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

General Description of EUT	
Product Name:	AC1200 Dual Band WiFi GPON Terminal, Dual Band WiFi GPON Terminal, Terminal WiFi GPON de doble banda AC1200
Test Model:	NP1257GB
Sample ID:	202302-0215-5-2#
Environmental Conditions	
Temperature:	23.6℃
Relative Humidity:	43%
Test Voltage:	DC 12V
Test Engineer:	Haiting Zhou
Note: For a more detailed features description, please refer to the report TBR-C-202302-0215-5.	

Contents

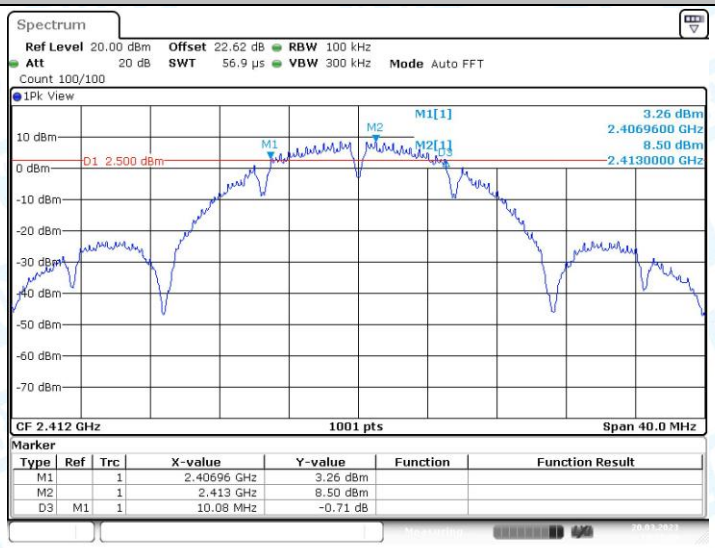
1. DTS Bandwidth

1.1.Test Result

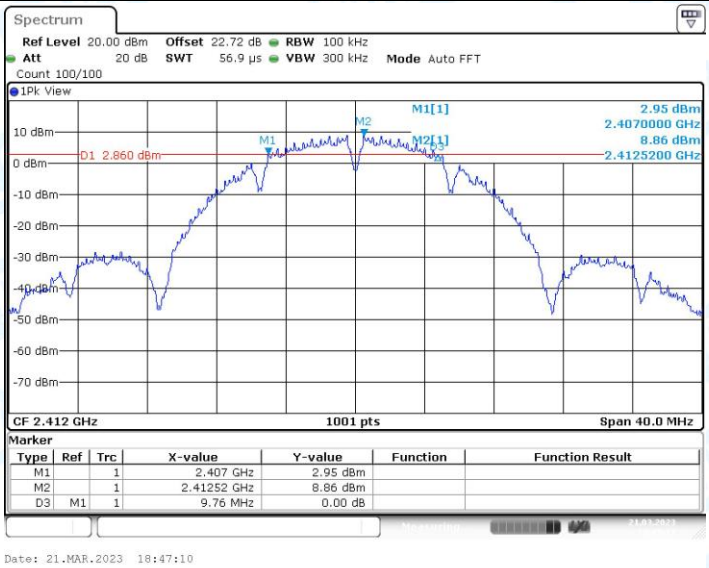
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.08	2406.96	2417.04	0.5	PASS
	Ant2	2412	9.76	2407.00	2416.76	0.5	PASS
	Ant1	2437	10.04	2431.96	2442.00	0.5	PASS
	Ant2	2437	10.04	2431.96	2442.00	0.5	PASS
	Ant1	2462	10.04	2456.96	2467.00	0.5	PASS
	Ant2	2462	9.80	2456.96	2466.76	0.5	PASS
11G	Ant1	2412	15.48	2404.08	2419.56	0.5	PASS
	Ant2	2412	15.44	2404.12	2419.56	0.5	PASS
	Ant1	2437	16.32	2428.84	2445.16	0.5	PASS
	Ant2	2437	15.40	2429.12	2444.52	0.5	PASS
	Ant1	2462	15.08	2454.44	2469.52	0.5	PASS
	Ant2	2462	16.32	2453.84	2470.16	0.5	PASS
11N20MIMO	Ant1	2412	15.72	2403.84	2419.56	0.5	PASS
	Ant2	2412	15.12	2404.44	2419.56	0.5	PASS
	Ant1	2437	15.00	2429.52	2444.52	0.5	PASS
	Ant2	2437	15.08	2429.44	2444.52	0.5	PASS
	Ant1	2462	13.88	2455.68	2469.56	0.5	PASS
	Ant2	2462	15.08	2454.44	2469.52	0.5	PASS
11N40MIMO	Ant1	2422	35.04	2404.48	2439.52	0.5	PASS
	Ant2	2422	32.56	2406.96	2439.52	0.5	PASS
	Ant1	2437	35.04	2419.48	2454.52	0.5	PASS
	Ant2	2437	35.04	2419.48	2454.52	0.5	PASS
	Ant1	2452	35.44	2434.08	2469.52	0.5	PASS
	Ant2	2452	35.04	2434.48	2469.52	0.5	PASS

1.2.Test Graphs

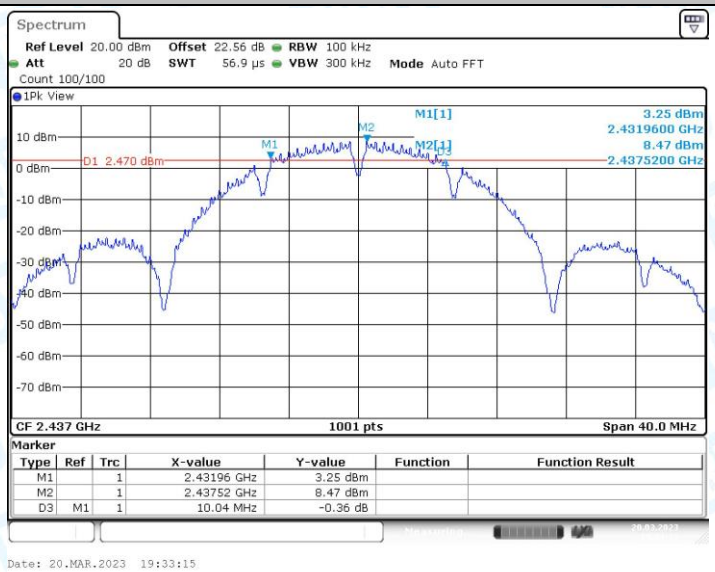
11B_Ant1_2412



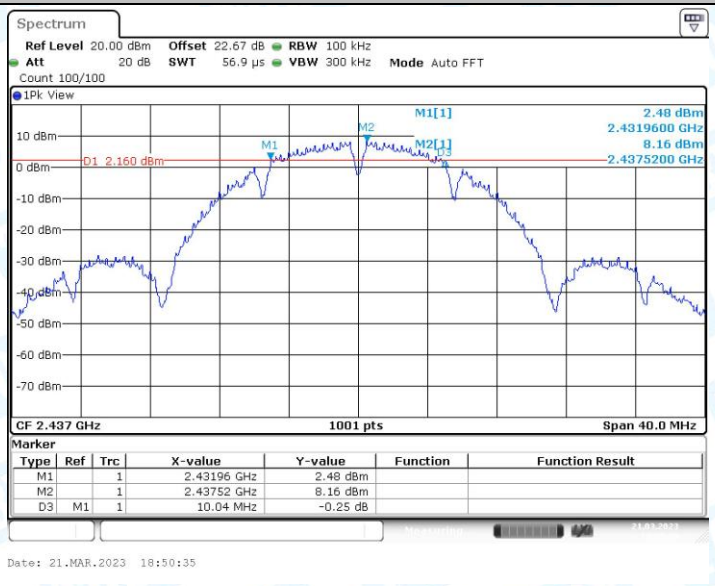
11B_Ant2_2412



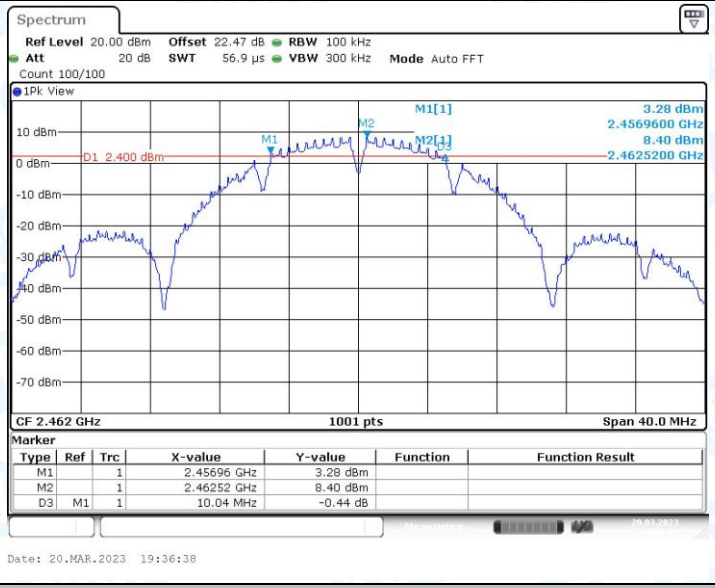
11B_Ant1_2437



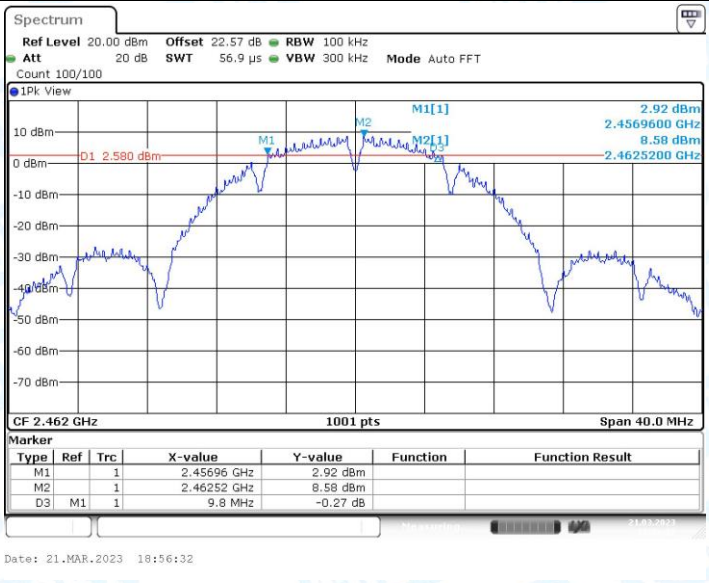
11B_Ant2_2437



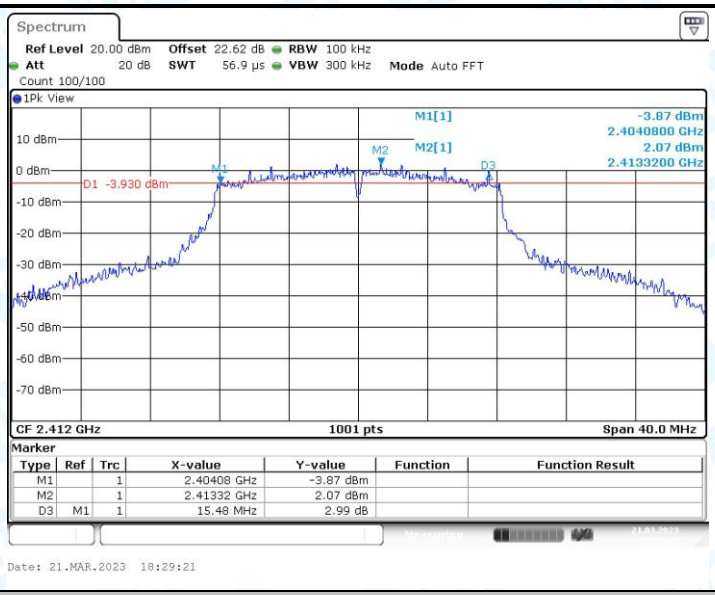
11B_Ant1_2462



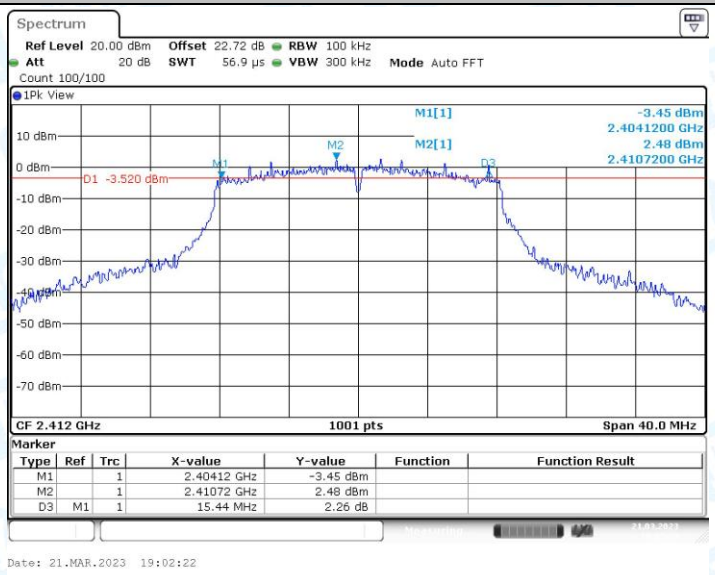
11B_Ant2_2462



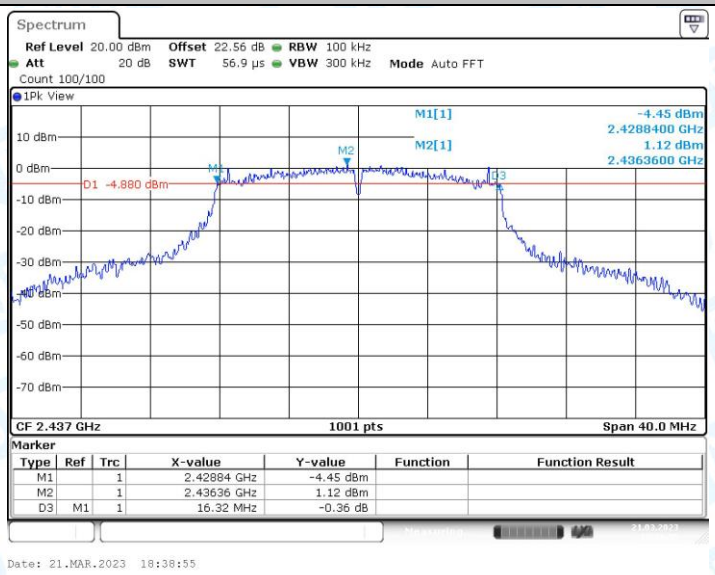
11G_Ant1_2412



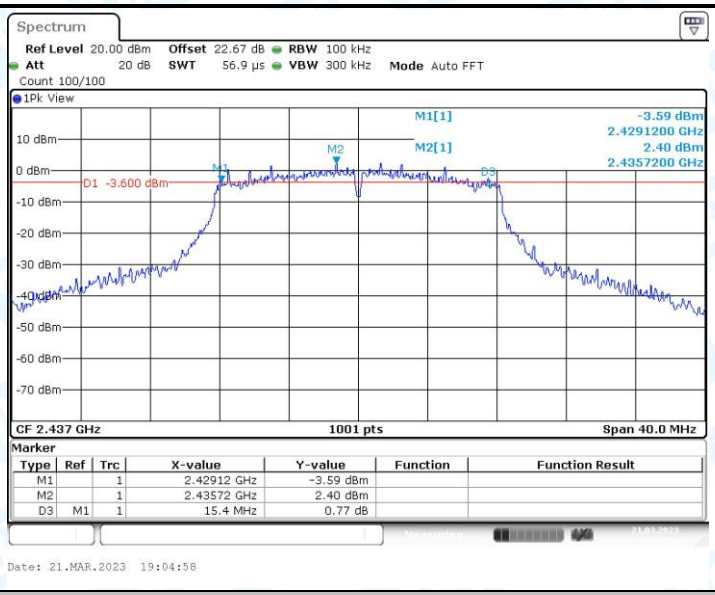
11G_Ant2_2412



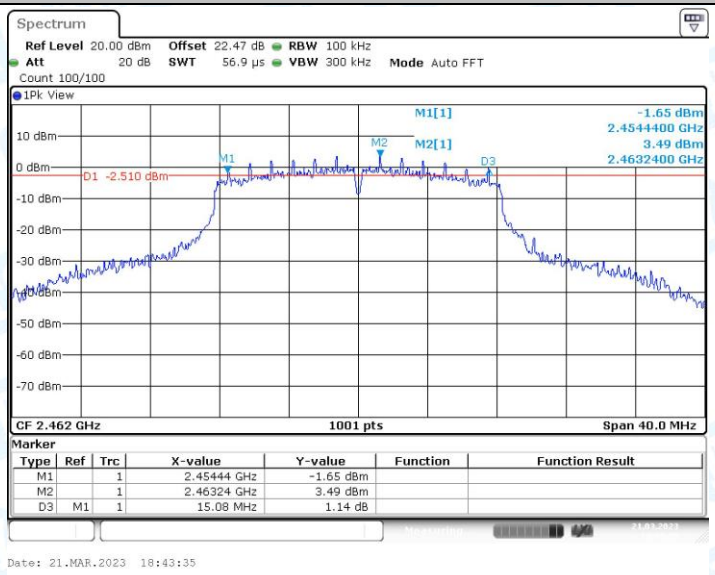
11G_Ant1_2437



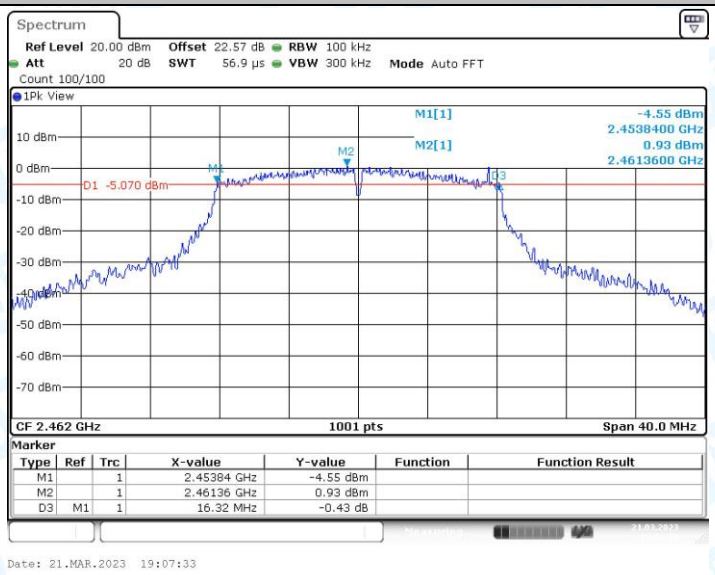
11G_Ant2_2437



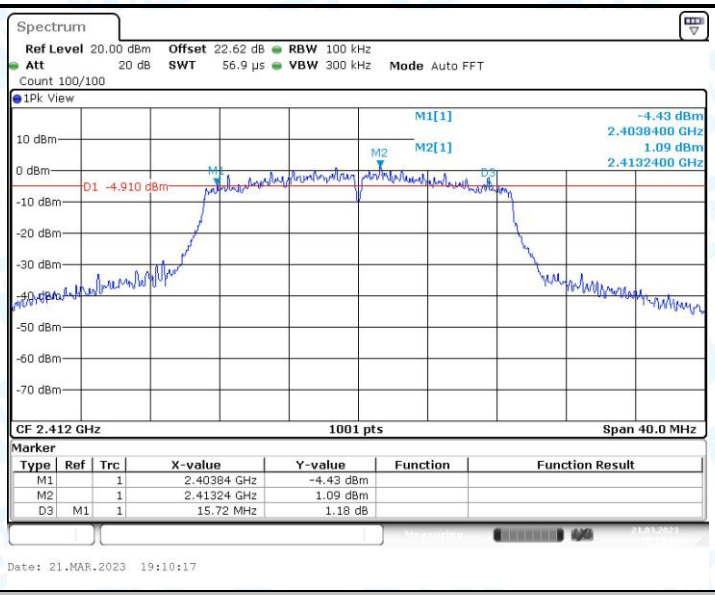
11G_Ant1_2462



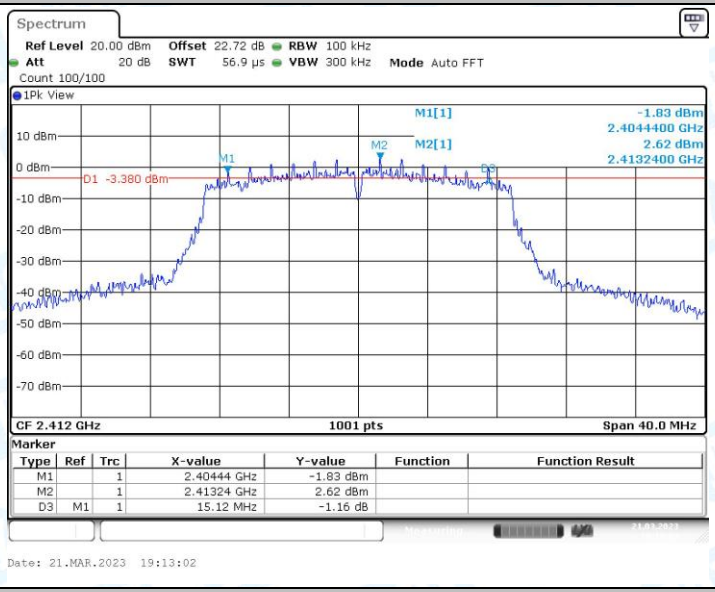
11G_Ant2_2462



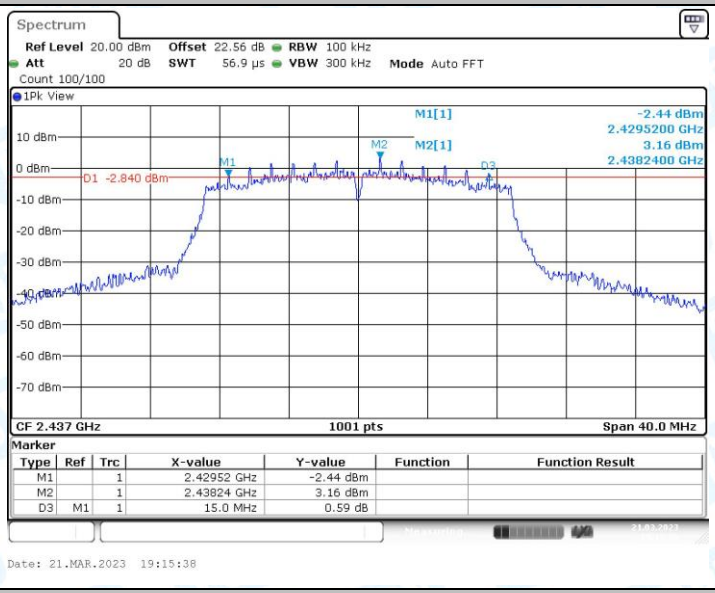
11N20MIMO_Ant1_2412



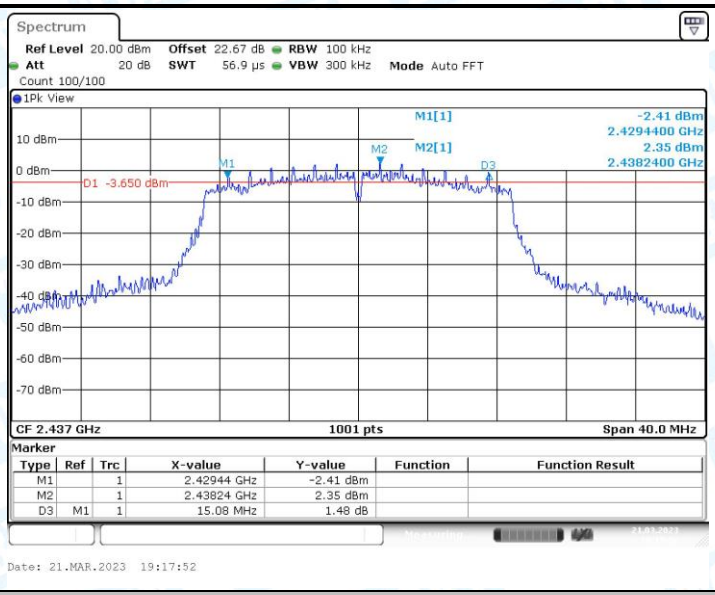
11N20MIMO_Ant2_2412



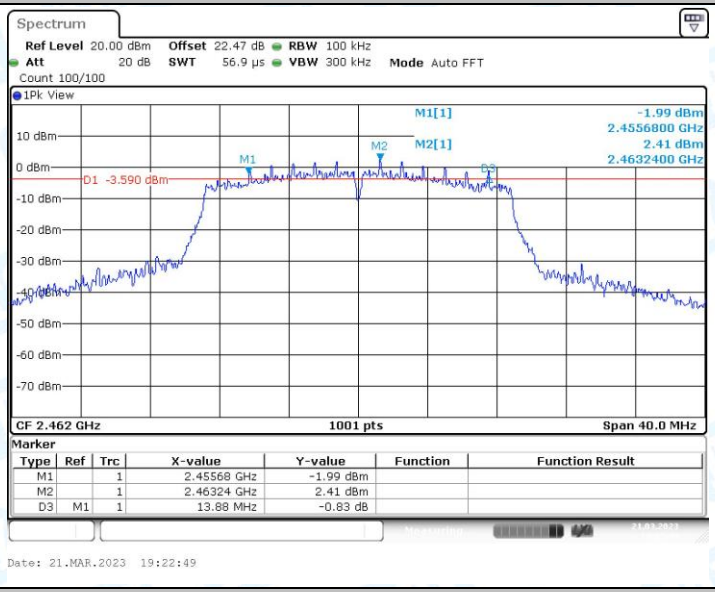
11N20MIMO_Ant1_2437



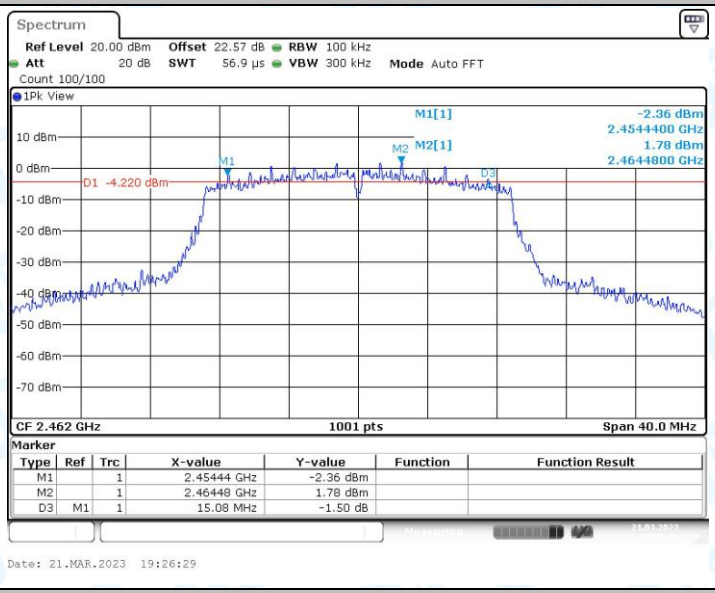
11N20MIMO_Ant2_2437



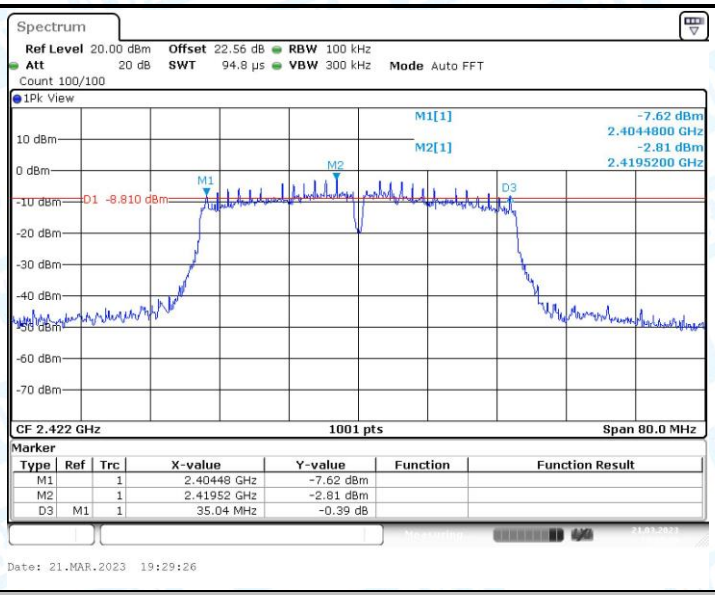
11N20MIMO_Ant1_2462



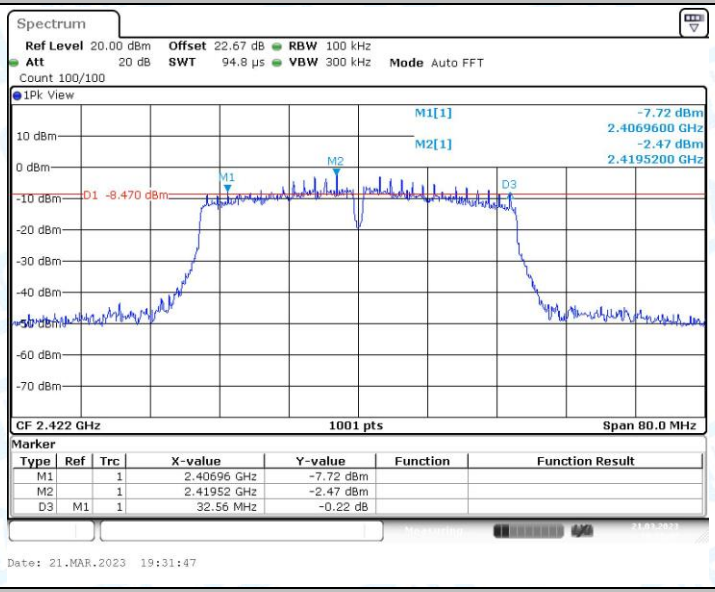
11N20MIMO_Ant2_2462



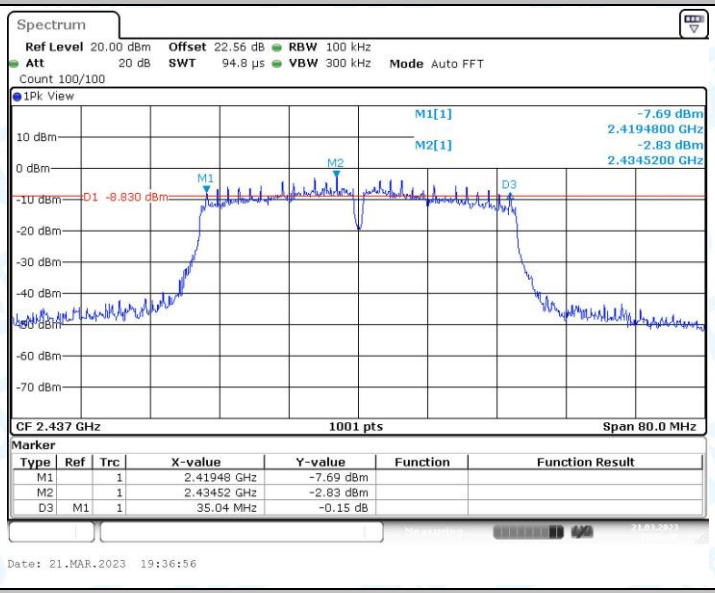
11N40MIMO_Ant1_2422



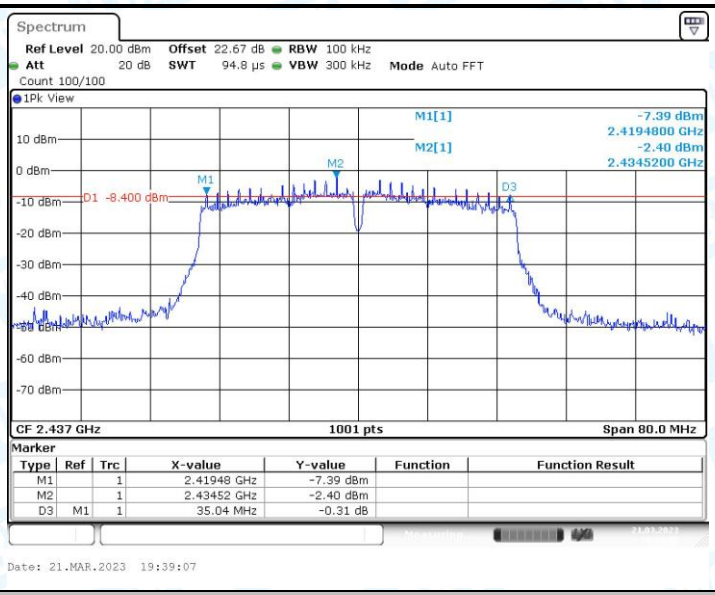
11N40MIMO_Ant2_2422



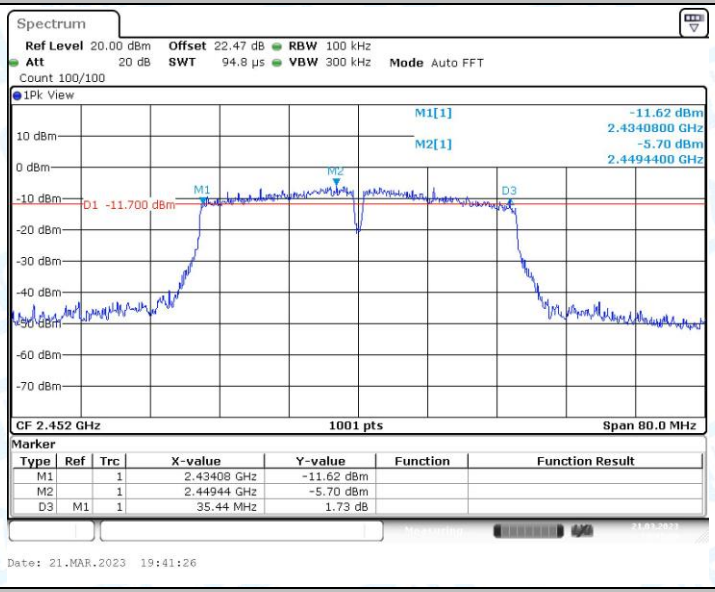
11N40MIMO_Ant1_2437



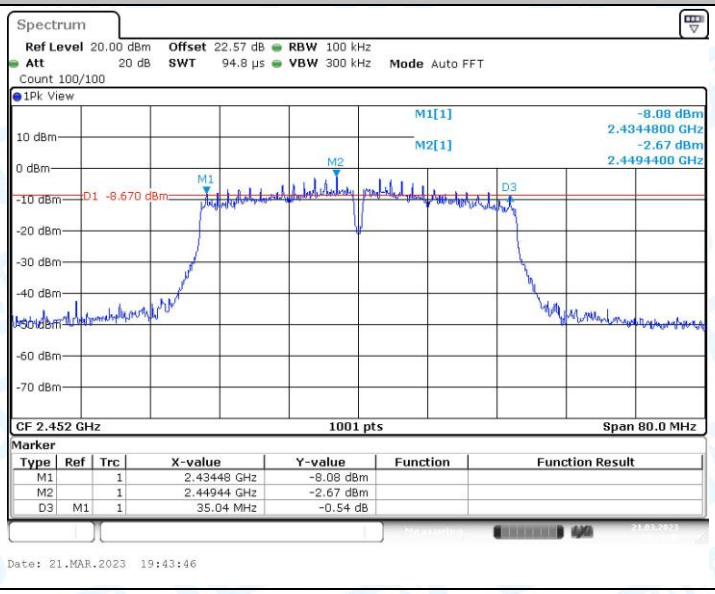
11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452



2. Maximum conducted output power

2.1.Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	19.37	≤30.00	PASS
	Ant2	2412	18.98	≤30.00	PASS
	Ant1	2437	19.37	≤30.00	PASS
	Ant2	2437	18.90	≤30.00	PASS
	Ant1	2462	19.30	≤30.00	PASS
	Ant2	2462	18.85	≤30.00	PASS
11G	Ant1	2412	14.89	≤30.00	PASS
	Ant2	2412	14.87	≤30.00	PASS
	Ant1	2437	15.18	≤30.00	PASS
	Ant2	2437	14.54	≤30.00	PASS
	Ant1	2462	15.03	≤30.00	PASS
	Ant2	2462	14.46	≤30.00	PASS
11N20MIMO	Ant1	2412	14.27	≤30.00	PASS
	Ant2	2412	13.61	≤30.00	PASS
	total	2412	16.96	≤29.33	PASS
	Ant1	2437	13.82	≤30.00	PASS
	Ant2	2437	13.39	≤30.00	PASS
	total	2437	16.62	≤29.33	PASS
	Ant1	2462	13.74	≤30.00	PASS
	Ant2	2462	13.27	≤30.00	PASS
	total	2462	16.52	≤29.33	PASS
11N40MIMO	Ant1	2422	11.98	≤30.00	PASS
	Ant2	2422	11.17	≤30.00	PASS
	total	2422	14.60	≤29.33	PASS
	Ant1	2437	12.05	≤30.00	PASS
	Ant2	2437	11.17	≤30.00	PASS
	total	2437	14.64	≤29.33	PASS
	Ant1	2452	11.96	≤30.00	PASS
	Ant2	2452	11.14	≤30.00	PASS
	total	2452	14.58	≤29.33	PASS

Note： The EUT incorporates a MIMO function. Physically, the EUT provides two antennas for transmitting and receiving.
When ANT.1(4.26dBi) and ANT. 2(3.18dBi) transmitting simultaneously, so the Directional Gain= 6.76dBi＞6dBi.
So Pout = Plimit-(G_{TX}-6)]=(30-0.67)dBm =29.33dBm

Directional gain = $10^{*}\log[(10^{G1/20} + 10^{G2/20})^2 / 2]$

3. Maximum power spectral density

3.1.Test Result

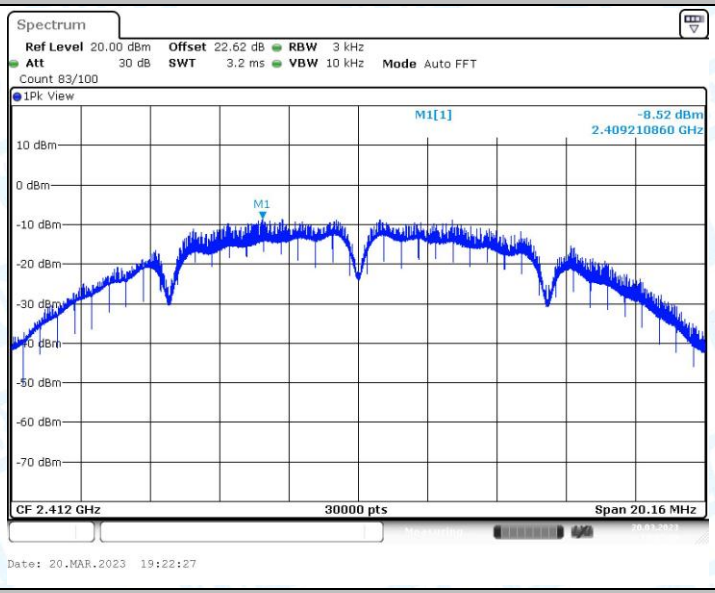
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-8.52	≤8.00	PASS
	Ant2	2412	-7.17	≤8.00	PASS
	Ant1	2437	5.71	≤8.00	PASS
	Ant2	2437	-6.78	≤8.00	PASS
	Ant1	2462	5.8	≤8.00	PASS
	Ant2	2462	-6.65	≤8.00	PASS
11G	Ant1	2412	-11.45	≤8.00	PASS
	Ant2	2412	-12.42	≤8.00	PASS
	Ant1	2437	-12.46	≤8.00	PASS
	Ant2	2437	-11.86	≤8.00	PASS
	Ant1	2462	-13.25	≤8.00	PASS
	Ant2	2462	-12.47	≤8.00	PASS
11N20MIMO	Ant1	2412	-13.25	≤8.00	PASS
	Ant2	2412	-12.84	≤8.00	PASS
	total	2412	-10.03	≤7.33	PASS
	Ant1	2437	-13.45	≤8.00	PASS
	Ant2	2437	-13.53	≤8.00	PASS
	total	2437	-10.48	≤7.33	PASS
	Ant1	2462	-12.7	≤8.00	PASS
	Ant2	2462	-12.1	≤8.00	PASS
	total	2462	-9.38	≤7.33	PASS
11N40MIMO	Ant1	2422	-19.66	≤8.00	PASS
	Ant2	2422	-17.53	≤8.00	PASS
	total	2422	-15.46	≤7.33	PASS
	Ant1	2437	-18.75	≤8.00	PASS
	Ant2	2437	-18.68	≤8.00	PASS
	total	2437	-15.70	≤7.33	PASS
	Ant1	2452	-19.17	≤8.00	PASS
	Ant2	2452	-18.65	≤8.00	PASS
	total	2452	-15.89	≤7.33	PASS

Note： The EUT incorporates a MIMO function. Physically, the EUT provides two antennas for transmitting and receiving.
When ANT.1(4.26dBi) and ANT. 2(3.18dBi) transmitting simultaneously, so the Directional Gain= 6.76dBi＞6dBi.
So $PSD_{out} = PSD_{limit}-(G_{TX}-6)]=(8-0.67)$dBm/3kHz =7.33dBm/3kHz

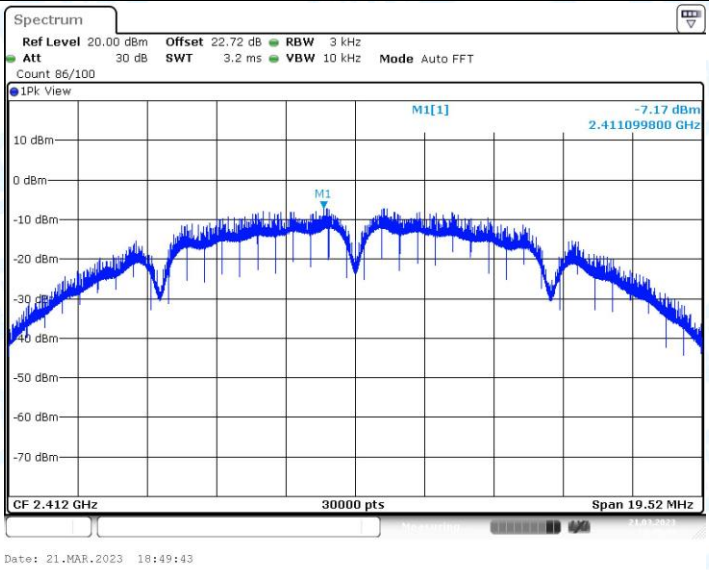
Directional gain = $10* \log[(10^{G1/20} + 10^{G2/20})^2 / 2]$

3.2.Test Graphs

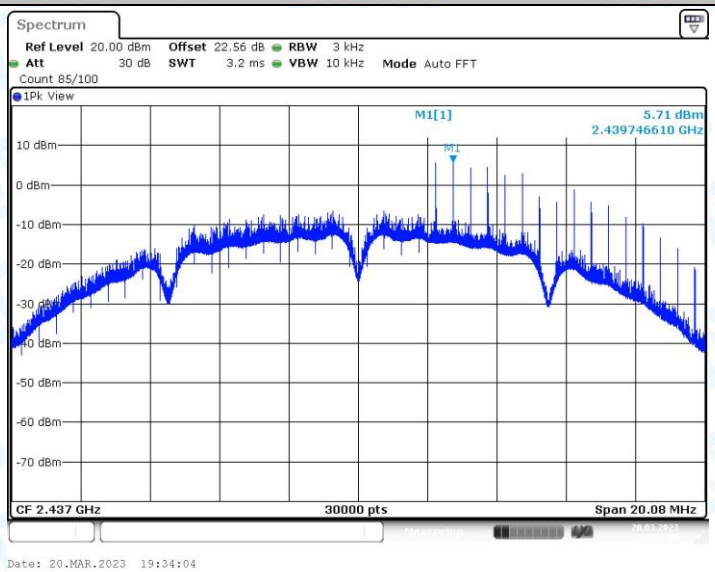
11B_Ant1_2412



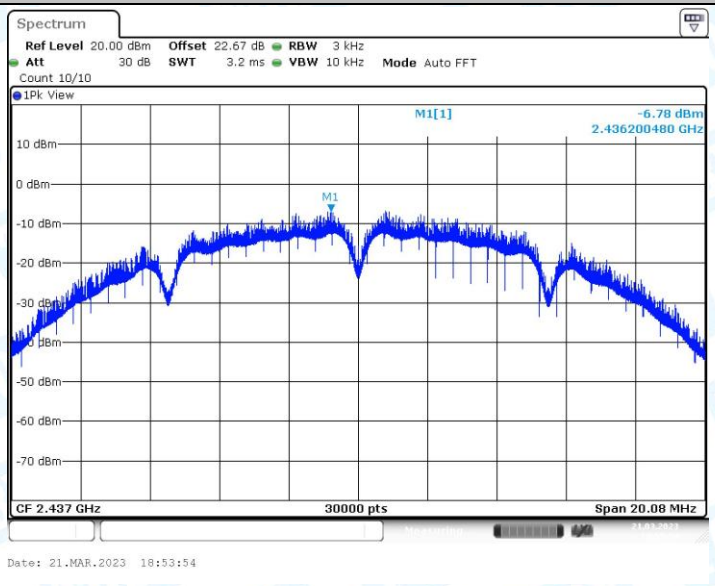
11B_Ant2_2412



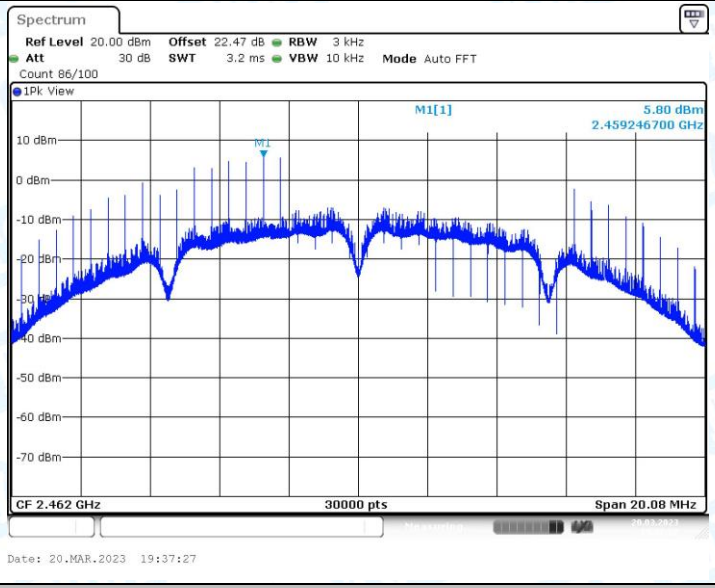
11B_Ant1_2437



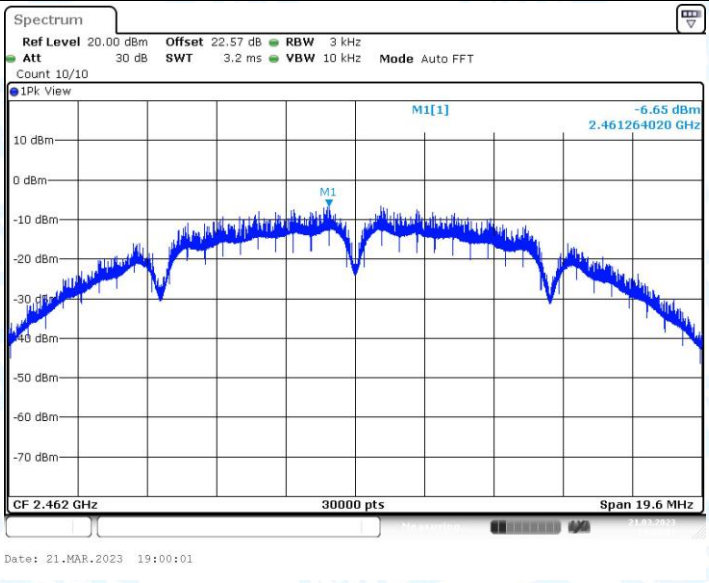
11B_Ant2_2437



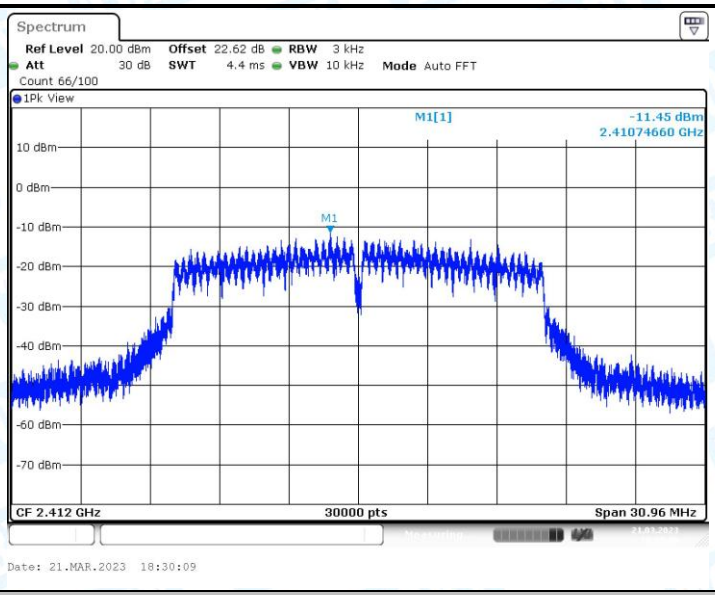
11B_Ant1_2462



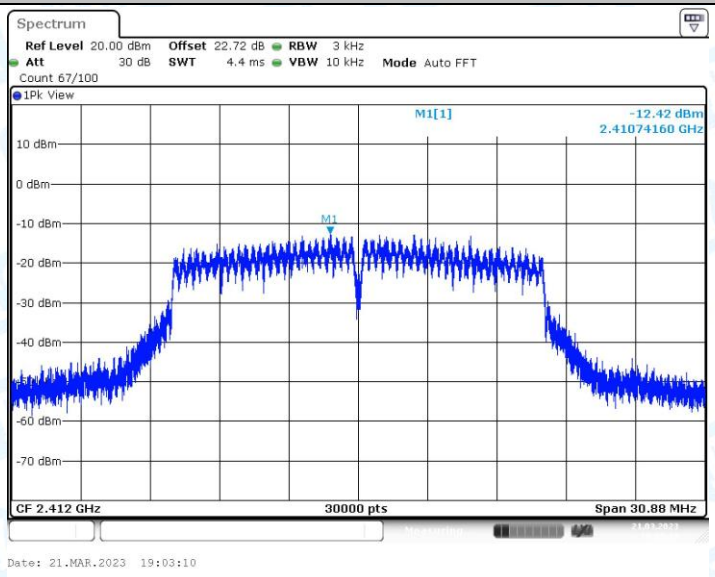
11B_Ant2_2462



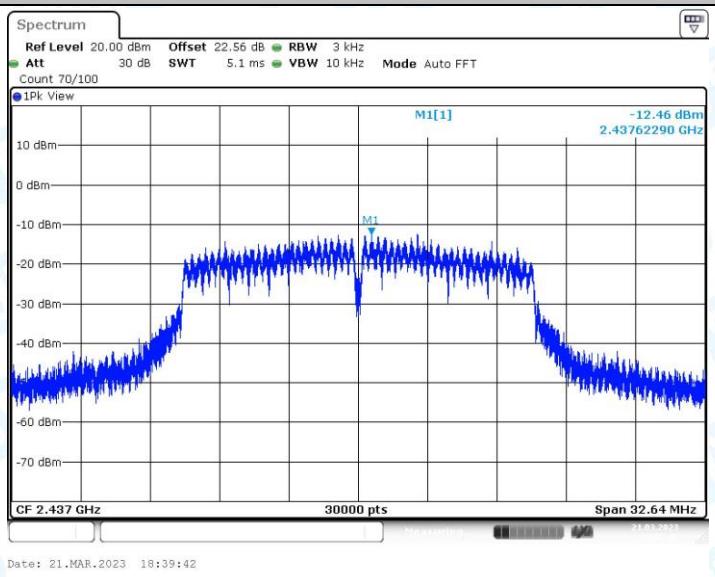
11G_Ant1_2412



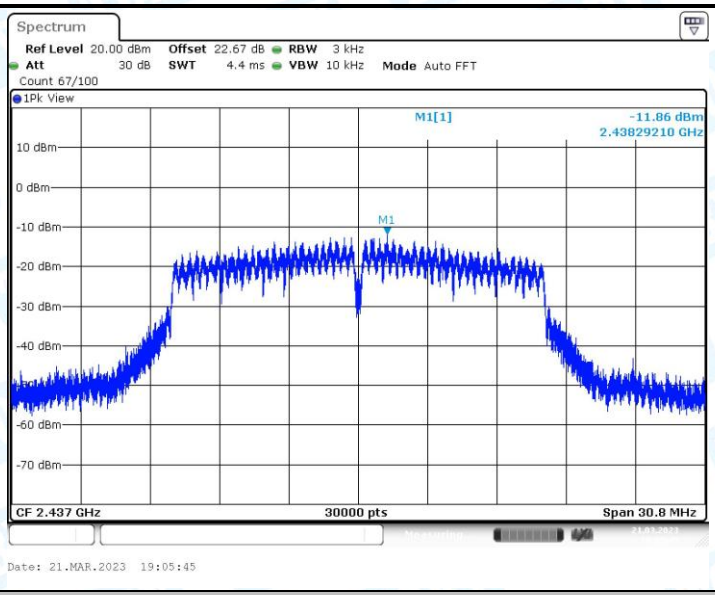
11G_Ant2_2412



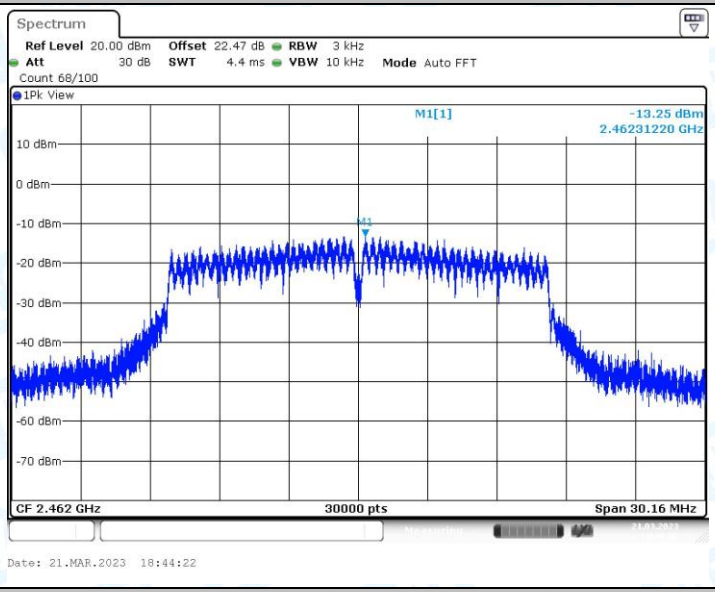
11G_Ant1_2437



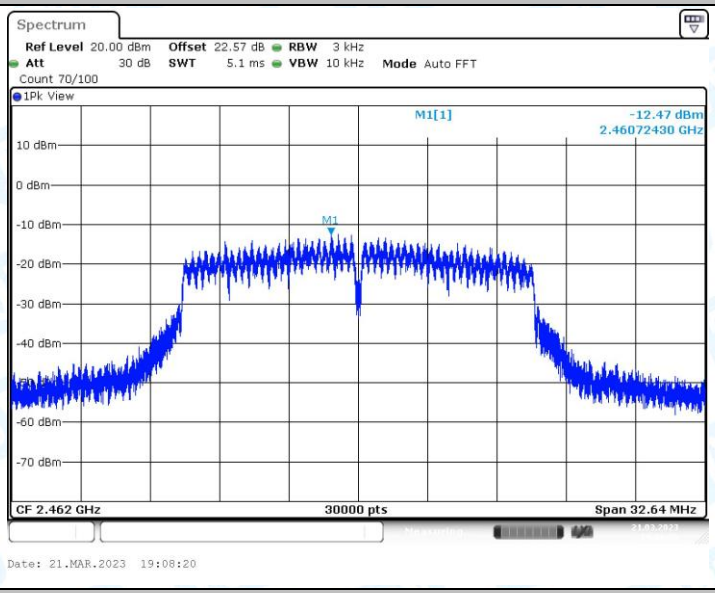
11G_Ant2_2437



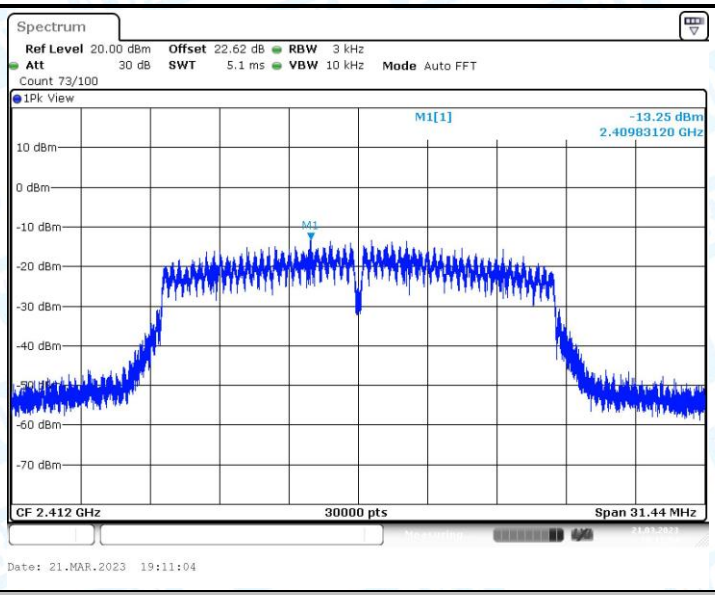
11G_Ant1_2462



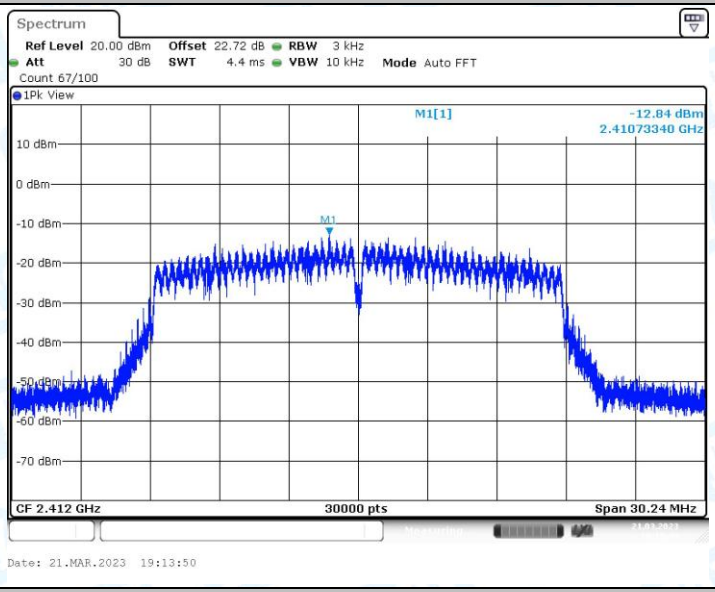
11G_Ant2_2462



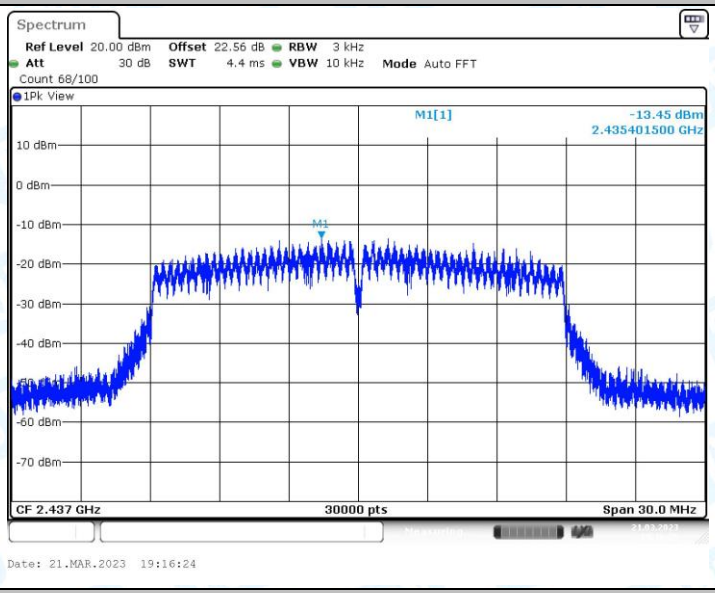
11N20MIMO_Ant1_2412



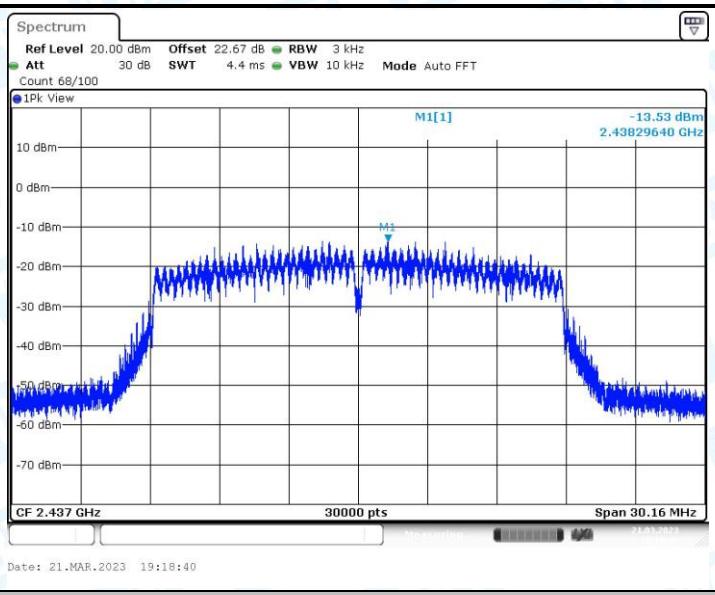
11N20MIMO_Ant2_2412



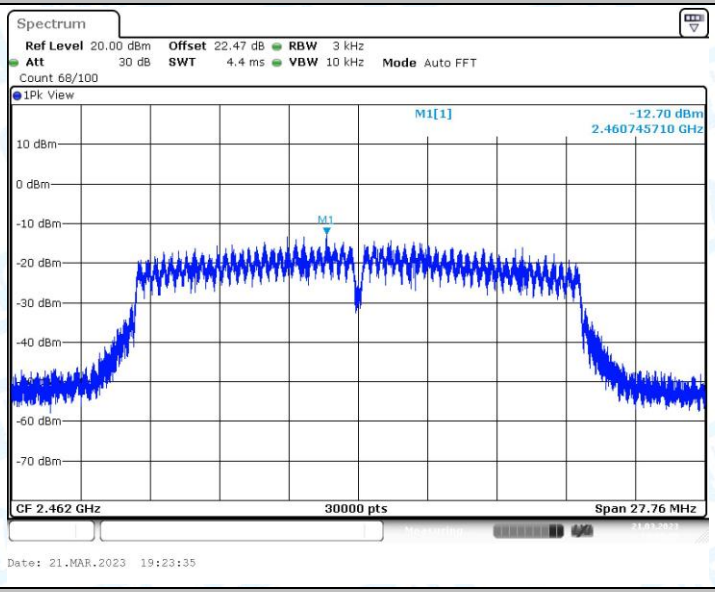
11N20MIMO_Ant1_2437



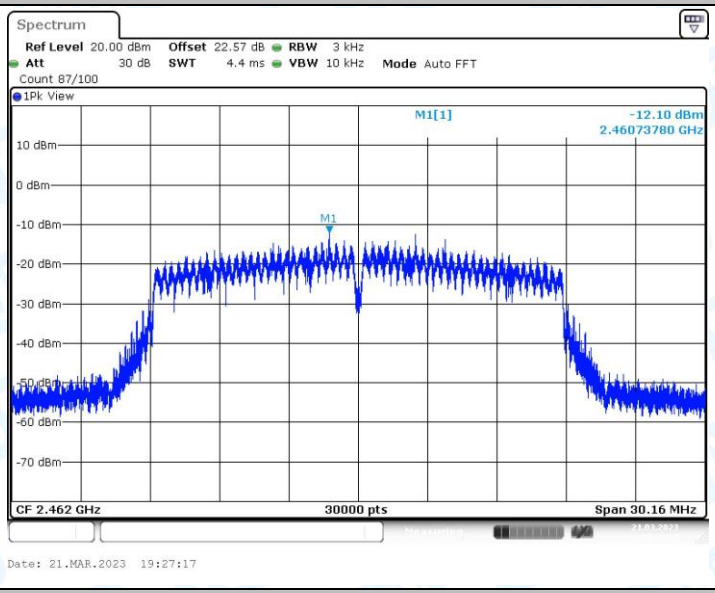
11N20MIMO_Ant2_2437



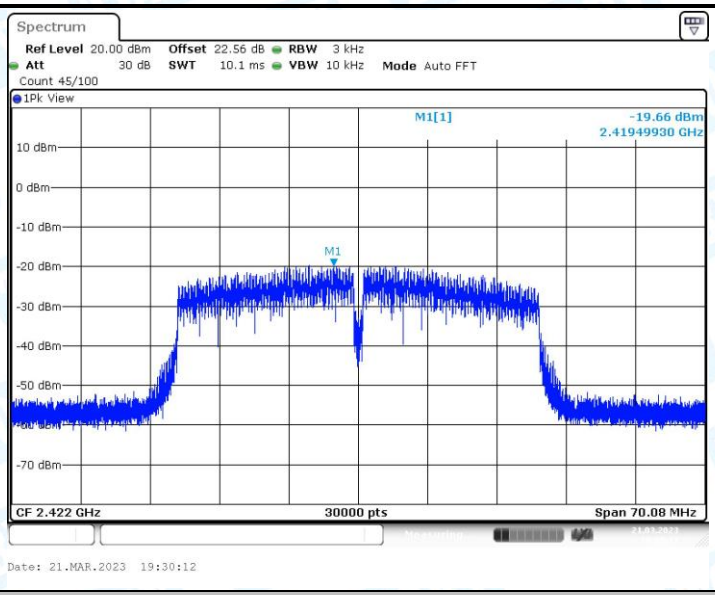
11N20MIMO_Ant1_2462



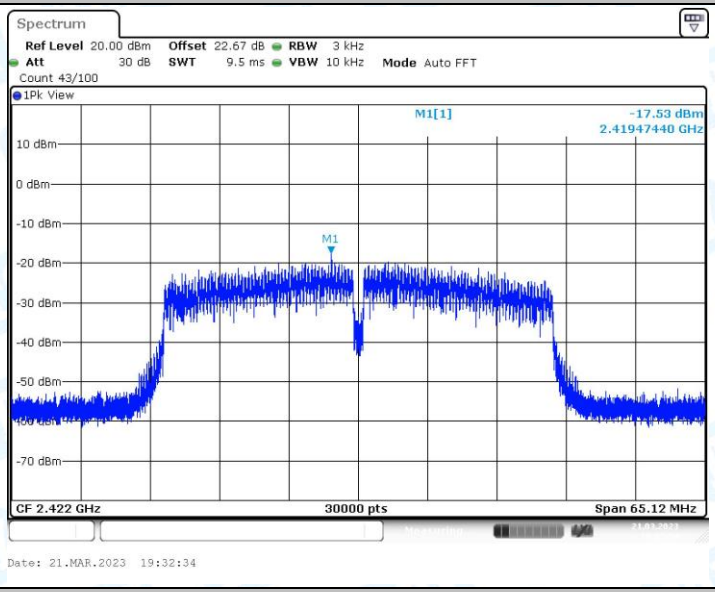
11N20MIMO_Ant2_2462



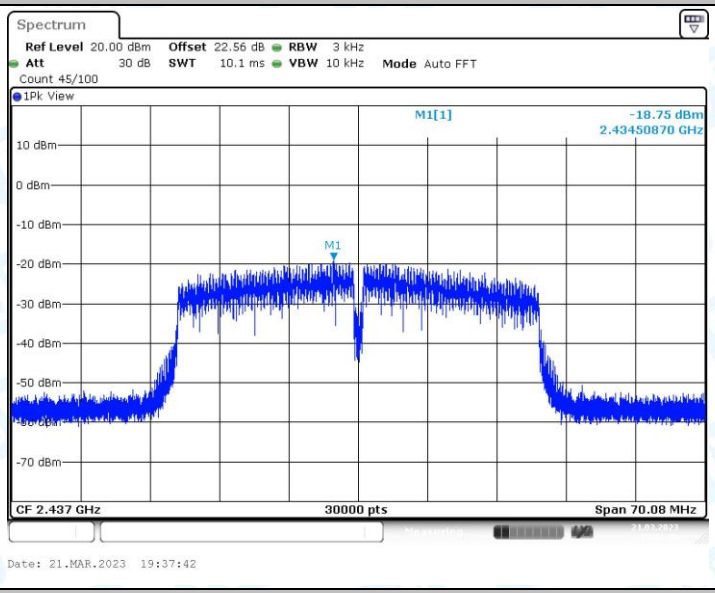
11N40MIMO_Ant1_2422



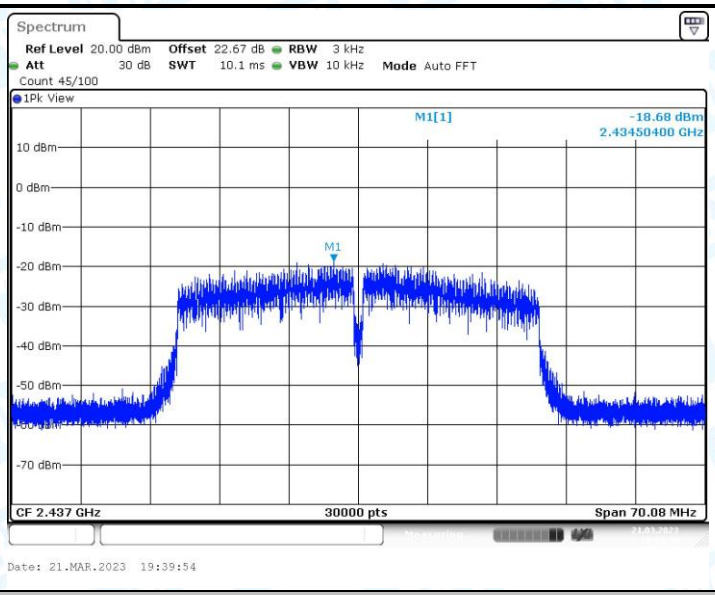
11N40MIMO_Ant2_2422



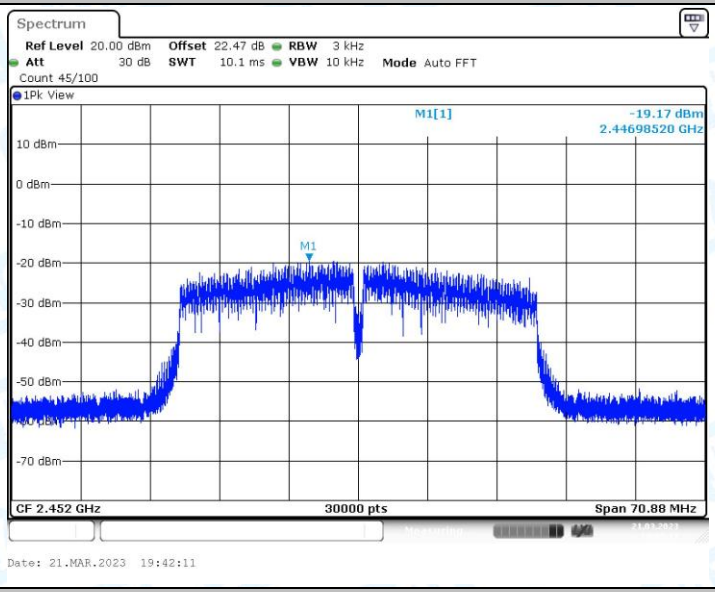
11N40MIMO_Ant1_2437



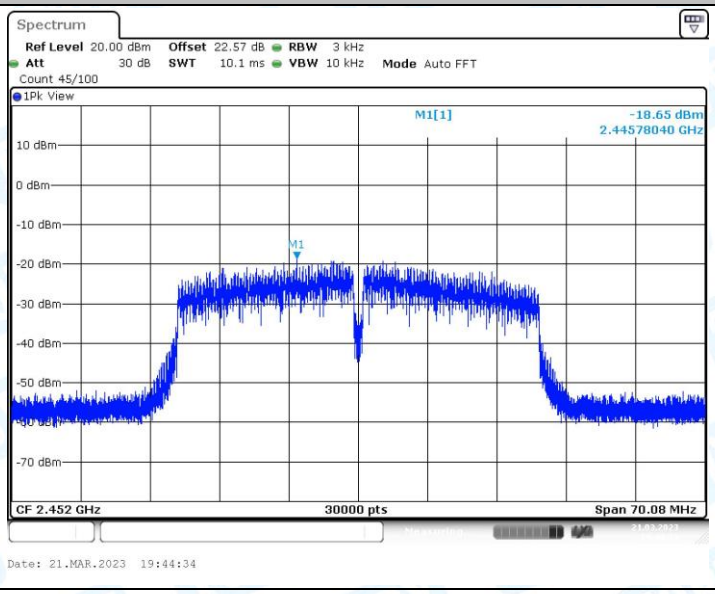
11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452



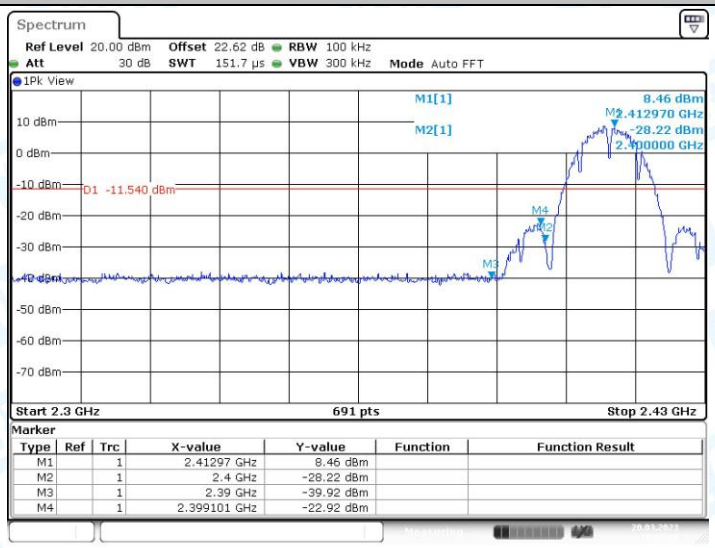
4. Band edge measurements

4.1.Test Result

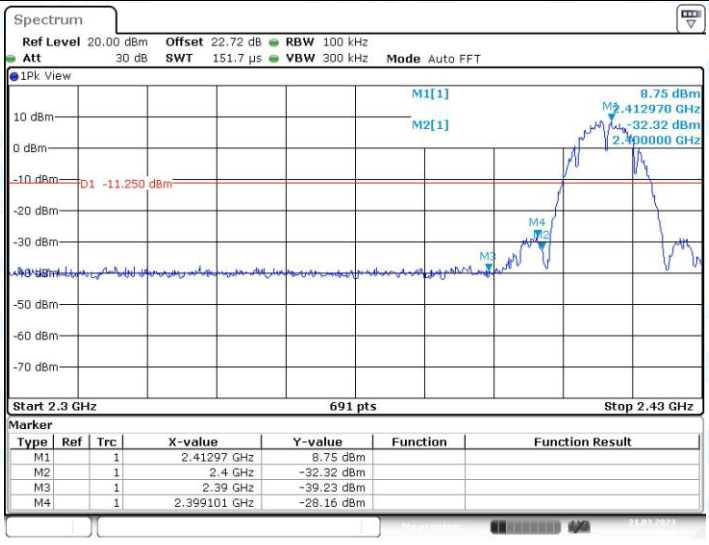
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	8.46	-22.92	≤-11.54	PASS
	Ant2	Low	2412	8.75	-28.16	≤-11.25	PASS
	Ant1	High	2462	8.33	-35.86	≤-11.67	PASS
	Ant2	High	2462	8.53	-35.67	≤-11.47	PASS
11G	Ant1	Low	2412	4.08	-26.79	≤-15.92	PASS
	Ant2	Low	2412	3.46	-29.05	≤-16.54	PASS
	Ant1	High	2462	3.38	-35.42	≤-16.62	PASS
	Ant2	High	2462	3.72	-36.09	≤-16.28	PASS
11N20MIMO	Ant1	Low	2412	2.58	-30.82	≤-17.42	PASS
	Ant2	Low	2412	2.47	-32.96	≤-17.53	PASS
	Ant1	High	2462	1.96	-35.95	≤-18.04	PASS
	Ant2	High	2462	2.08	-34.95	≤-17.92	PASS
11N40MIMO	Ant1	Low	2422	-3.35	-36.36	≤-23.35	PASS
	Ant2	Low	2422	-2.62	-36.48	≤-22.62	PASS
	Ant1	High	2452	-2.57	-36.14	≤-22.57	PASS
	Ant2	High	2452	-2.69	-35.65	≤-22.69	PASS

4.2.Test Graphs

11B_Ant1_Low_2412



11B_Ant2_Low_2412



11B_Ant1_High_2462