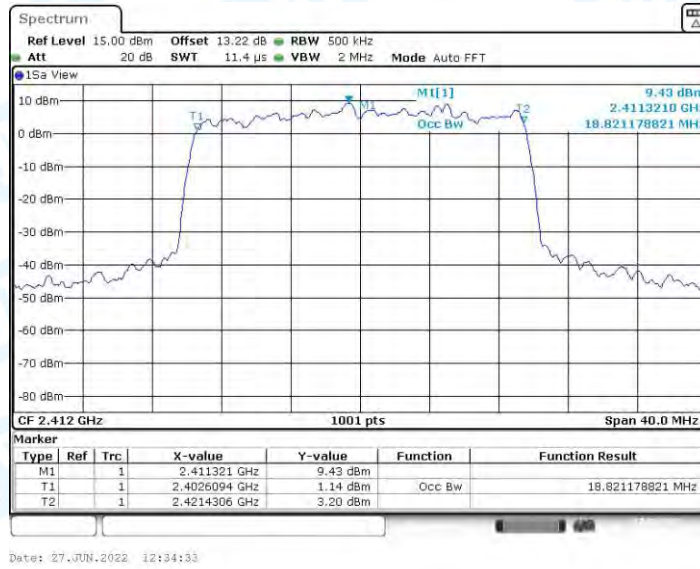
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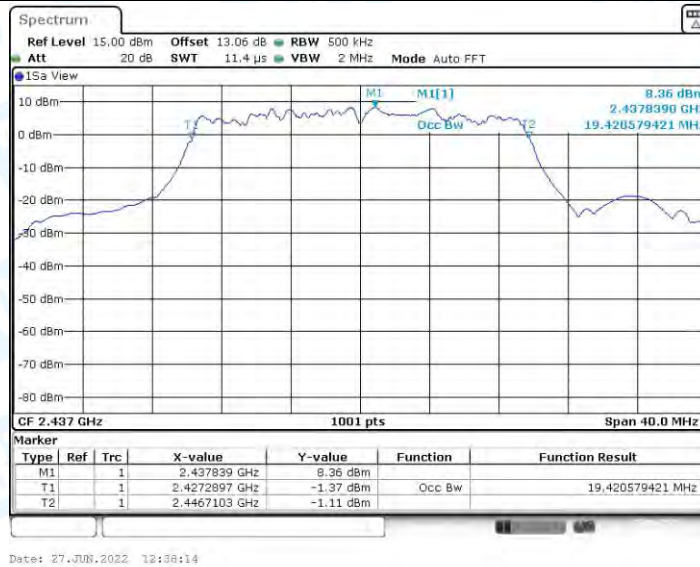
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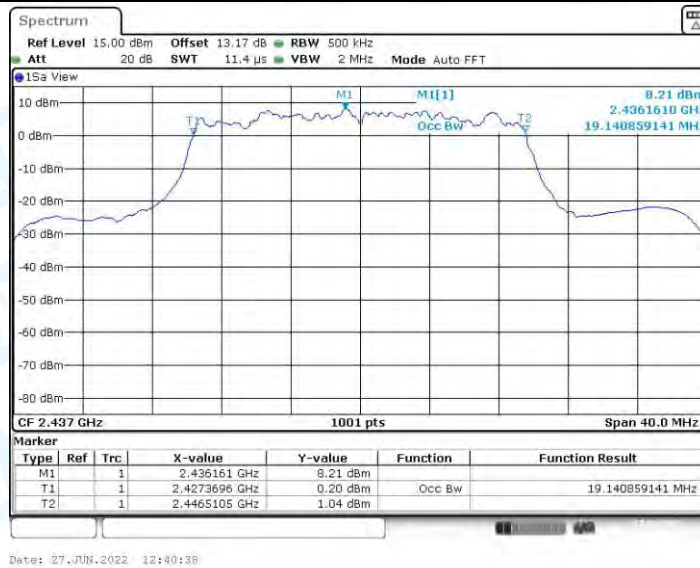
11AX20MIMO_Ant1_2412



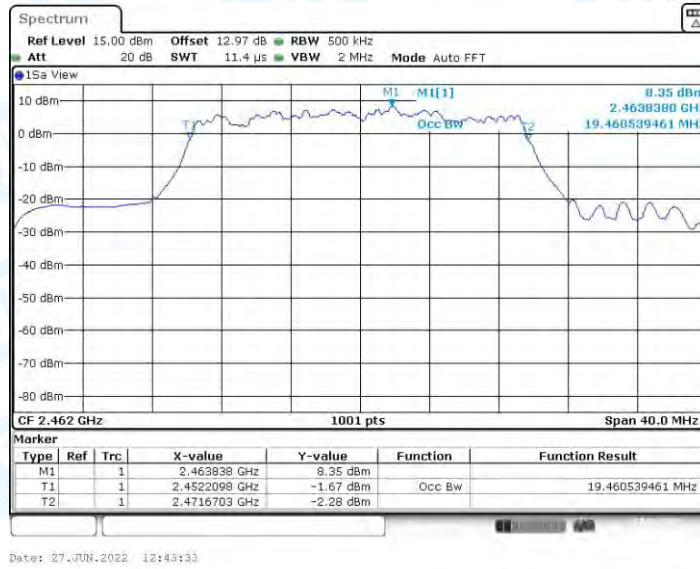
11AX20MIMO_Ant2_2412



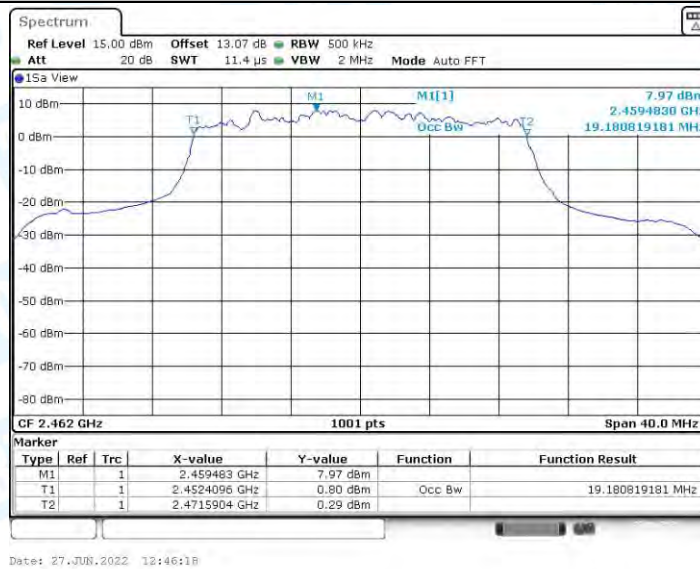
11AX20MIMO_Ant1_2437



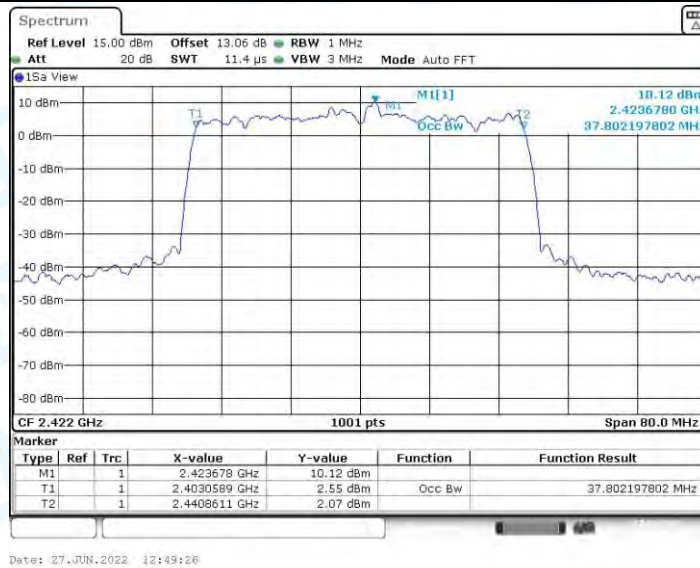
11AX20MIMO_Ant2_2437



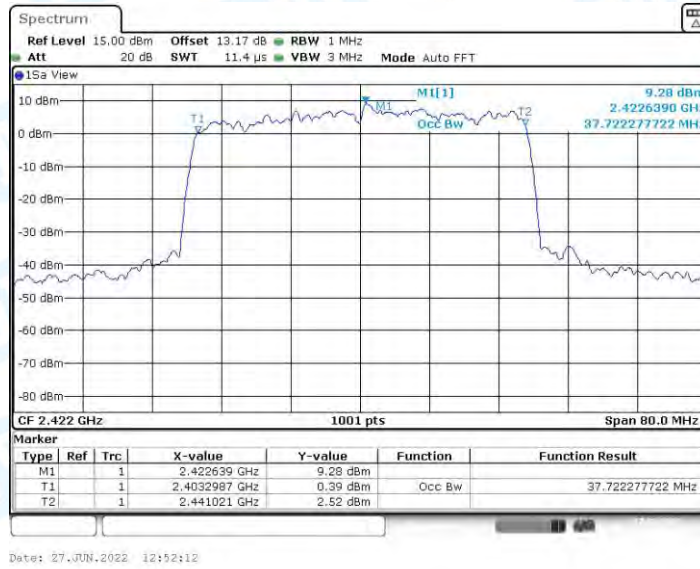
11AX20MIMO_Ant1_2462



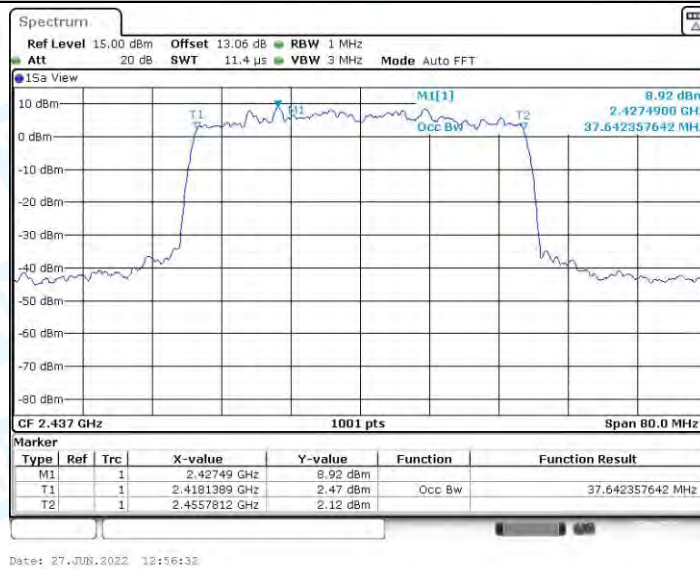
11AX20MIMO_Ant2_2462



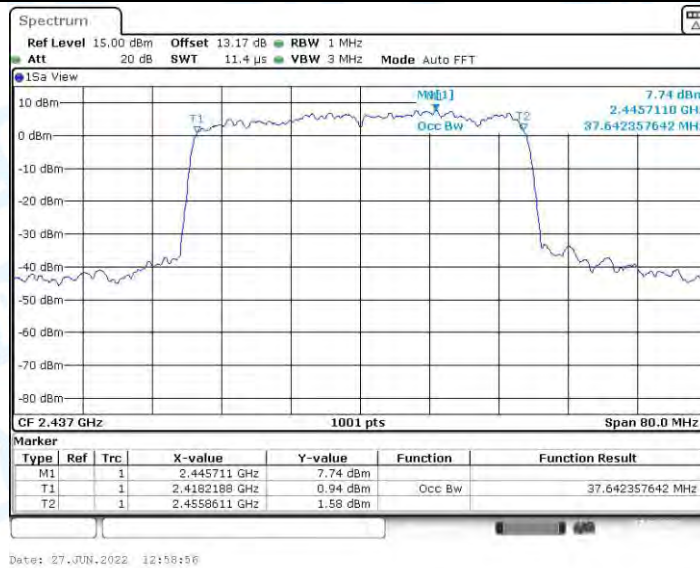
11AX40MIMO_Ant1_2422



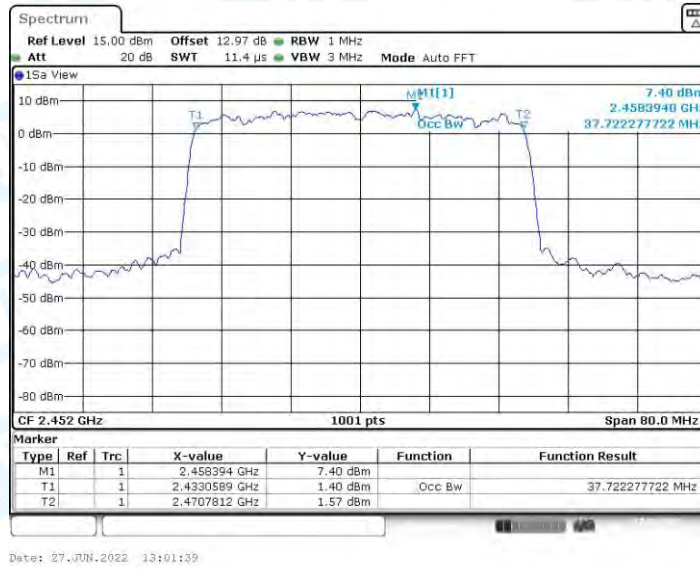
11AX40MIMO_Ant2_2422



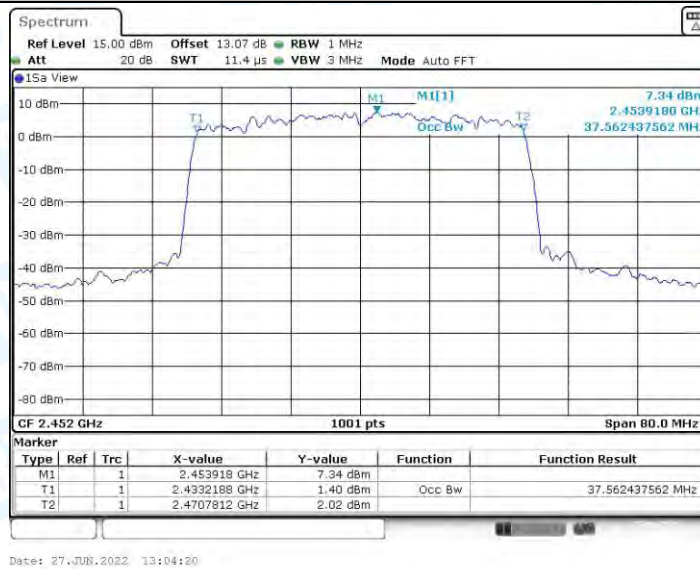
11AX40MIMO_Ant1_2437



11AX40MIMO_Ant2_2437



11AX40MIMO_Ant1_2452



11AX40MIMO_Ant2_2452

3. Maximum conducted output power

Test Mode	Antenna	Frequency [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11B	Ant1	2412	17.33	≤30.00	3.9025	21.23	≤36.00	PASS
	Ant2	2412	17.17	≤30.00	4.7514	21.92	≤36.00	PASS
	Ant1	2437	17.16	≤30.00	3.9025	21.06	≤36.00	PASS
	Ant2	2437	17.00	≤30.00	4.7514	21.75	≤36.00	PASS
	Ant1	2462	16.88	≤30.00	3.9025	20.78	≤36.00	PASS
	Ant2	2462	16.97	≤30.00	4.7514	21.72	≤36.00	PASS
11G	Ant1	2412	14.49	≤30.00	3.9025	18.39	≤36.00	PASS
	Ant2	2412	14.02	≤30.00	4.7514	18.77	≤36.00	PASS
	Ant1	2437	14.33	≤30.00	3.9025	18.23	≤36.00	PASS
	Ant2	2437	13.88	≤30.00	4.7514	18.63	≤36.00	PASS
	Ant1	2462	14.13	≤30.00	3.9025	18.03	≤36.00	PASS
	Ant2	2462	13.94	≤30.00	4.7514	18.69	≤36.00	PASS
11N20MIMO	Ant1	2412	12.59	≤30.00	3.9025	16.49	≤36.00	PASS
	Ant2	2412	12.02	≤30.00	4.7514	16.77	≤36.00	PASS
	total	2412	15.32	≤28.64	---	19.64	≤36.00	PASS
	Ant1	2437	12.44	≤30.00	3.9025	16.34	≤36.00	PASS
	Ant2	2437	11.90	≤30.00	4.7514	16.65	≤36.00	PASS
	total	2437	15.19	≤28.64	---	19.51	≤36.00	PASS
	Ant1	2462	12.21	≤30.00	3.9025	16.11	≤36.00	PASS
	Ant2	2462	11.98	≤30.00	4.7514	16.73	≤36.00	PASS
	total	2462	15.11	≤28.64	---	19.68	≤36.00	PASS
11N40MIMO	Ant1	2422	10.28	≤30.00	3.9025	14.18	≤36.00	PASS
	Ant2	2422	9.81	≤30.00	4.7514	14.56	≤36.00	PASS
	total	2422	13.06	≤28.64	---	17.38	≤36.00	PASS
	Ant1	2437	10.28	≤30.00	3.9025	14.18	≤36.00	PASS
	Ant2	2437	9.69	≤30.00	4.7514	14.44	≤36.00	PASS
	total	2437	13.01	≤28.64	---	17.32	≤36.00	PASS
	Ant1	2452	10.26	≤30.00	3.9025	14.16	≤36.00	PASS
	Ant2	2452	9.64	≤30.00	4.7514	14.39	≤36.00	PASS
	total	2452	12.97	≤28.64	---	17.29	≤36.00	PASS
11AX20MIMO	Ant1	2412	10.24	≤30.00	3.9025	14.14	≤36.00	PASS
	Ant2	2412	9.72	≤30.00	4.7514	14.47	≤36.00	PASS
	total	2412	13.00	≤28.64	---	17.32	≤36.00	PASS
	Ant1	2437	10.10	≤30.00	3.9025	14.00	≤36.00	PASS
	Ant2	2437	9.53	≤30.00	4.7514	14.28	≤36.00	PASS
	total	2437	12.83	≤28.64	---	17.15	≤36.00	PASS
	Ant1	2462	9.97	≤30.00	3.9025	13.87	≤36.00	PASS
	Ant2	2462	9.37	≤30.00	4.7514	14.12	≤36.00	PASS
	total	2462	12.69	≤28.64	---	17.01	≤36.00	PASS
11AX40MIMO	Ant1	2422	10.35	≤30.00	3.9025	14.25	≤36.00	PASS
	Ant2	2422	9.85	≤30.00	4.7514	14.60	≤36.00	PASS
	total	2422	13.12	≤28.64	---	17.44	≤36.00	PASS
	Ant1	2437	10.32	≤30.00	3.9025	14.22	≤36.00	PASS
	Ant2	2437	9.77	≤30.00	4.7514	14.52	≤36.00	PASS
	total	2437	13.06	≤28.64	---	17.38	≤36.00	PASS
	Ant1	2452	10.23	≤30.00	3.9025	14.13	≤36.00	PASS
	Ant2	2452	9.72	≤30.00	4.7514	14.47	≤36.00	PASS
	total	2452	12.99	≤28.64	---	17.31	≤36.00	PASS

Note: The EUT incorporates a MIMO function. Physically, the EUT provides three antennas for transmitting and receiving. When ANT.1(3.9025dBi) and ANT. 2(4.7514dBi) transmitting simultaneously, and the Directional Gain=7.36dBi > 6dBi. So Pout = Plimit-(G_{TX}-6)=[(30-1.36)dBm -28.64dBm

4. Maximum power spectral density

4.1. Test Result

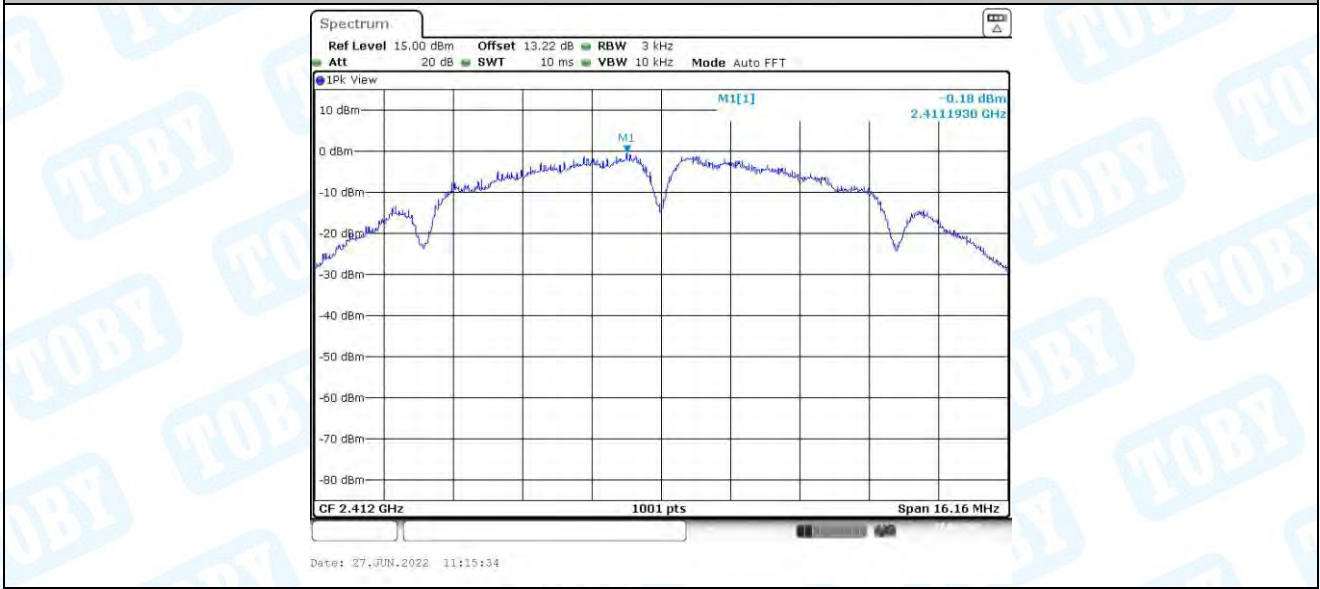
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-0.81	≤8.00	PASS
	Ant2	2412	-0.18	≤8.00	PASS
	Ant1	2437	-0.27	≤8.00	PASS
	Ant2	2437	0.34	≤8.00	PASS
	Ant1	2462	-1.53	≤8.00	PASS
	Ant2	2462	-1.14	≤8.00	PASS
11G	Ant1	2412	-5.12	≤8.00	PASS
	Ant2	2412	-4.11	≤8.00	PASS
	Ant1	2437	-4.64	≤8.00	PASS
	Ant2	2437	-5.09	≤8.00	PASS
	Ant1	2462	-4.74	≤8.00	PASS
	Ant2	2462	-4.9	≤8.00	PASS
11N20MIMO	Ant1	2412	-10.19	≤8.00	PASS
	Ant2	2412	-9.56	≤8.00	PASS
	total	2412	-6.85	≤6.64	PASS
	Ant1	2437	-7.86	≤8.00	PASS
	Ant2	2437	-10.72	≤8.00	PASS
	total	2437	-6.05	≤6.64	PASS
	Ant1	2462	-10.28	≤8.00	PASS
	Ant2	2462	-9.86	≤8.00	PASS
total	2462	-7.05	≤6.64	PASS	
11N40MIMO	Ant1	2422	-14.27	≤8.00	PASS
	Ant2	2422	-13.91	≤8.00	PASS
	total	2422	-11.08	≤6.64	PASS
	Ant1	2437	-13.55	≤8.00	PASS
	Ant2	2437	-14.07	≤8.00	PASS
	total	2437	-10.79	≤6.64	PASS
	Ant1	2452	-13.14	≤8.00	PASS
	Ant2	2452	-12.98	≤8.00	PASS
total	2452	-10.05	≤6.64	PASS	
11AX20MIMO	Ant1	2412	-10.76	≤8.00	PASS
	Ant2	2412	-11.06	≤8.00	PASS
	total	2412	-7.90	≤6.64	PASS
	Ant1	2437	-11.4	≤8.00	PASS
	Ant2	2437	-11.63	≤8.00	PASS
	total	2437	-8.50	≤6.64	PASS
	Ant1	2462	-11.94	≤8.00	PASS
	Ant2	2462	-11.46	≤8.00	PASS
total	2462	-8.68	≤6.64	PASS	
11AX40MIMO	Ant1	2422	-14.4	≤8.00	PASS
	Ant2	2422	-14.23	≤8.00	PASS
	total	2422	-11.30	≤6.64	PASS
	Ant1	2437	-13.84	≤8.00	PASS
	Ant2	2437	-13.8	≤8.00	PASS
	total	2437	-10.81	≤6.64	PASS
	Ant1	2452	-15.25	≤8.00	PASS
	Ant2	2452	-14.73	≤8.00	PASS
total	2452	-11.97	≤6.64	PASS	

Note: The EUT incorporates a MIMO function. Physically, the EUT provides three antennas for transmitting and receiving. When ANT.1(3.9025dBi) and ANT. 2(4.7514dBi) transmitting simultaneously, and the Directional Gain=7.36dBi > 6dBi. So PSDout = PSDlimit-(G_{TX}-6)]= (8-1.36)dBm = 6.64dBm/3kHz

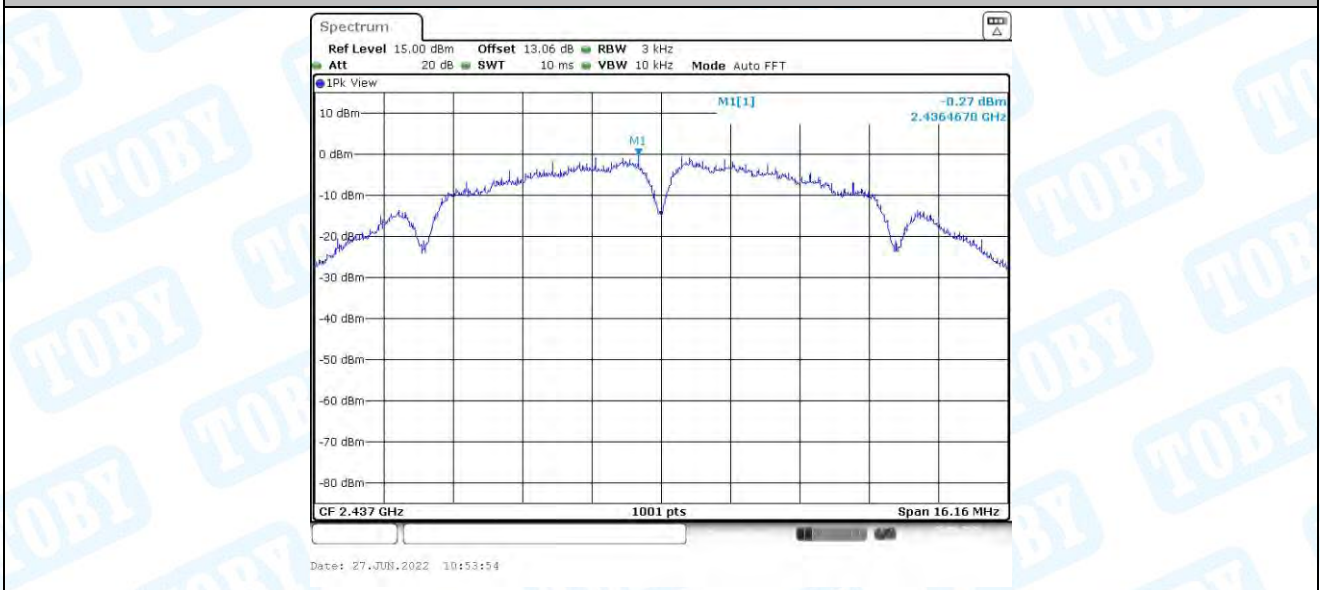
4.2. Test Graphs



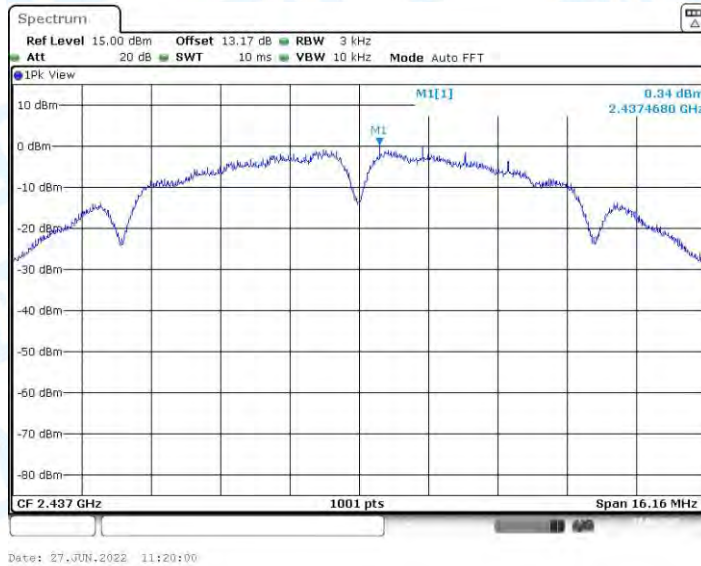
11B_Ant1_2412



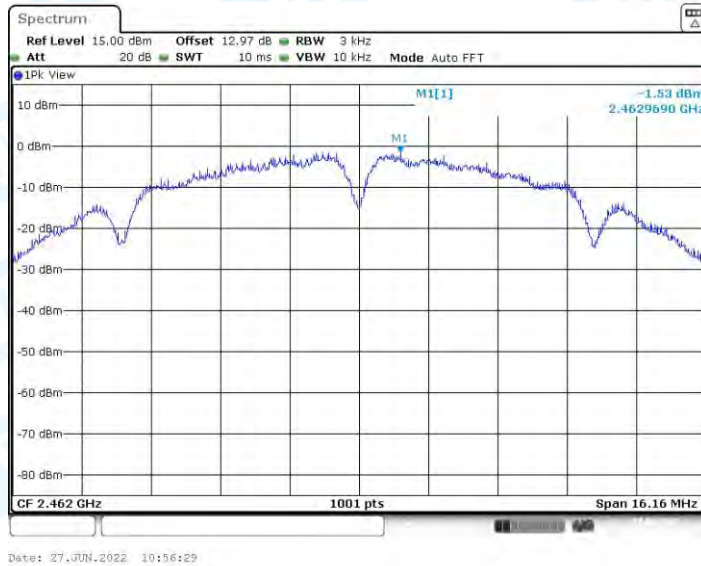
11B_Ant2_2412



11B_Ant1_2437



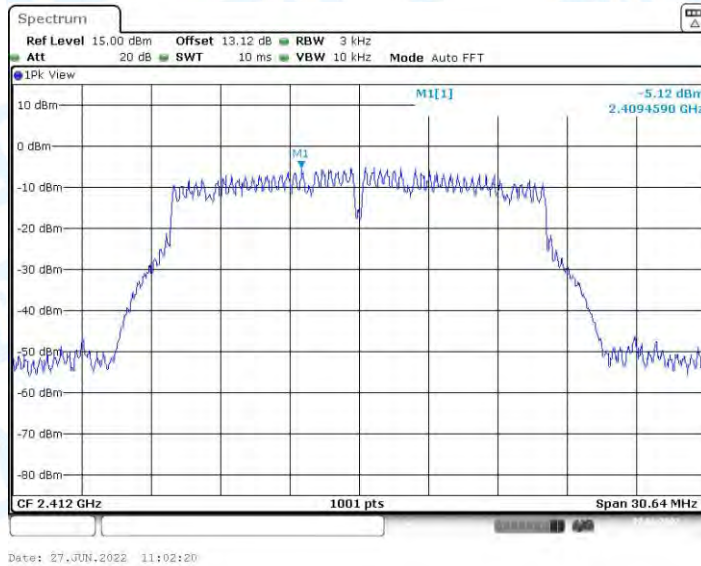
11B_Ant2_2437



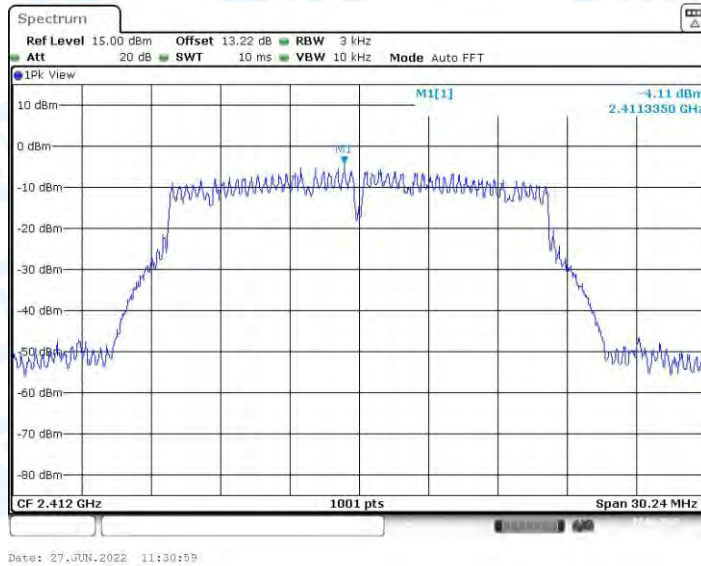
11B_Ant1_2462



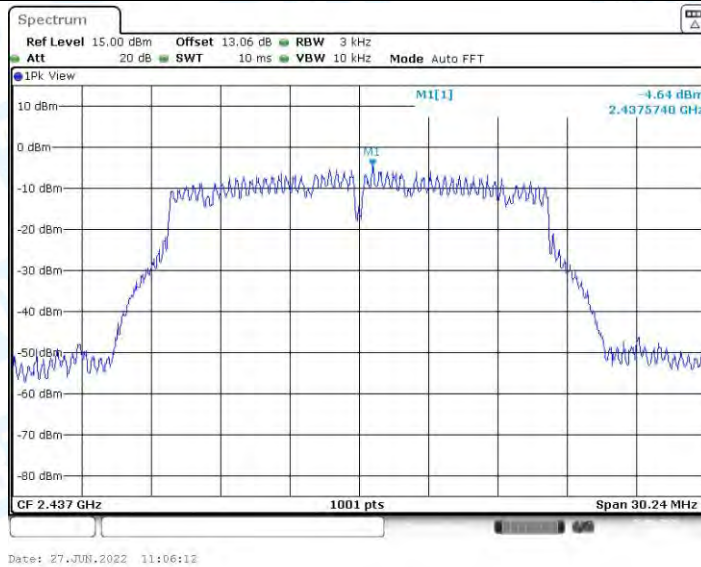
11B_Ant2_2462



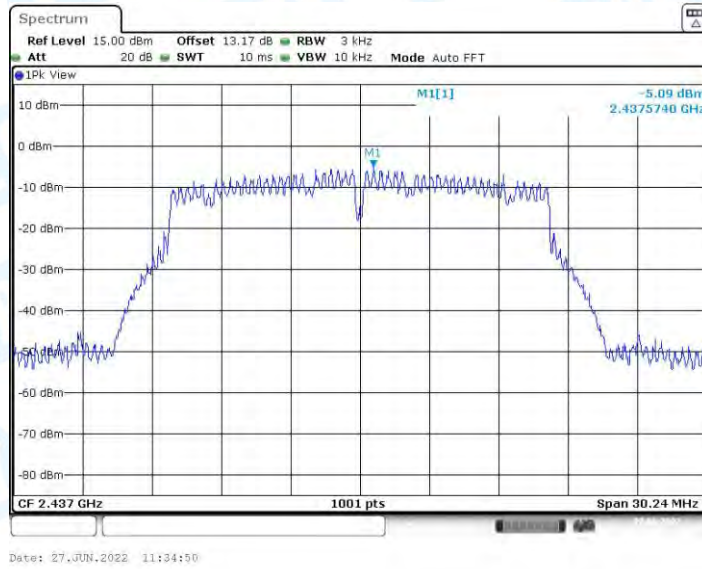
11G_Ant1_2412



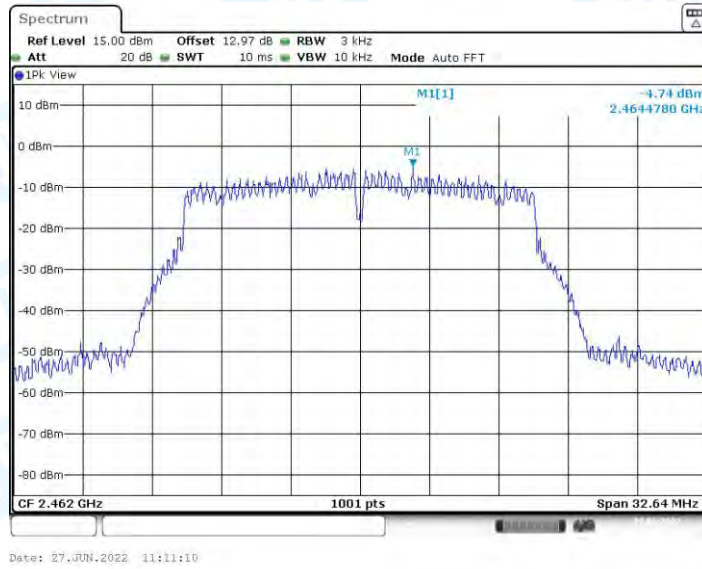
11G_Ant2_2412



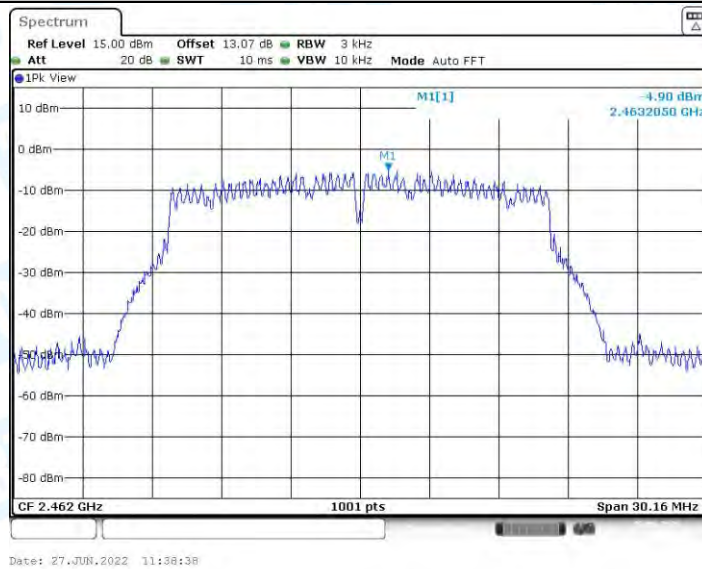
11G_Ant1_2437



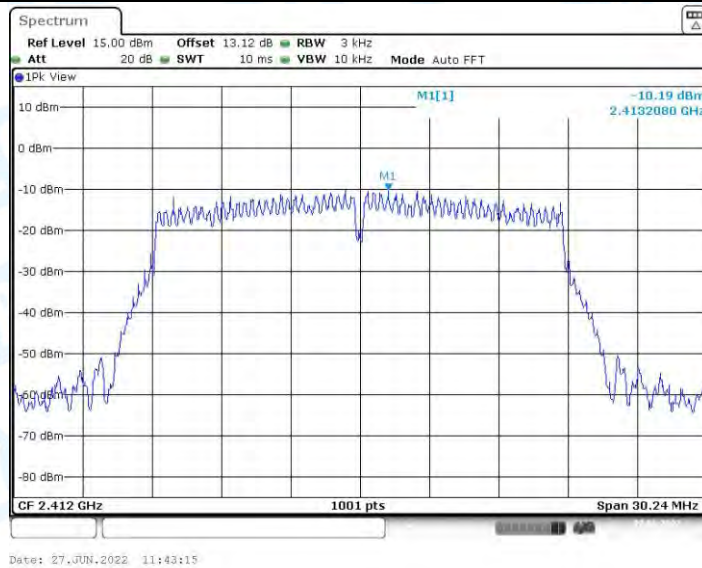
11G_Ant2_2437



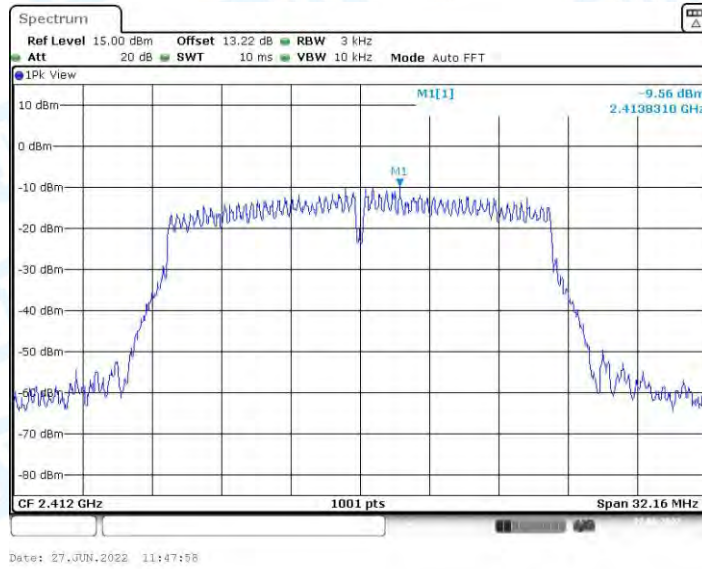
11G_Ant1_2462



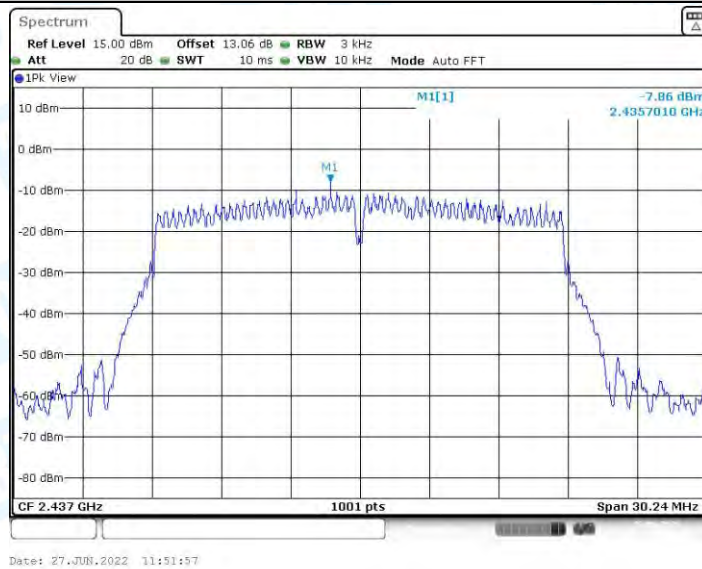
11G_Ant2_2462



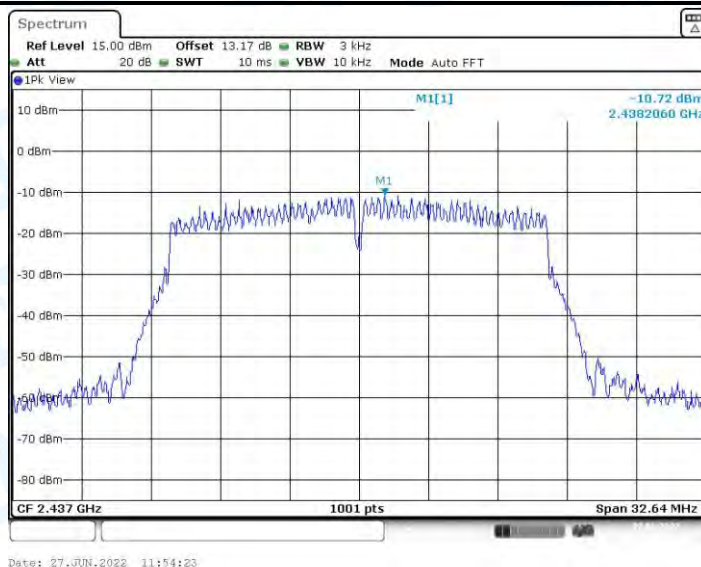
11N20MIMO_Ant1_2412



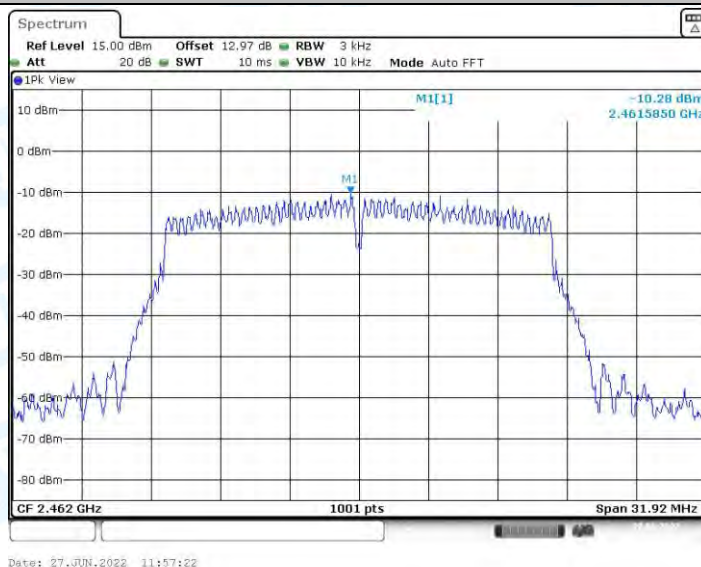
11N20MIMO_Ant2_2412



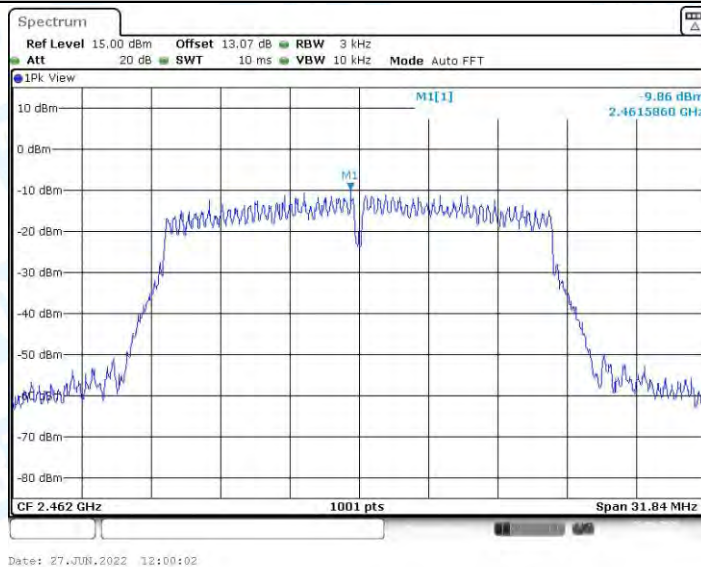
11N20MIMO_Ant1_2437



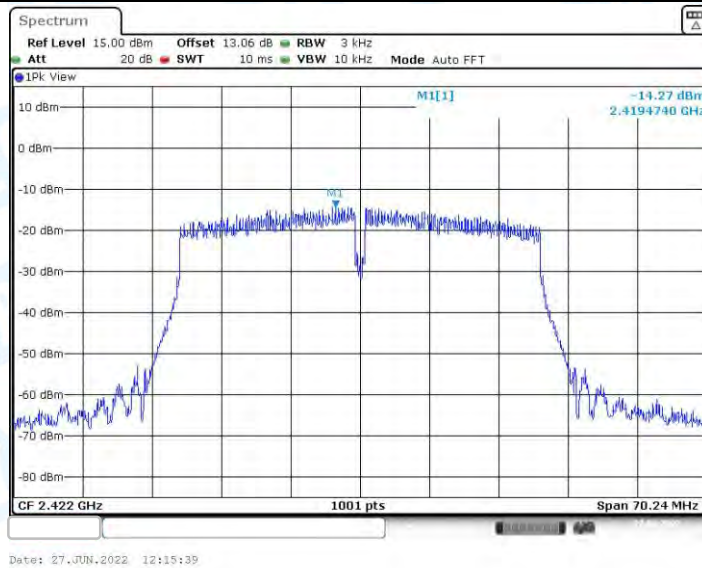
11N20MIMO_Ant2_2437



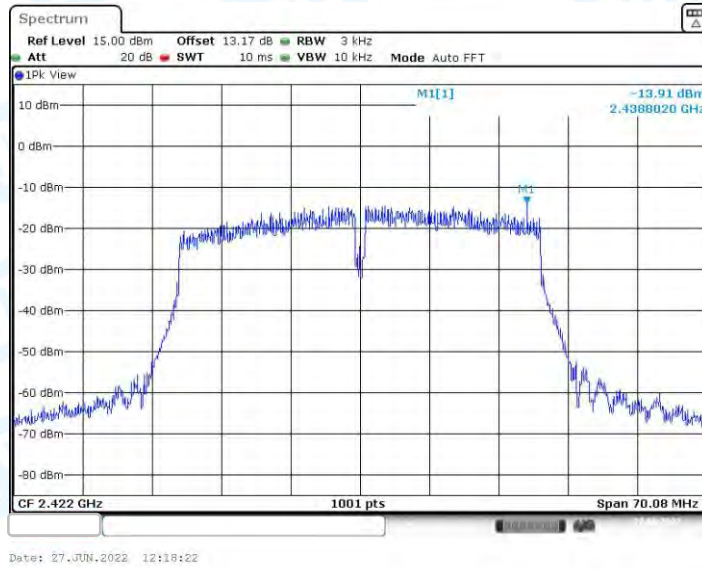
11N20MIMO_Ant1_2462



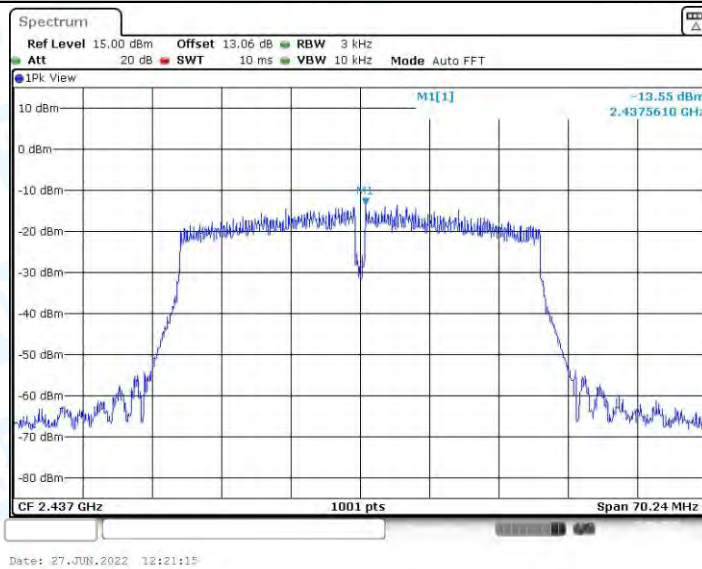
11N20MIMO_Ant2_2462



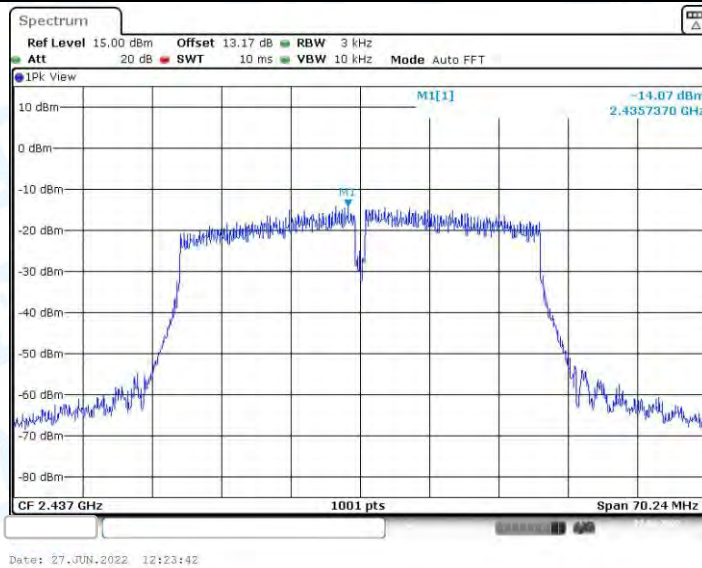
11N40MIMO_Ant1_2422



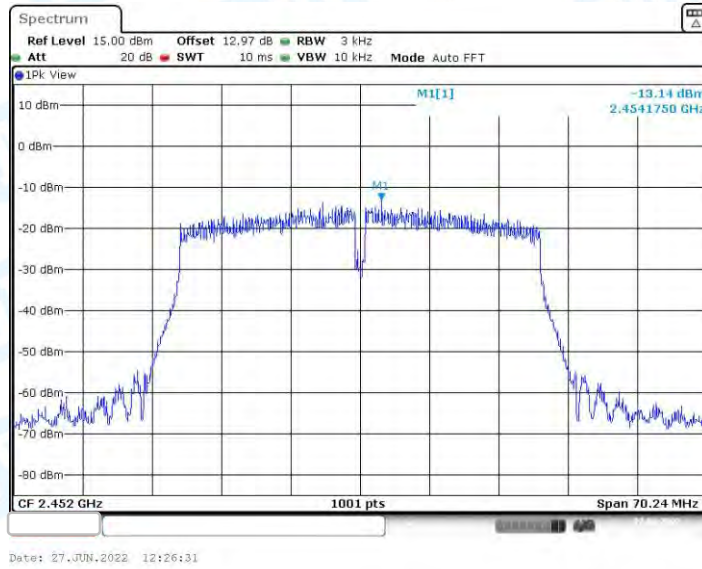
11N40MIMO_Ant2_2422



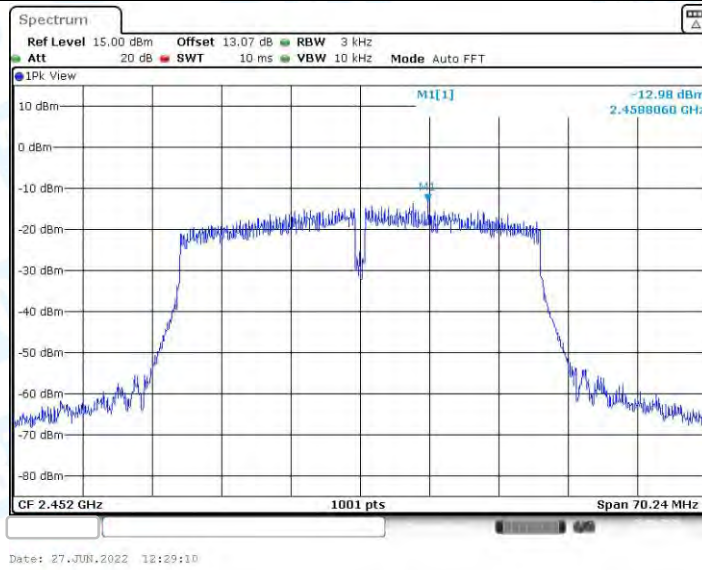
11N40MIMO_Ant1_2437



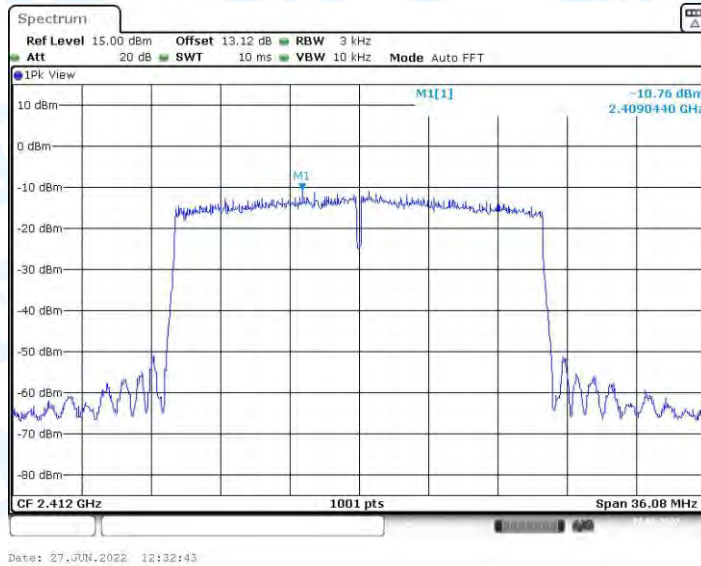
11N40MIMO_Ant2_2437



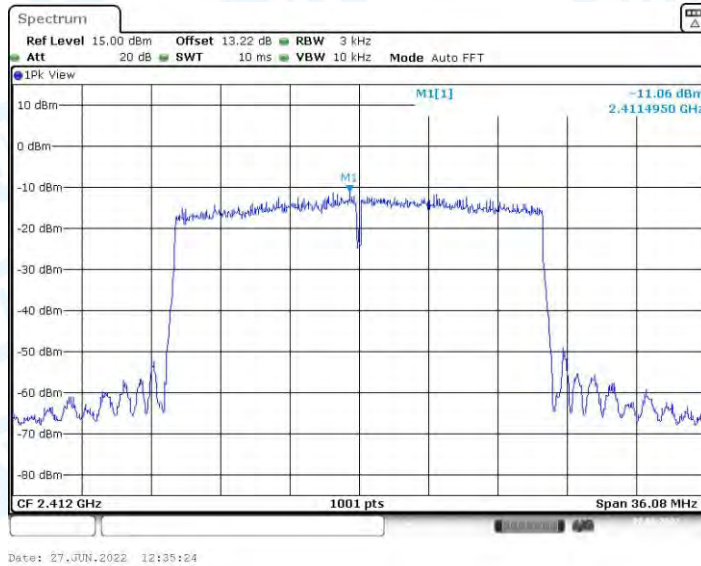
11N40MIMO_Ant1_2452



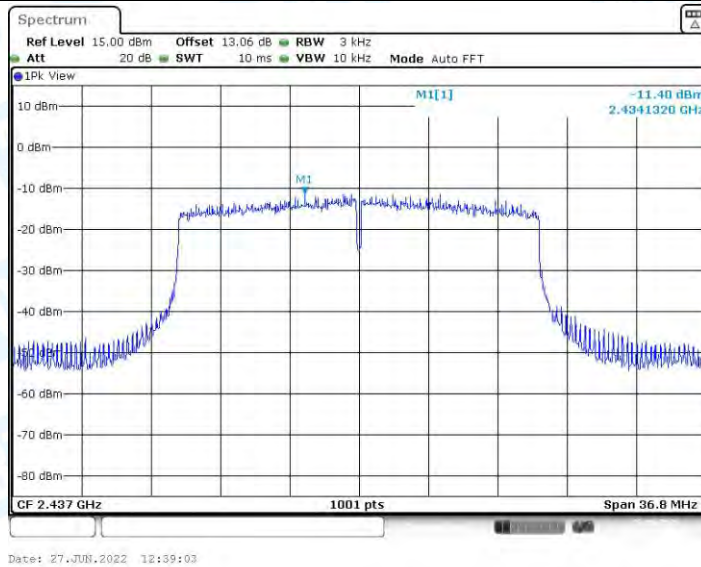
11N40MIMO_Ant2_2452



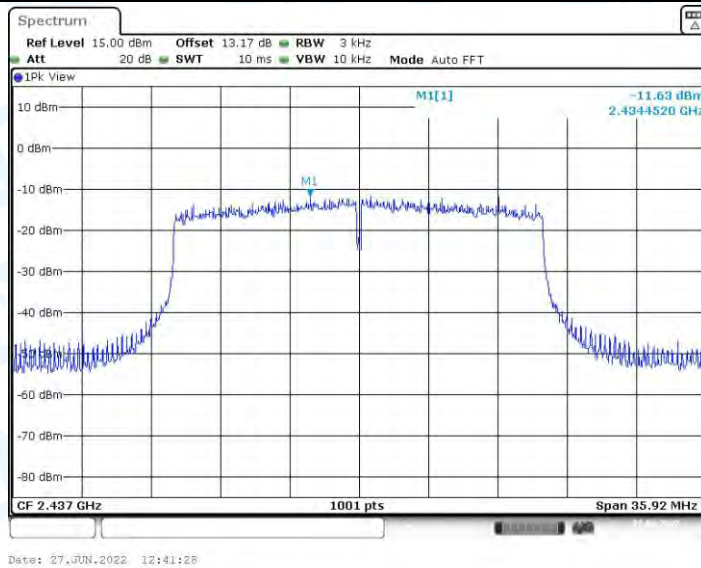
11AX20MIMO_Ant1_2412



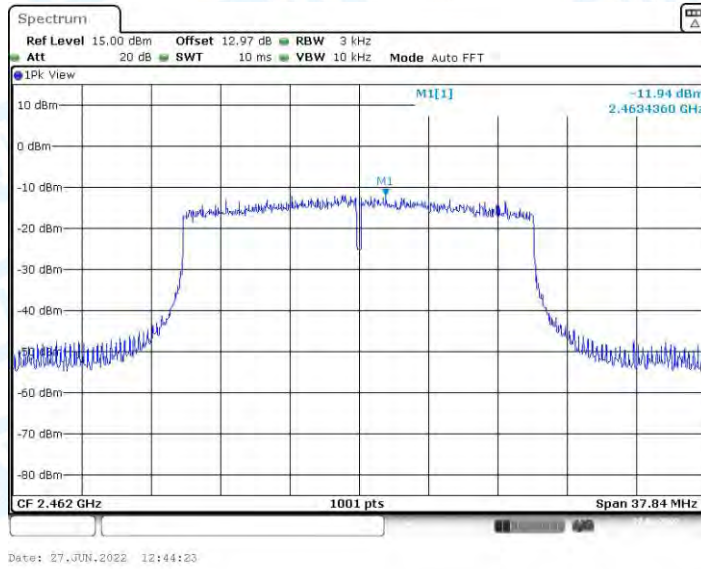
11AX20MIMO_Ant2_2412



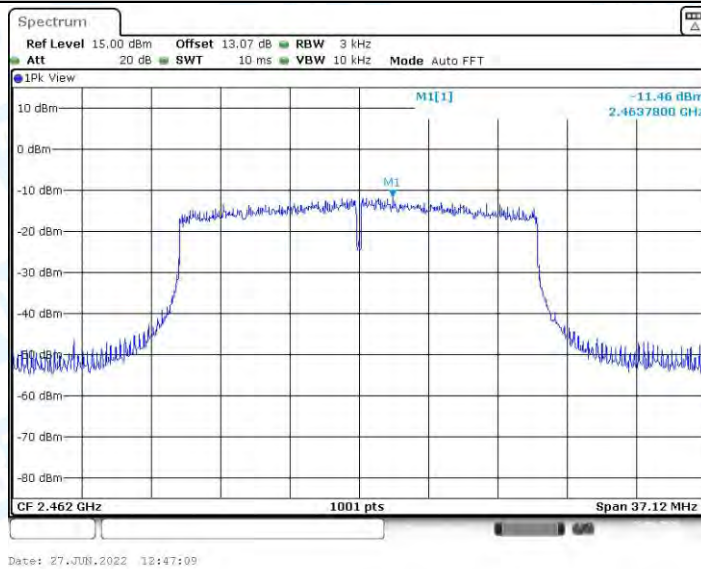
11AX20MIMO_Ant1_2437



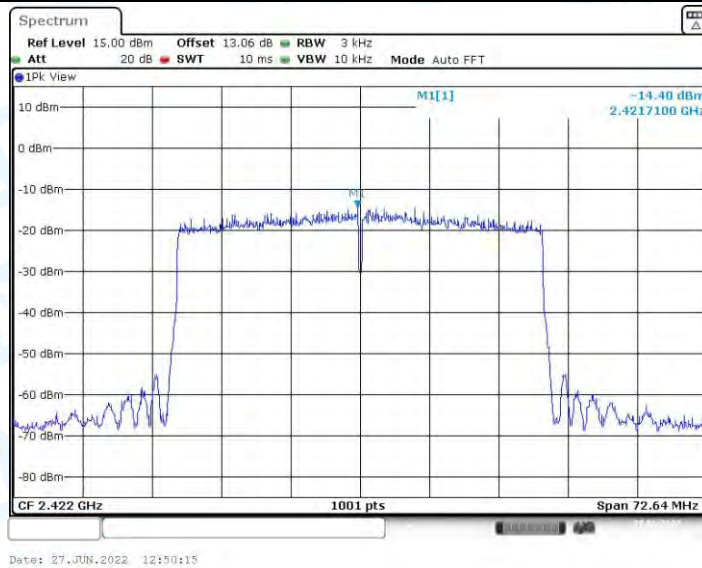
11AX20MIMO_Ant2_2437



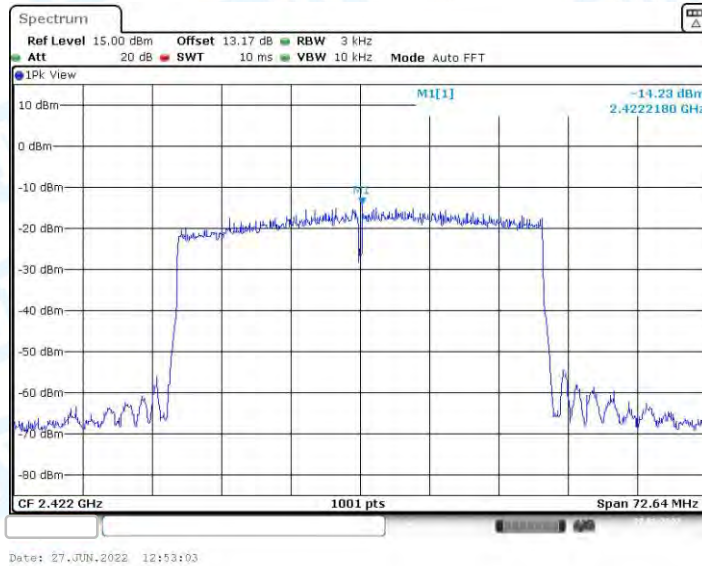
11AX20MIMO_Ant1_2462



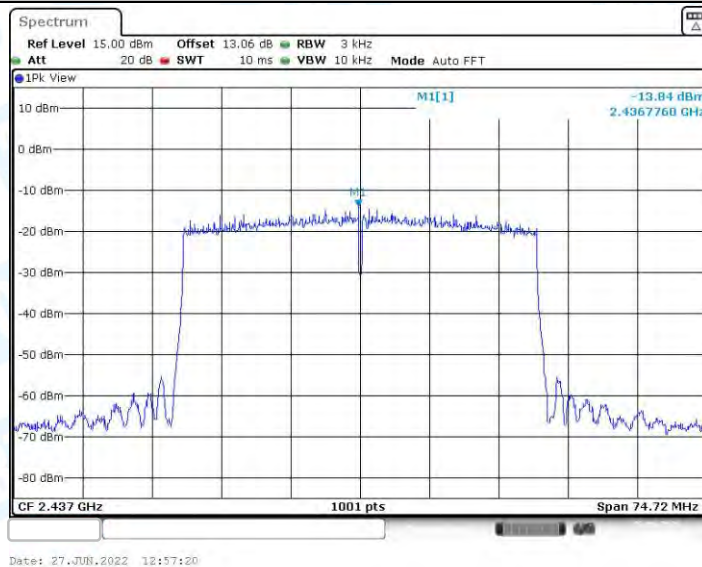
11AX20MIMO_Ant2_2462



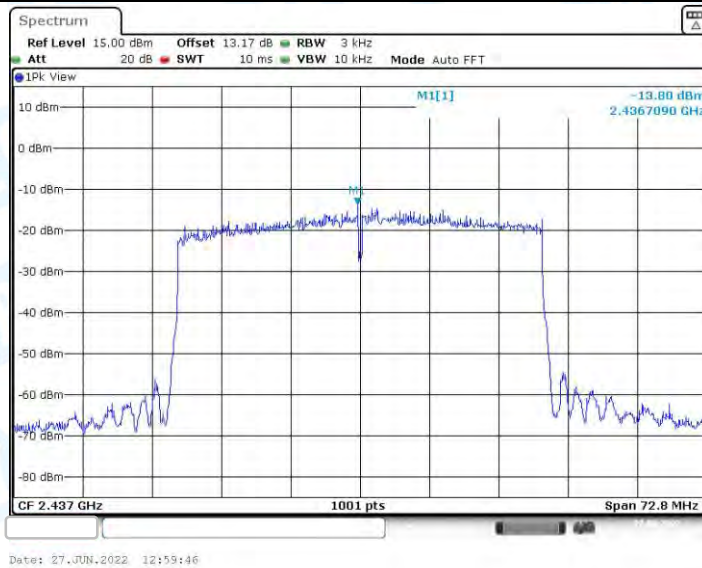
11AX40MIMO_Ant1_2422



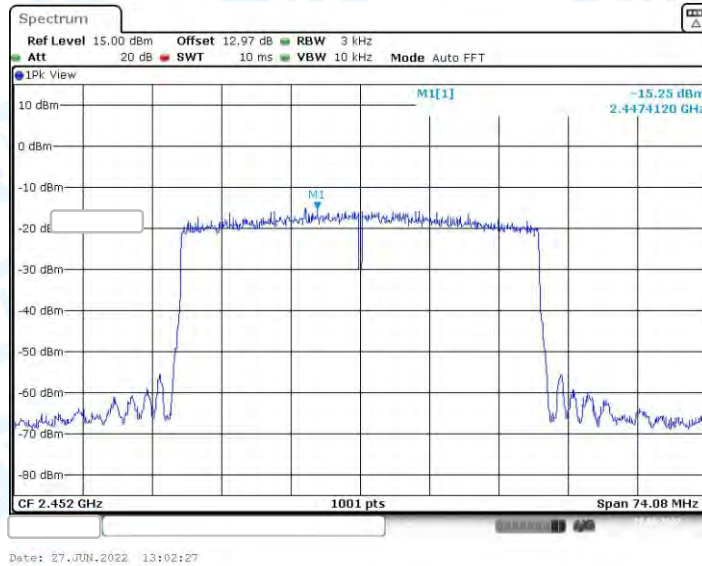
11AX40MIMO_Ant2_2422



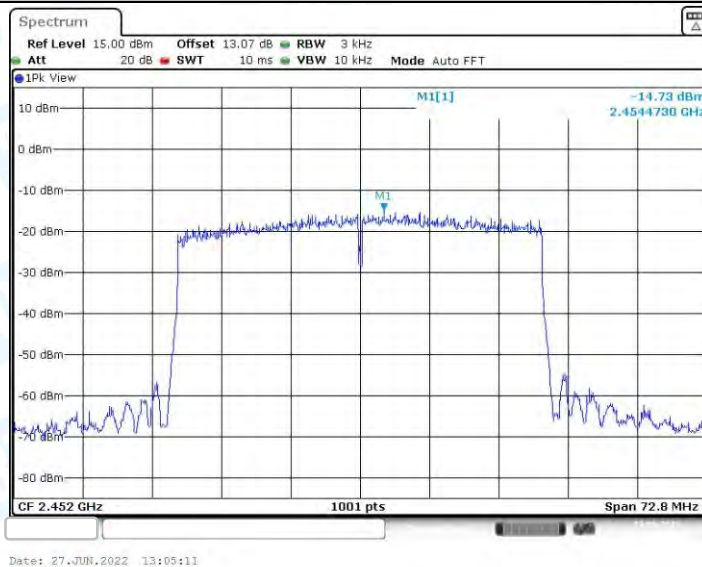
11AX40MIMO_Ant1_2437



11AX40MIMO_Ant2_2437



11AX40MIMO_Ant1_2452



11AX40MIMO_Ant2_2452