



11BE20MIMO_Ant2_High_2462_106Tone_RU54



Small MRU

Ant1 of the result table and result graph corresponds to ant5 of the EUT, ant2 of the result table and result graph corresponds to ant6 of the EUT.

Test Mode	Antenna	Ch Name	Channel	Mru Type	Mru Index	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11BE20 MIMO	Ant1	Low	2412	106 Tone,index53 + 26Tone,index4		-3.01	-34.6	≤-23.01	PASS
				106 Tone,index54 + 26Tone,index4		-2.56	-38	≤-22.56	PASS
				52 Tone,index38 + 26Tone,index1		-0.53	-37.69	≤-20.53	PASS
				52 Tone,index39 + 26Tone,index7		-0.15	-38.07	≤-20.15	PASS

Ant2	Low	2412	106 Tone,index53 + 26Tone,index4	-2.66	-33.15	≤ -22.66	PASS
			106 Tone,index54 + 26Tone,index4	-2.36	-35.63	≤ -22.36	PASS
			52 Tone,index38 + 26Tone,index1	-0.49	-36.47	≤ -20.49	PASS
			52 Tone,index39 + 26Tone,index7	-0.40	-35.19	≤ -20.4	PASS
Ant1	High	2462	106 Tone,index53 + 26Tone,index4	-1.22	-46.78	≤ -21.22	PASS
			106 Tone,index54 + 26Tone,index4	-2.62	-46.42	≤ -22.62	PASS
			52 Tone,index38 + 26Tone,index1	-0.44	-45.27	≤ -20.44	PASS
			52 Tone,index39 + 26Tone,index7	-0.36	-45.96	≤ -20.36	PASS
Ant2	High	2462	106 Tone,index53 + 26Tone,index4	-1.75	-46.06	≤ -21.75	PASS
			106 Tone,index54 + 26Tone,index4	-3.12	-46.2	≤ -23.12	PASS
			52 Tone,index38 + 26Tone,index1	-0.53	-40.93	≤ -20.53	PASS
			52 Tone,index39 + 26Tone,index7	-0.81	-42.01	≤ -20.81	PASS

Test graphs as below:





11BE20MIMO_Ant1_Low_2412_52+26_1



11BE20MIMO_Ant1_Low_2412_52+26_3



11BE20MIMO_Ant2_Low_2412_106+26_1



11BE20MIMO_Ant2_Low_2412_106+26_2



11BE20MIMO_Ant2_Low_2412_52+26_1



11BE20MIMO_Ant2_Low_2412_52+26_3



11BE20MIMO_Ant1_High_2462_106+26_1



11BE20MIMO_Ant1_High_2462_106+26_2



11BE20MIMO_Ant1_High_2462_52+26_1



11BE20MIMO_Ant1_High_2462_52+26_3



11BE20MIMO_Ant2_High_2462_106+26_1



11BE20MIMO_Ant2_High_2462_106+26_2



11BE20MIMO_Ant2_High_2462_52+26_1



11BE20MIMO_Ant2_High_2462_52+26_3



Conclusion: Pass

A.6. Transmitter Spurious Emission

A.6.1 Transmitter Spurious Emission – Conducted

Method of Measurement: See ANSI C63.10-2013-clause 11.11

Establish a reference level by using the following procedure:

- a) Set instrument center frequency to DTS channel center frequency
- b) Set the span to ≥ 1.5 times the DTS bandwidth
- c) Set the RBW= 100 kHz
- d) Set the VBW= 300 kHz
- e) Detector = Peak
- f) Sweep time = auto couple
- g) Trace mode = max hold
- h) Allow trace to fully stabilize
- i) Use the peak marker function to determine the maximum PSD level

Note that the channel found to contain the maximum PSD level can be used to establish the reference level.

Establish an emission level by using the following procedure:

- a) Set the center frequency and span to encompass frequency range to be measured.
- b) Set the RBW = 100 kHz.
- c) Set the VBW = 300 kHz.
- d) Detector = peak.
- e) Sweep time = auto couple.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247 (d)	20dB below peak output power in 100 kHz bandwidth

EUT ID: UT35a

Measurement Results:

Note: Ant1 of the result table and result graph corresponds to ant5 of the EUT, ant2 of the result table and result graph corresponds to ant6 of the EUT.

Test Mode	Antenna	Fre [MHz]	Fre Range [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11BE MIMO	Ant1	2412	Reference	7.60	7.60	---	PASS
			30~1000	7.60	-56.68	≤-12.4	PASS
			1000~26500	7.60	-44.11	≤-12.4	PASS
	Ant2	2412	Reference	7.41	7.41	---	PASS
			30~1000	7.41	-56.39	≤-12.59	PASS
			1000~26500	7.41	-42.99	≤-12.59	PASS
	Ant1	2437	Reference	7.24	7.24	---	PASS
			30~1000	7.24	-56.68	≤-12.76	PASS
			1000~26500	7.24	-44.29	≤-12.76	PASS
	Ant2	2437	Reference	7.13	7.13	---	PASS
			30~1000	7.13	-56.04	≤-12.87	PASS
			1000~26500	7.13	-43.77	≤-12.87	PASS
	Ant1	2462	Reference	7.14	7.14	---	PASS
			30~1000	7.14	-57.17	≤-12.86	PASS
			1000~26500	7.14	-43.19	≤-12.86	PASS
	Ant2	2462	Reference	6.76	6.76	---	PASS
			30~1000	6.76	-55.94	≤-13.24	PASS
			1000~26500	6.76	-43.71	≤-13.24	PASS
11G MIMO	Ant1	2412	Reference	4.26	4.26	---	PASS
			30~1000	4.26	-57.03	≤-15.74	PASS
			1000~26500	4.26	-44.16	≤-15.74	PASS
	Ant2	2412	Reference	4.18	4.18	---	PASS
			30~1000	4.18	-56.44	≤-15.82	PASS
			1000~26500	4.18	-43.73	≤-15.82	PASS
	Ant1	2437	Reference	5.02	5.02	---	PASS
			30~1000	5.02	-57.11	≤-14.98	PASS
			1000~26500	5.02	-44.7	≤-14.98	PASS
	Ant2	2437	Reference	4.95	4.95	---	PASS
			30~1000	4.95	-56.08	≤-15.05	PASS
			1000~26500	4.95	-43.69	≤-15.05	PASS
	Ant1	2462	Reference	4.27	4.27	---	PASS
			30~1000	4.27	-56.44	≤-15.73	PASS
			1000~26500	4.27	-43.72	≤-15.73	PASS
	Ant2	2462	Reference	3.43	3.43	---	PASS
			30~1000	3.43	-56.83	≤-16.57	PASS
			1000~26500	3.43	-44.5	≤-16.57	PASS
11BE20 MIMO	Ant1	2412	Reference	4.99	4.99	---	PASS
			30~1000	4.99	-56.46	≤-15.01	PASS
			1000~26500	4.99	-43.93	≤-15.01	PASS
	Ant2	2412	Reference	5.39	5.39	---	PASS

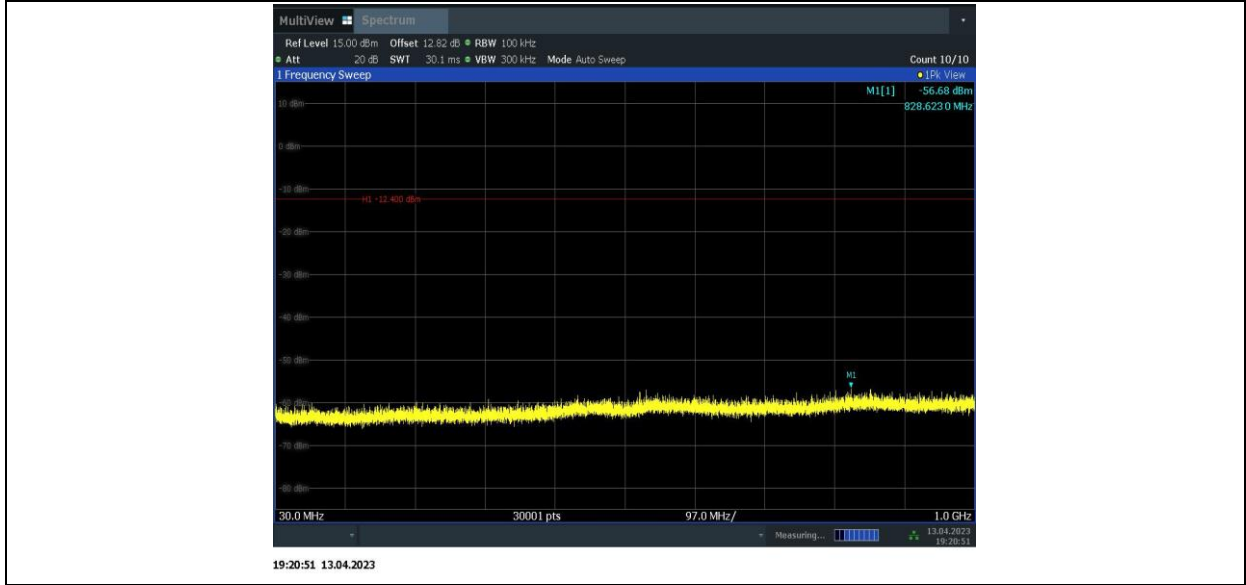
			30~1000	5.39	-56.62	≤ -14.61	PASS
			1000~26500	5.39	-42.45	≤ -14.61	PASS
	Ant1	2437	Reference	4.62	4.62	---	PASS
			30~1000	4.62	-56.12	≤ -15.38	PASS
	Ant2	2437	1000~26500	4.62	-43.52	≤ -15.38	PASS
			Reference	5.27	5.27	---	PASS
			30~1000	5.27	-56.19	≤ -14.73	PASS
	Ant1	2462	1000~26500	5.27	-44.16	≤ -14.73	PASS
			Reference	5.17	5.17	---	PASS
			30~1000	5.17	-56.95	≤ -14.83	PASS
	Ant2	2462	1000~26500	5.17	-43.62	≤ -14.83	PASS
			Reference	4.76	4.76	---	PASS
30~1000			4.76	-56.39	≤ -15.24	PASS	
11BE40 MIMO	Ant1	2422	1000~26500	4.76	-44.14	≤ -15.24	PASS
			Reference	0.02	0.02	---	PASS
			30~1000	0.02	-56.94	≤ -19.98	PASS
	Ant2	2422	1000~26500	0.02	-43.33	≤ -19.98	PASS
			Reference	-0.45	-0.45	---	PASS
			30~1000	-0.45	-57.11	≤ -20.45	PASS
	Ant1	2437	1000~26500	-0.45	-42.92	≤ -20.45	PASS
			Reference	2.36	2.36	---	PASS
			30~1000	2.36	-56.52	≤ -17.64	PASS
Ant2	2437	1000~26500	2.36	-43.85	≤ -17.64	PASS	
		Reference	2.52	2.52	---	PASS	
		30~1000	2.52	-57.03	≤ -17.48	PASS	
Ant1	2452	1000~26500	2.52	-44.02	≤ -17.48	PASS	
		Reference	-2.27	-2.27	---	PASS	
		30~1000	-2.27	-56.82	≤ -22.27	PASS	
Ant2	2452	1000~26500	-2.27	-43.94	≤ -22.27	PASS	
		Reference	-2.38	-2.38	---	PASS	
		30~1000	-2.38	-56.54	≤ -22.38	PASS	
			1000~26500	-2.38	-44.74	≤ -22.38	PASS

Test graphs as below:

11B-CDD_Ant1_2412_0-Reference



11B-CDD_Ant1_2412_30~1000



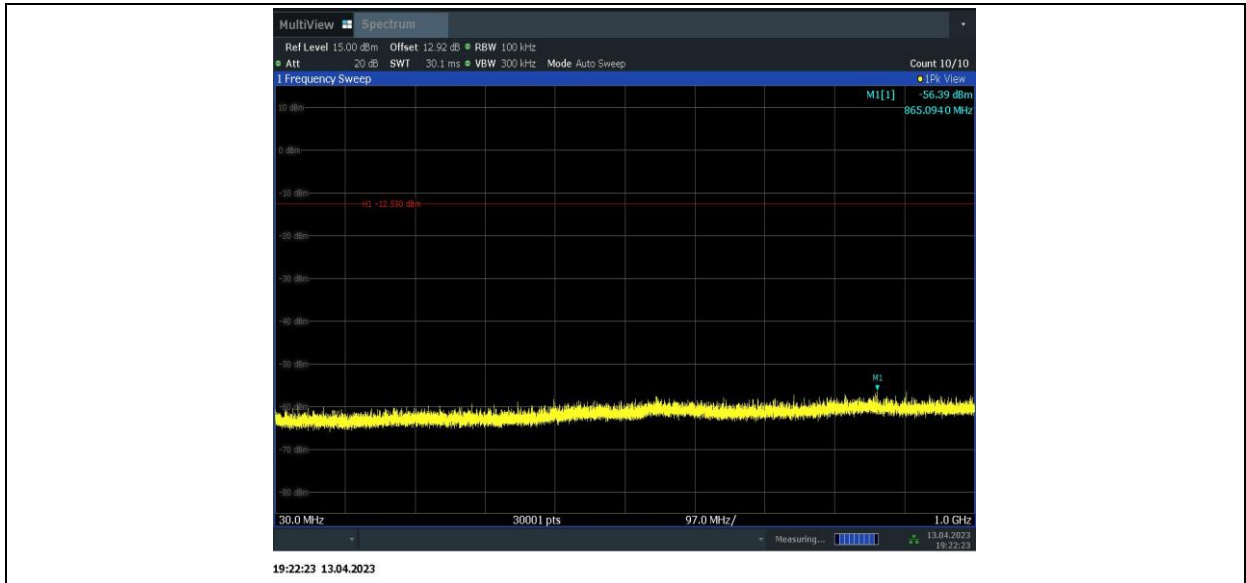
11B-CDD_Ant1_2412_1000~26500



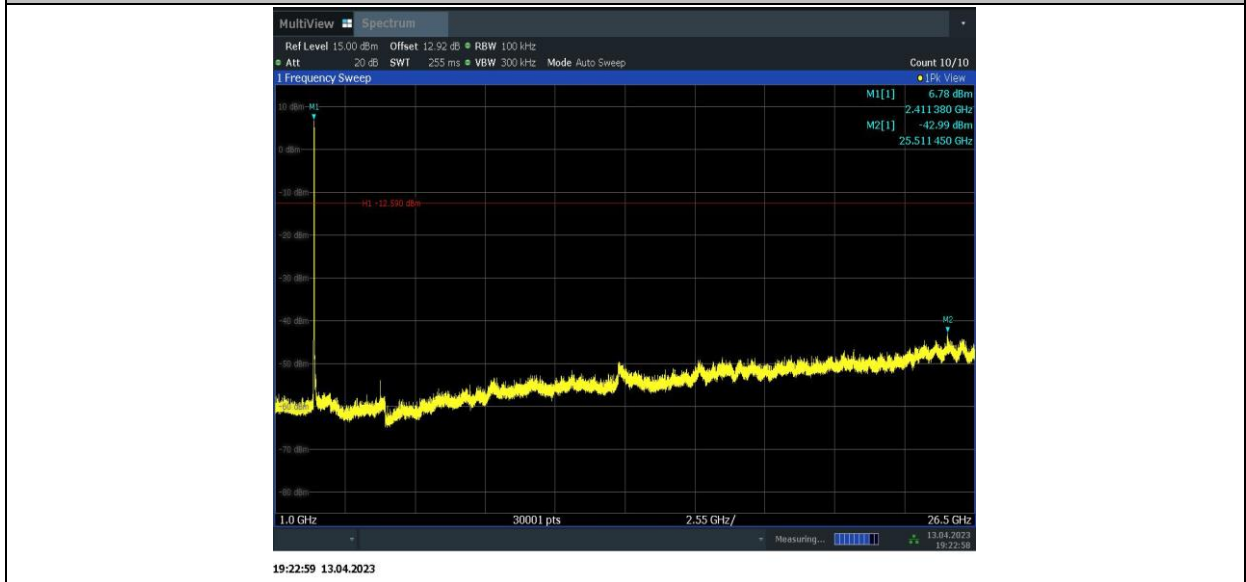
11B-CDD_Ant2_2412_0-Reference



11B-CDD_Ant2_2412_30~1000



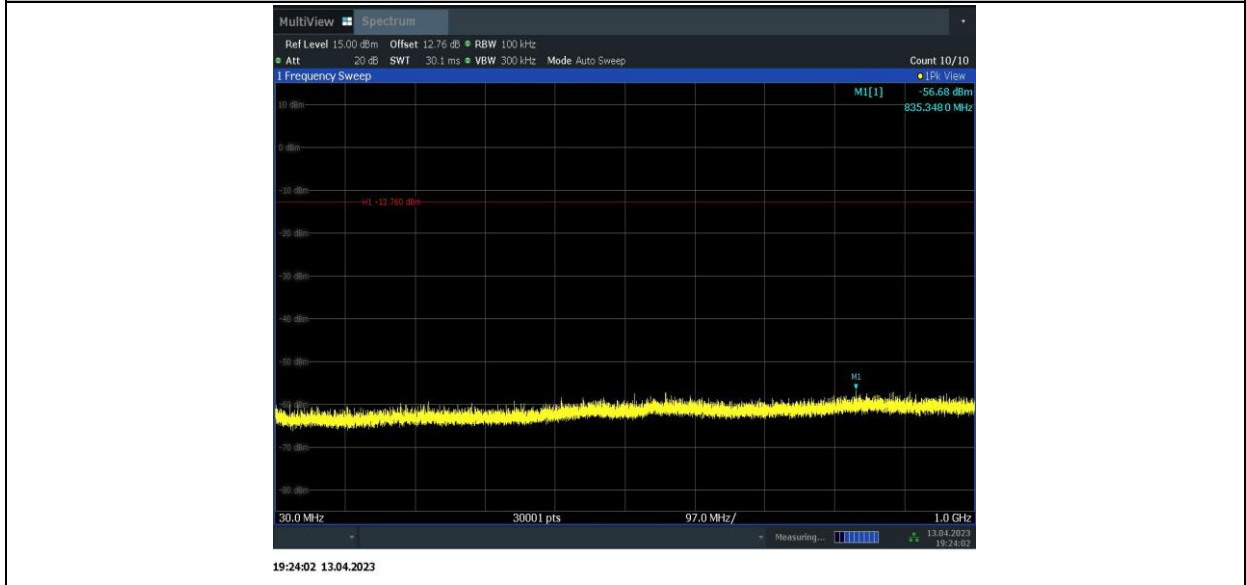
11B-CDD_Ant2_2412_1000~26500



11B-CDD_Ant1_2437_0-Reference



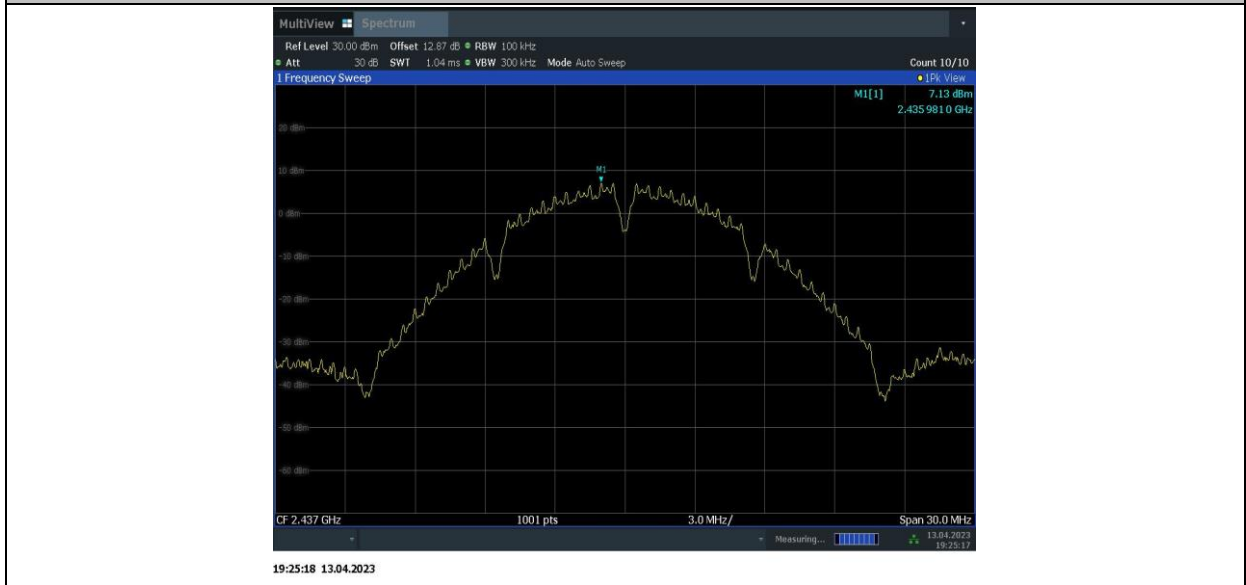
11B-CDD_Ant1_2437_30~1000



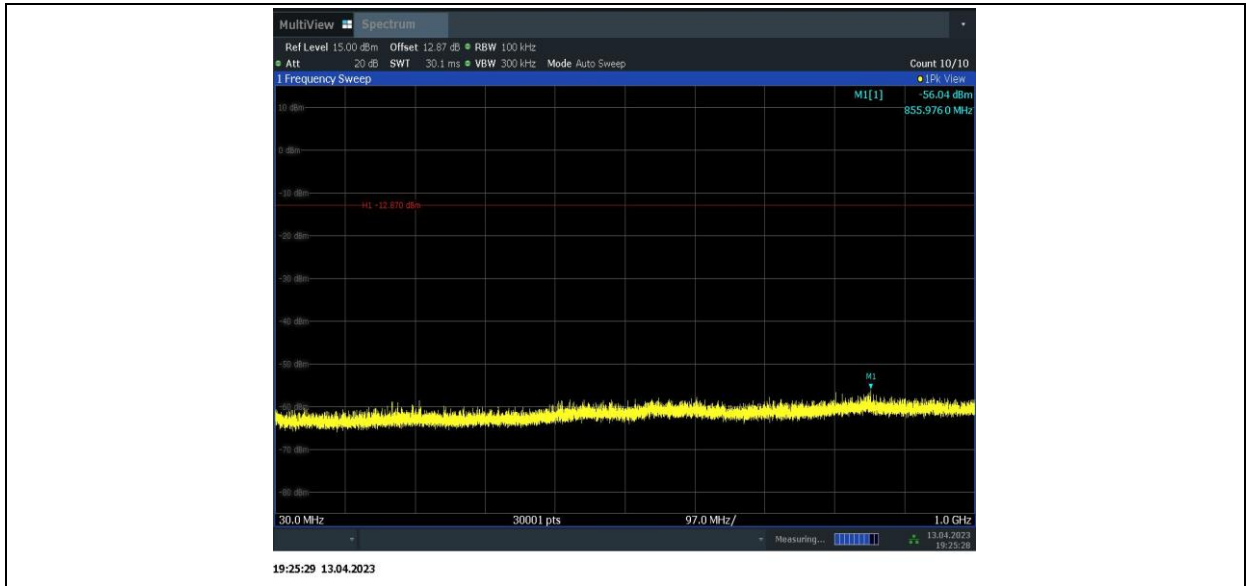
11B-CDD_Ant1_2437_1000~26500



11B-CDD_Ant2_2437_0-Reference



11B-CDD_Ant2_2437_30~1000



11B-CDD_Ant2_2437_1000~26500



11B-CDD_Ant1_2462_0~Reference



11B-CDD_Ant1_2462_30~1000



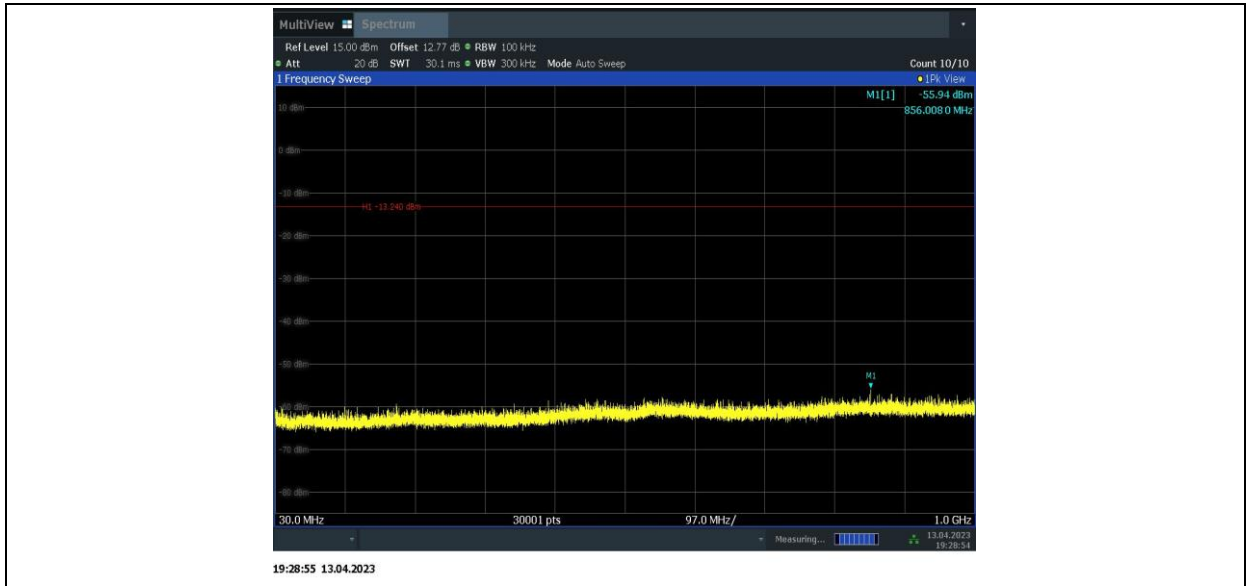
11B-CDD_Ant1_2462_1000~26500



11B-CDD_Ant2_2462_0-Reference



11B-CDD_Ant2_2462_30~1000



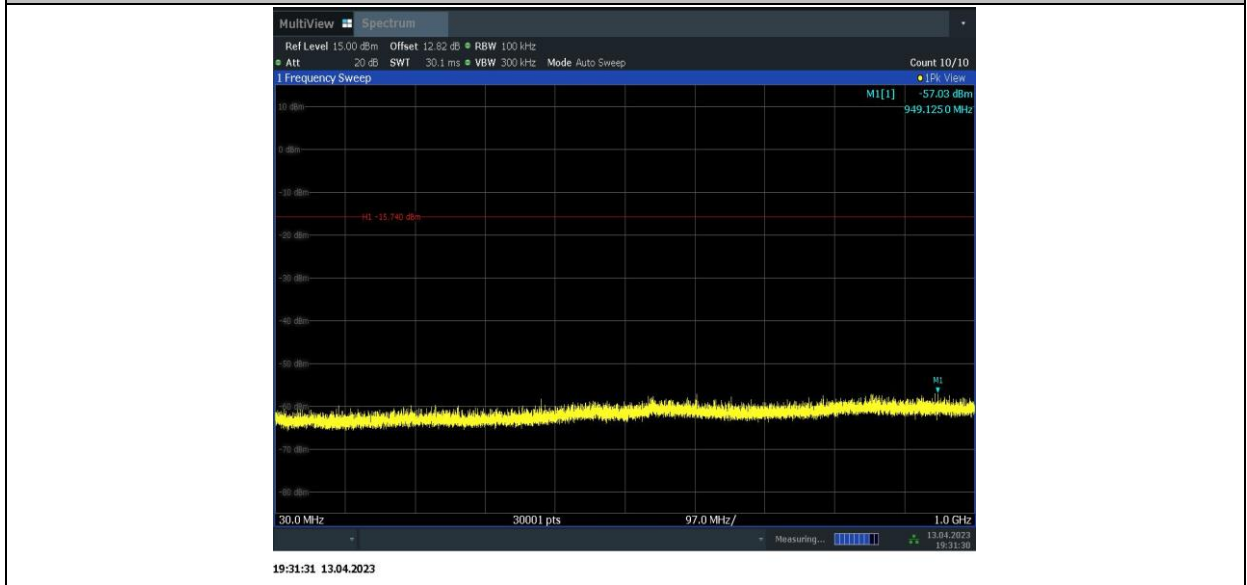
11B-CDD_Ant2_2462_1000~26500



11G-CDD_Ant1_2412_0~Reference



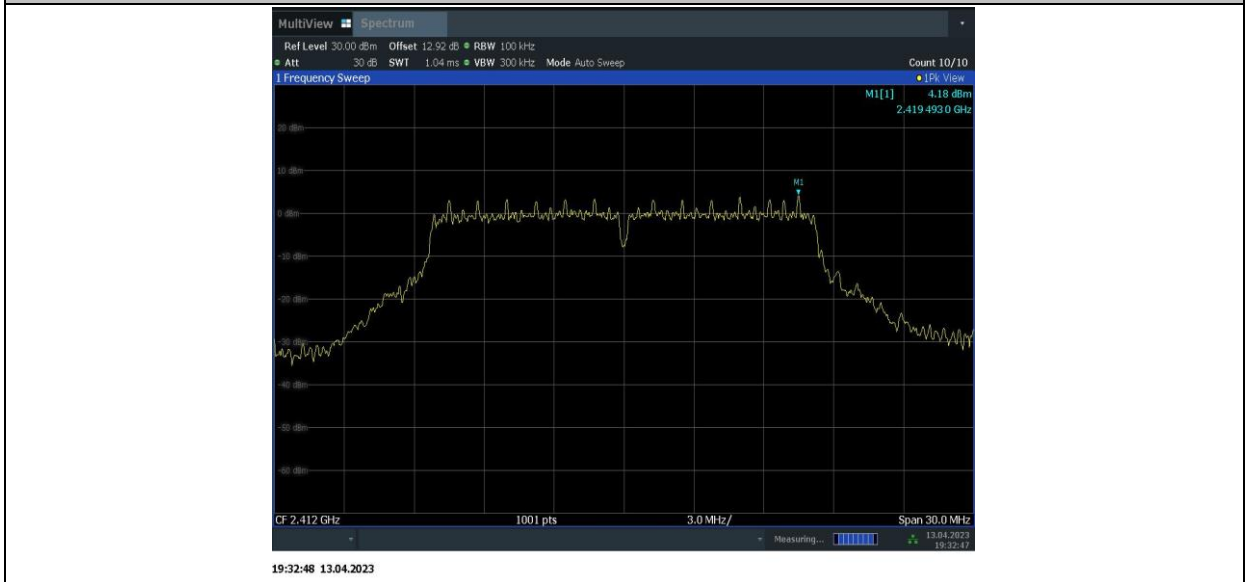
11G-CDD_Ant1_2412_30~1000



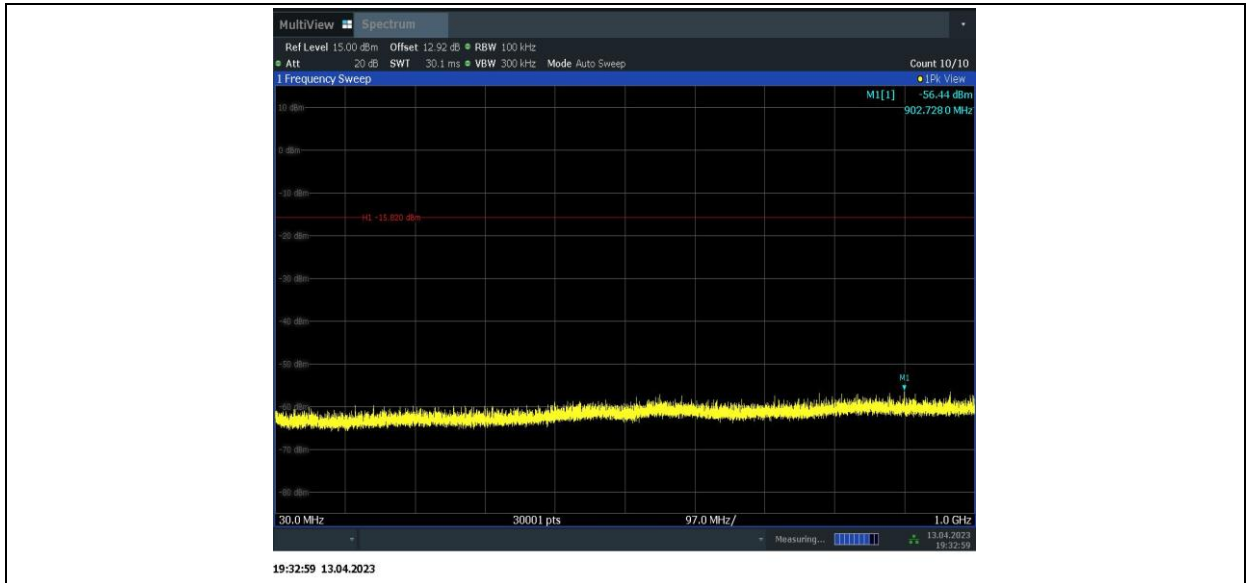
11G-CDD_Ant1_2412_1000~26500



11G-CDD_Ant2_2412_0~Reference



11G-CDD_Ant2_2412_30~1000



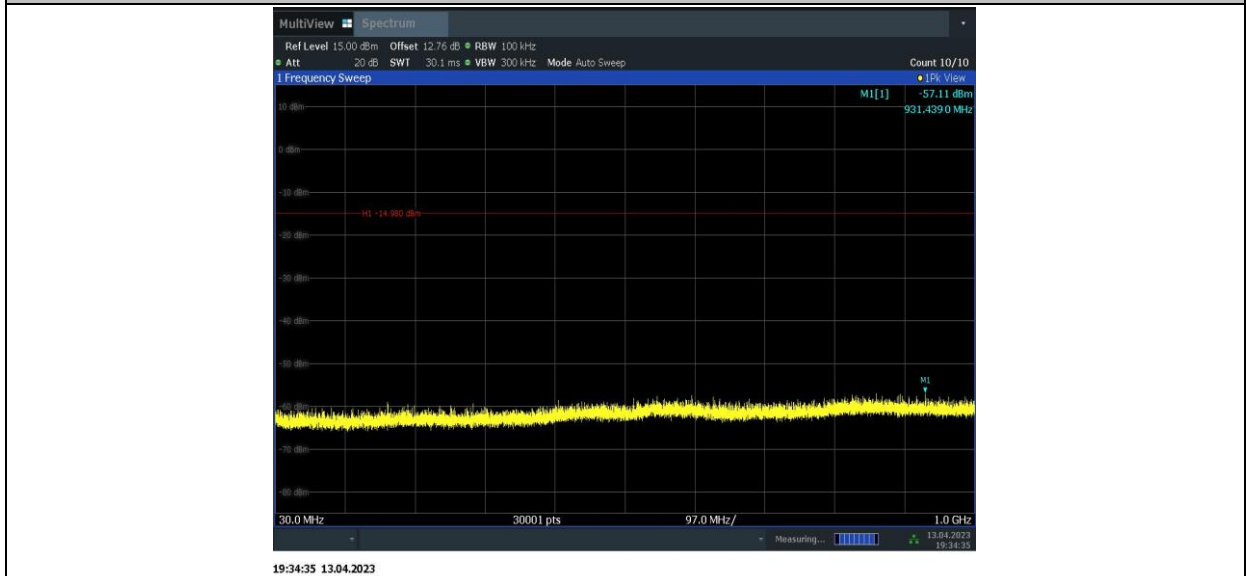
11G-CDD_Ant2_2412_1000~26500



11G-CDD_Ant1_2437_0~Reference



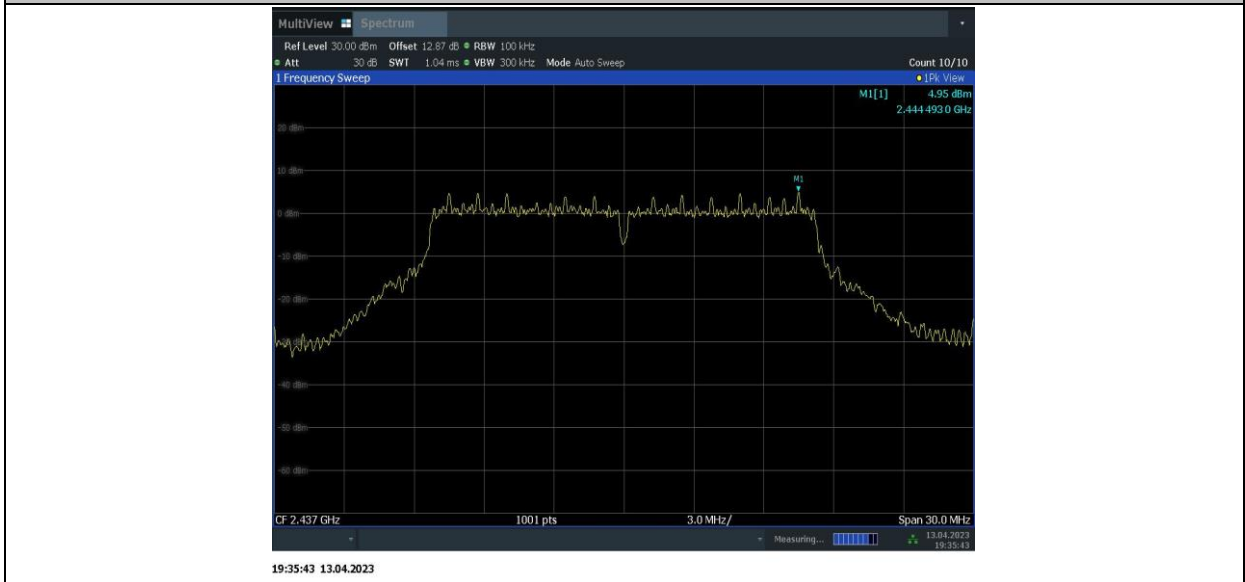
11G-CDD_Ant1_2437_30~1000



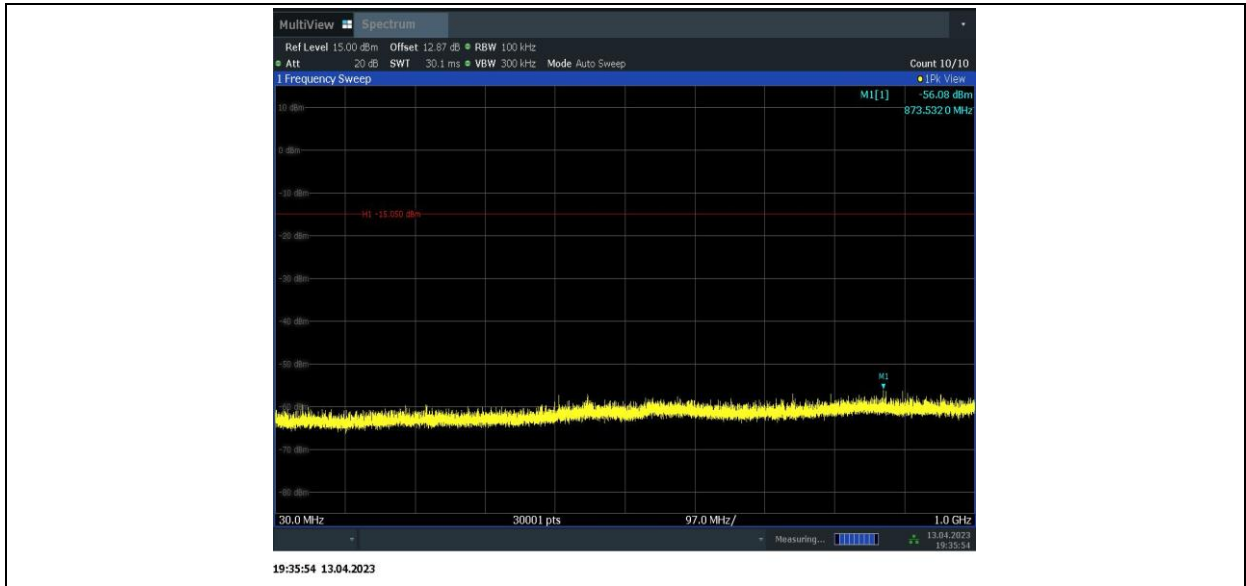
11G-CDD_Ant1_2437_1000~26500



11G-CDD_Ant2_2437_0-Reference



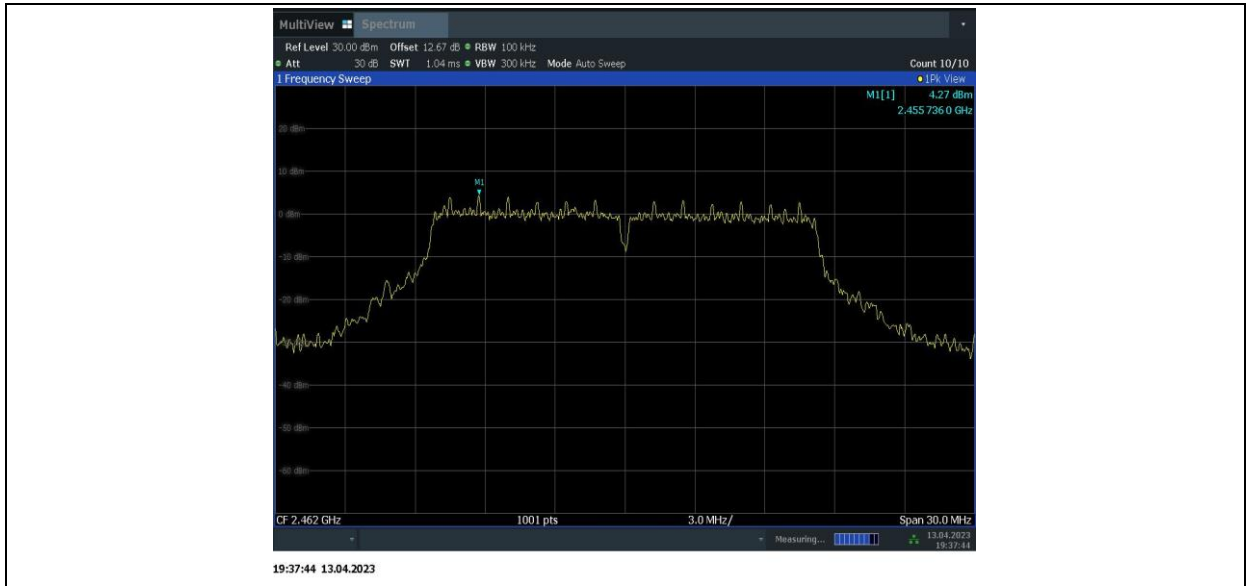
11G-CDD_Ant2_2437_30~1000



11G-CDD_Ant2_2437_1000~26500



11G-CDD_Ant1_2462_0~Reference



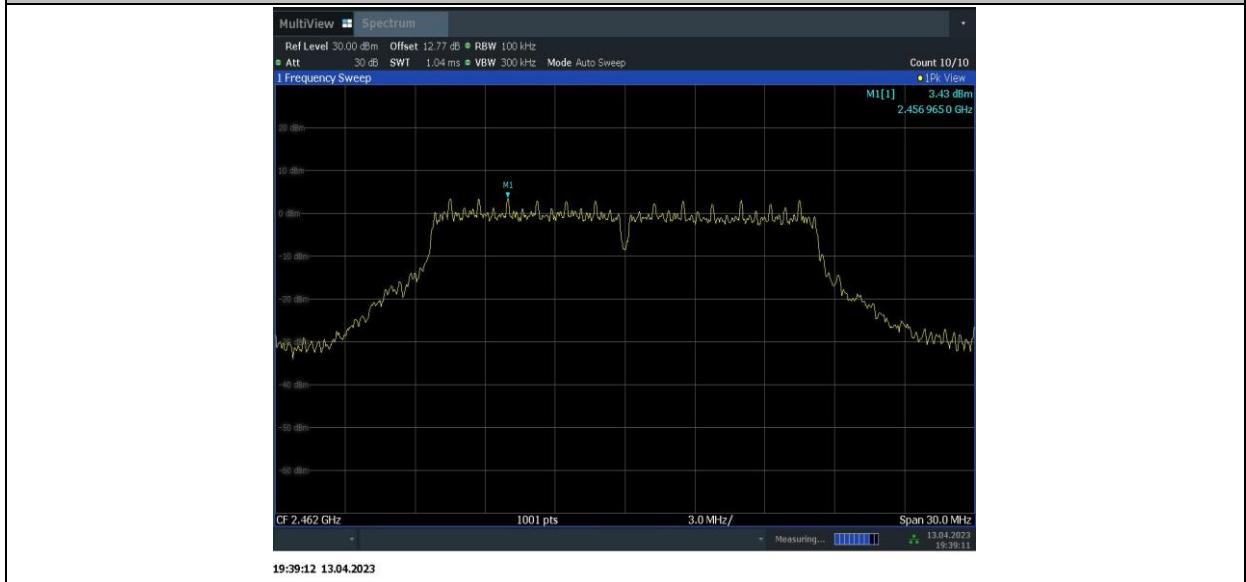
11G-CDD_Ant1_2462_30~1000



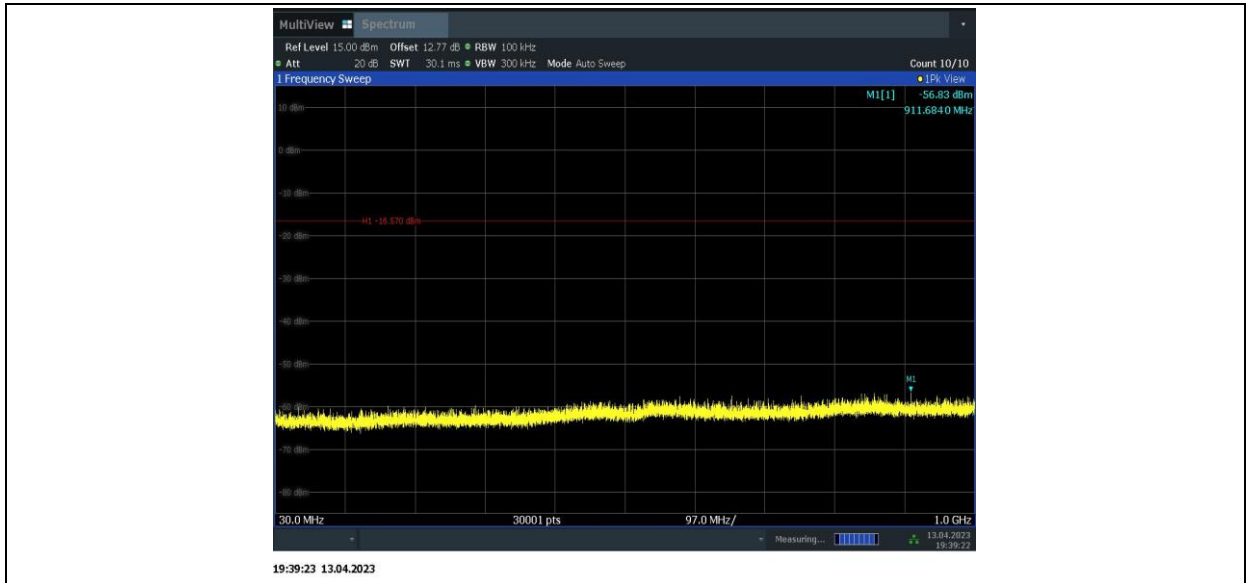
11G-CDD_Ant1_2462_1000~26500



11G-CDD_Ant2_2462_0~Reference



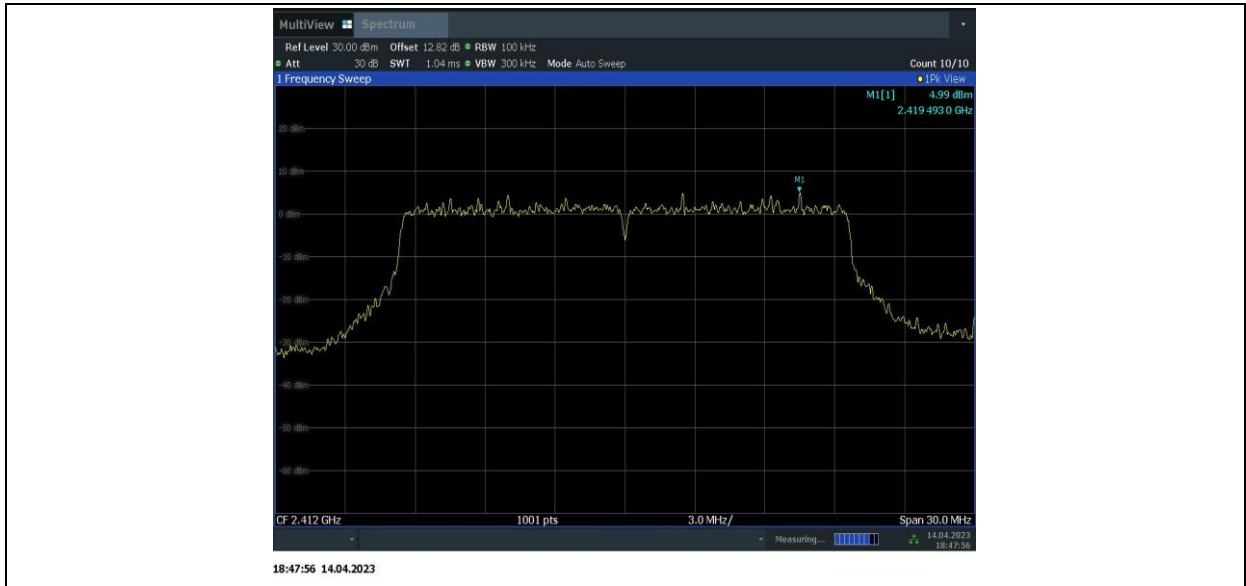
11G-CDD_Ant2_2462_30~1000



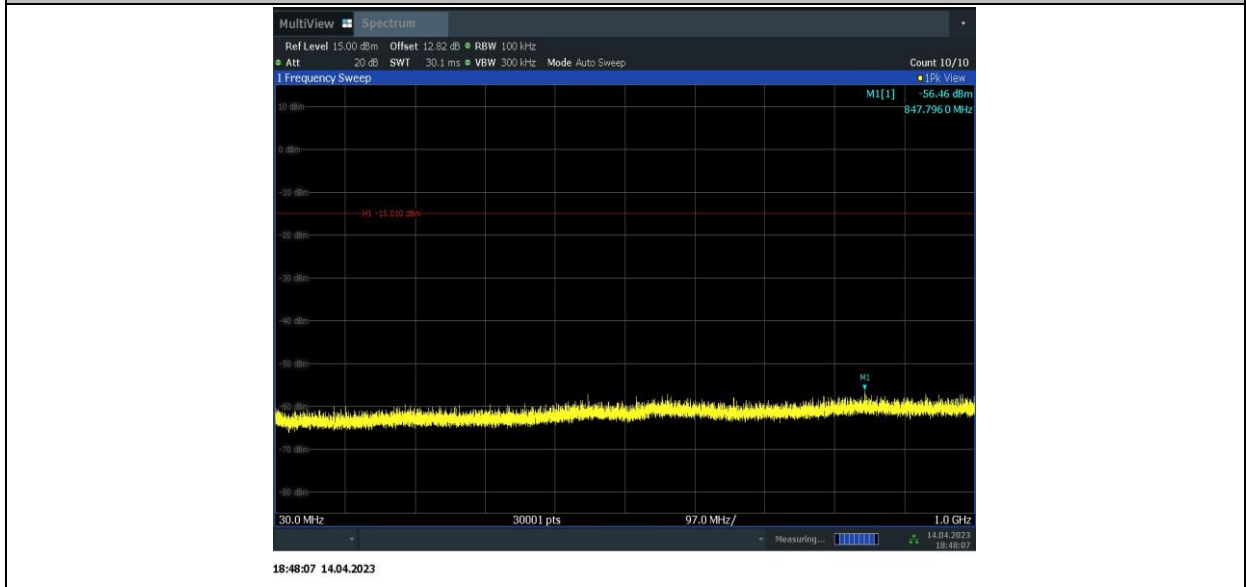
11G-CDD_Ant2_2462_1000~26500



11BE20MIMO_Ant1_2412_0~Reference



11BE20MIMO_Ant1_2412_30~1000

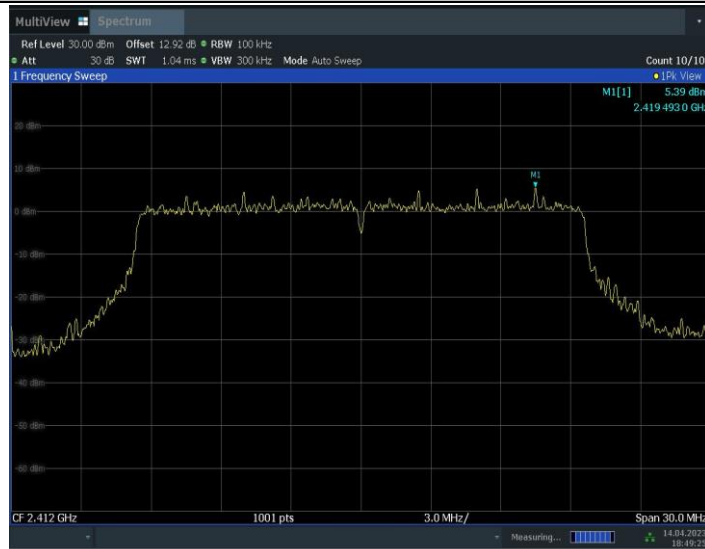


11BE20MIMO_Ant1_2412_1000~26500



18:48:43 14.04.2023

11BE20MIMO_Ant2_2412_0~Reference



18:49:26 14.04.2023

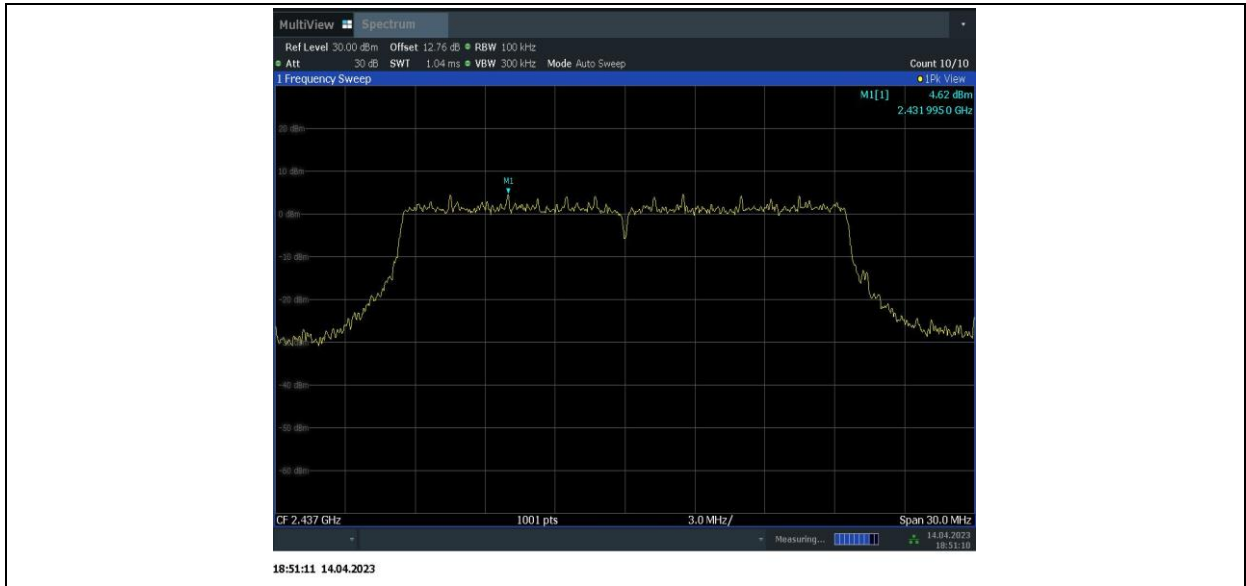
11BE20MIMO_Ant2_2412_30~1000



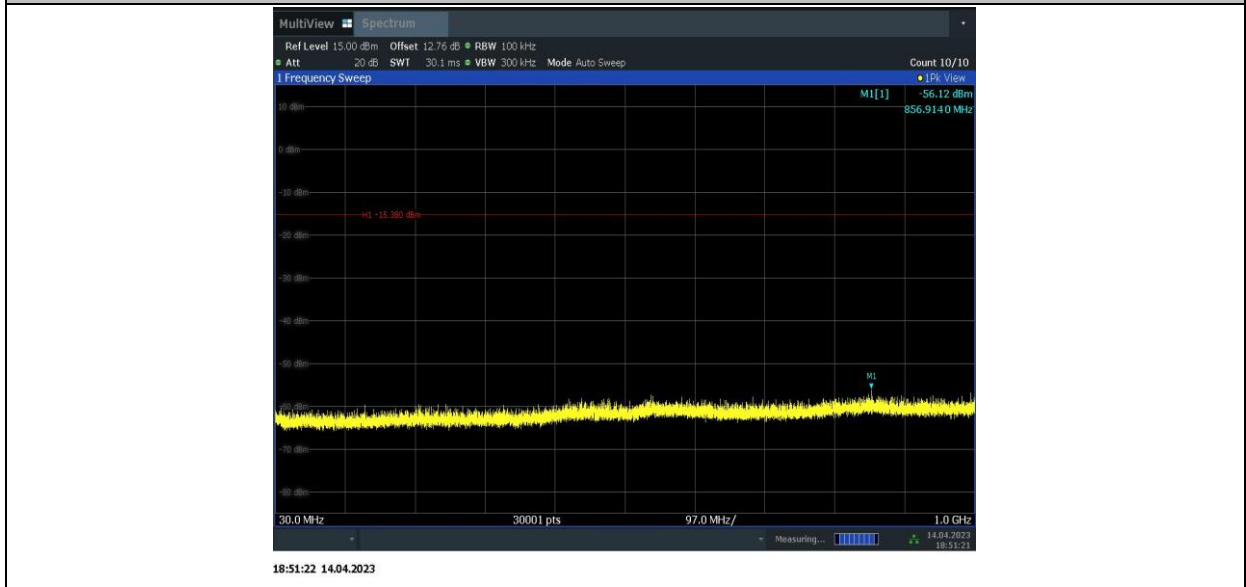
11BE20MIMO_Ant2_2412_1000~26500



11BE20MIMO_Ant1_2437_0~Reference



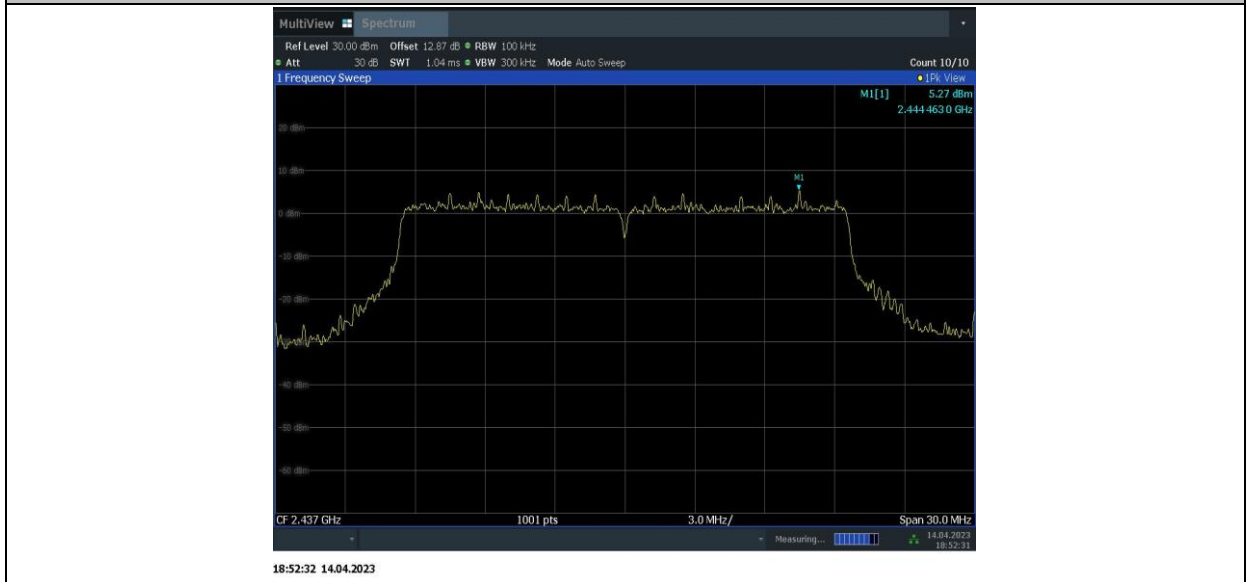
11BE20MIMO_Ant1_2437_30~1000



11BE20MIMO_Ant1_2437_1000~26500



11BE20MIMO_Ant2_2437_0~Reference



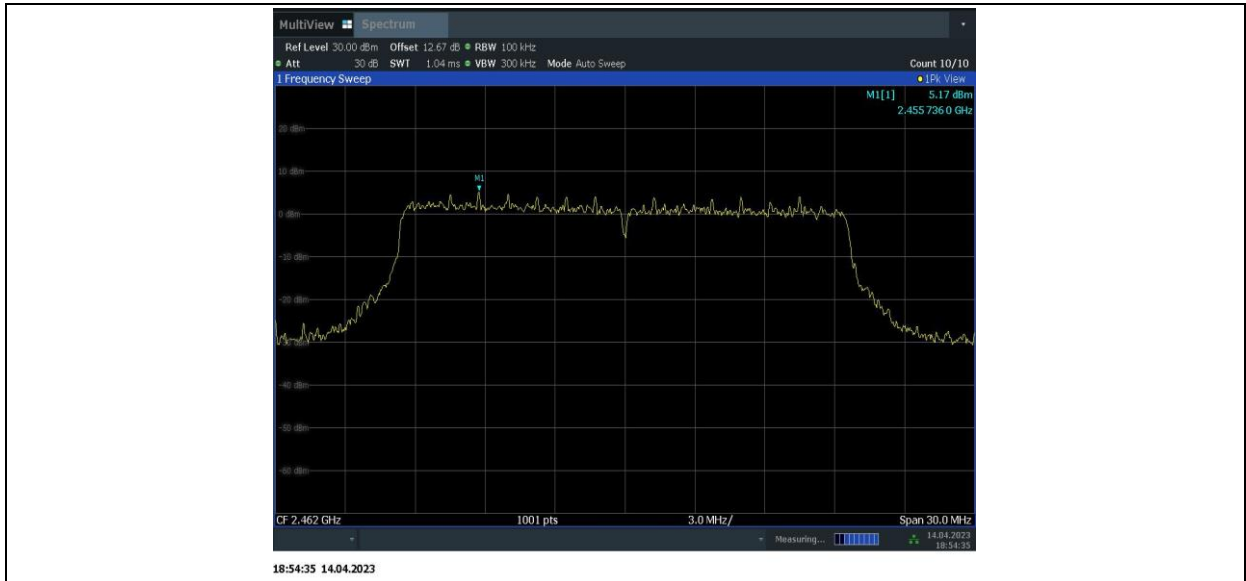
11BE20MIMO_Ant2_2437_30~1000



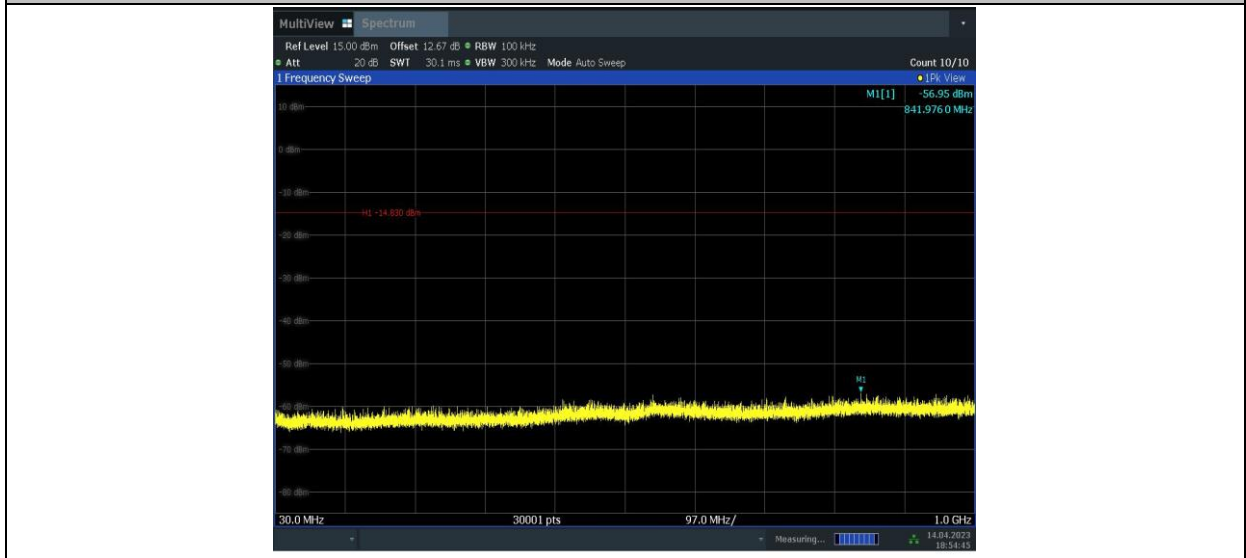
11BE20MIMO_Ant2_2437_1000~26500



11BE20MIMO_Ant1_2462_0~Reference



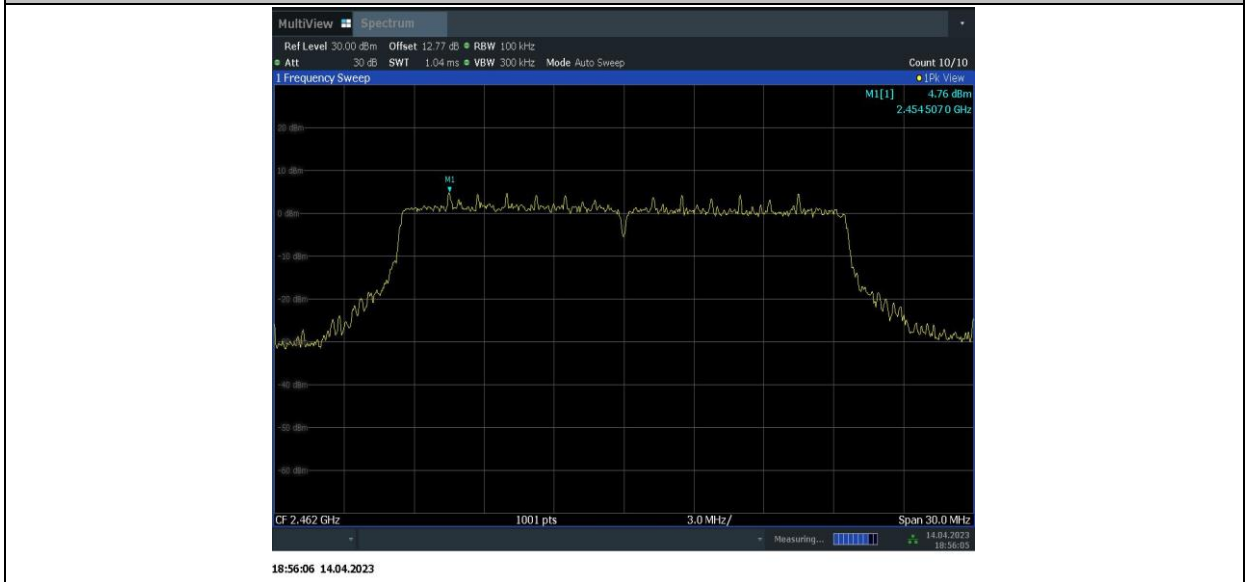
11BE20MIMO_Ant1_2462_30~1000



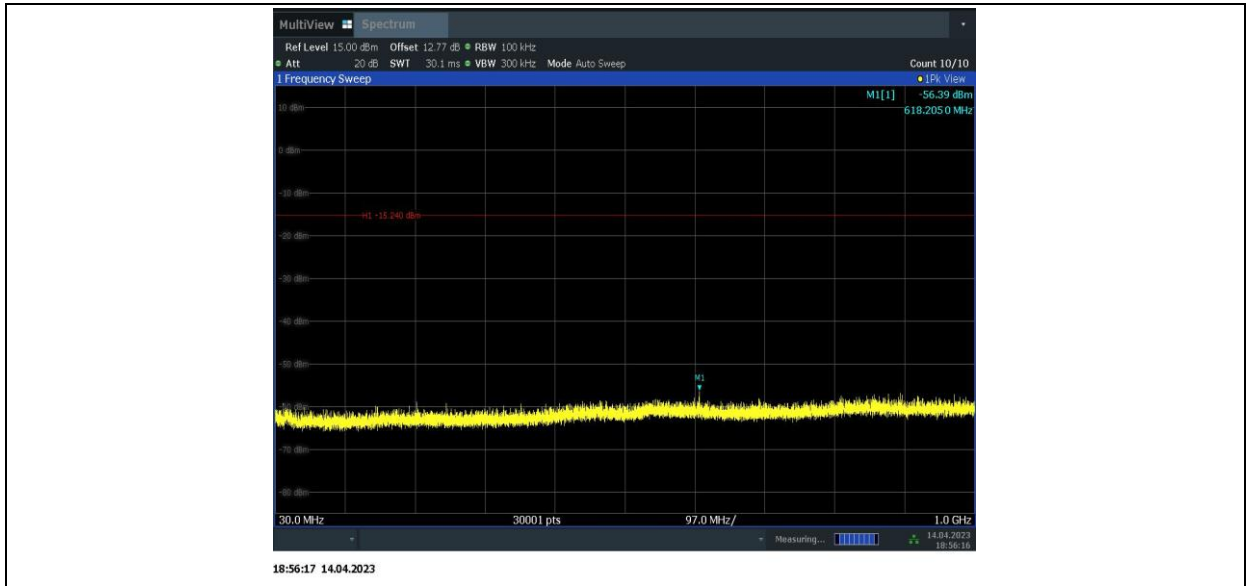
11BE20MIMO_Ant1_2462_1000~26500



11BE20MIMO_Ant2_2462_0~Reference



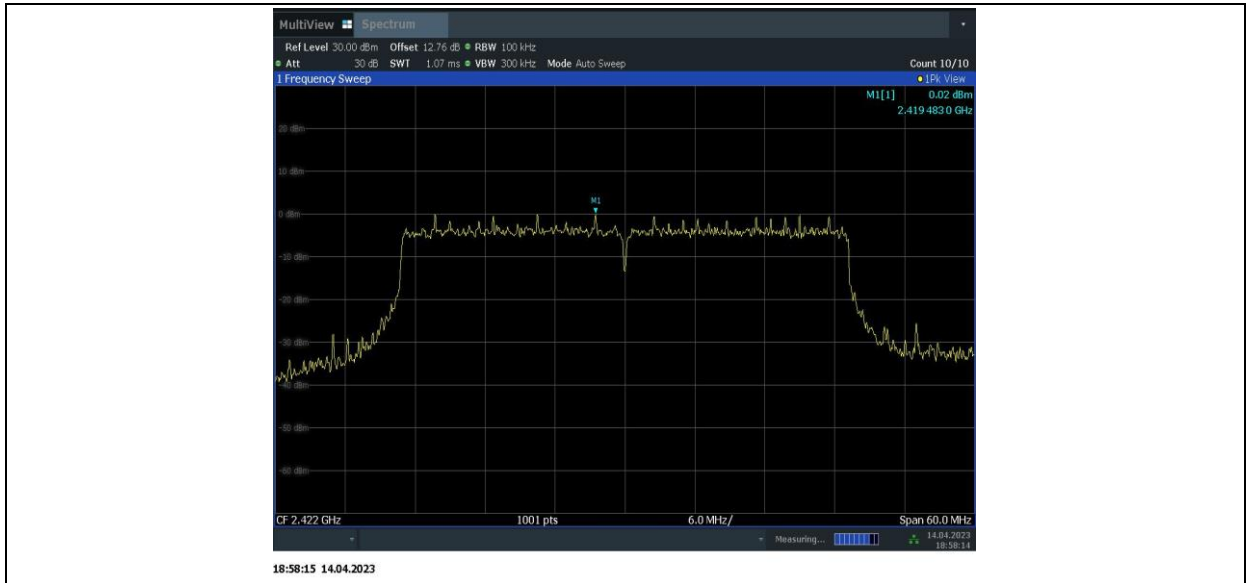
11BE20MIMO_Ant2_2462_30~1000



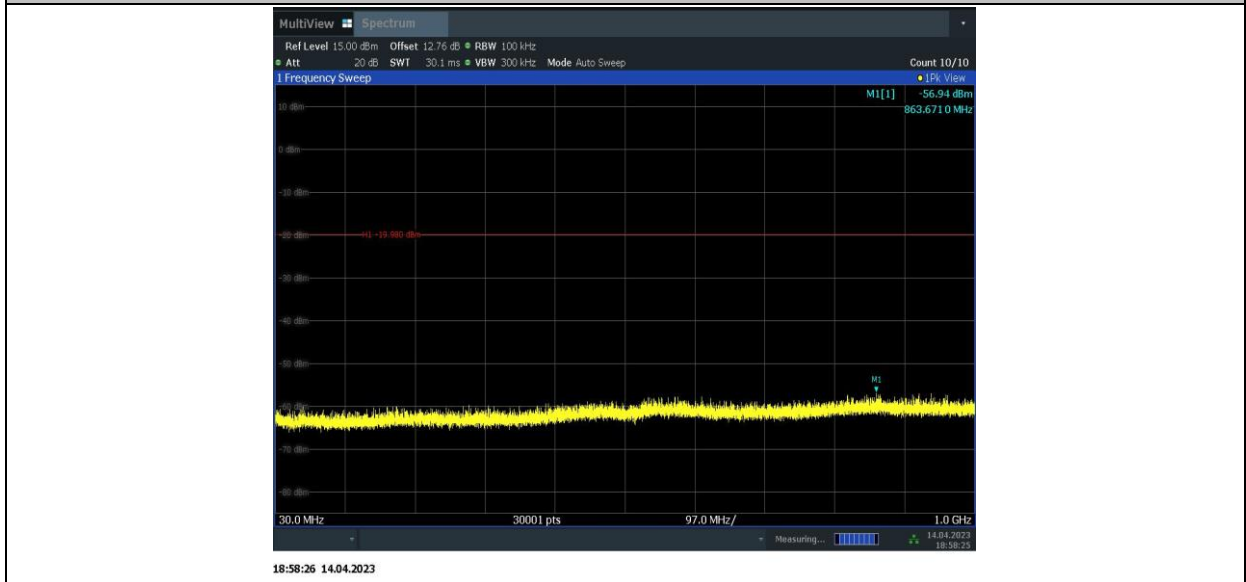
11BE20MIMO_Ant2_2462_1000~26500



11BE40MIMO_Ant1_2422_0~Reference



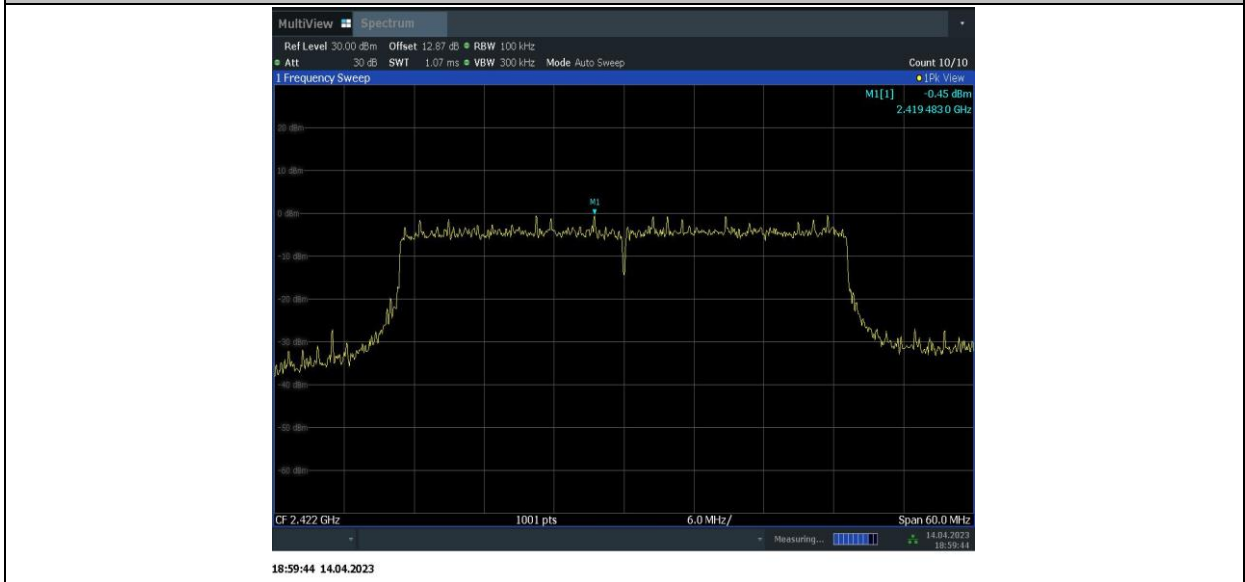
11BE40MIMO_Ant1_2422_30~1000



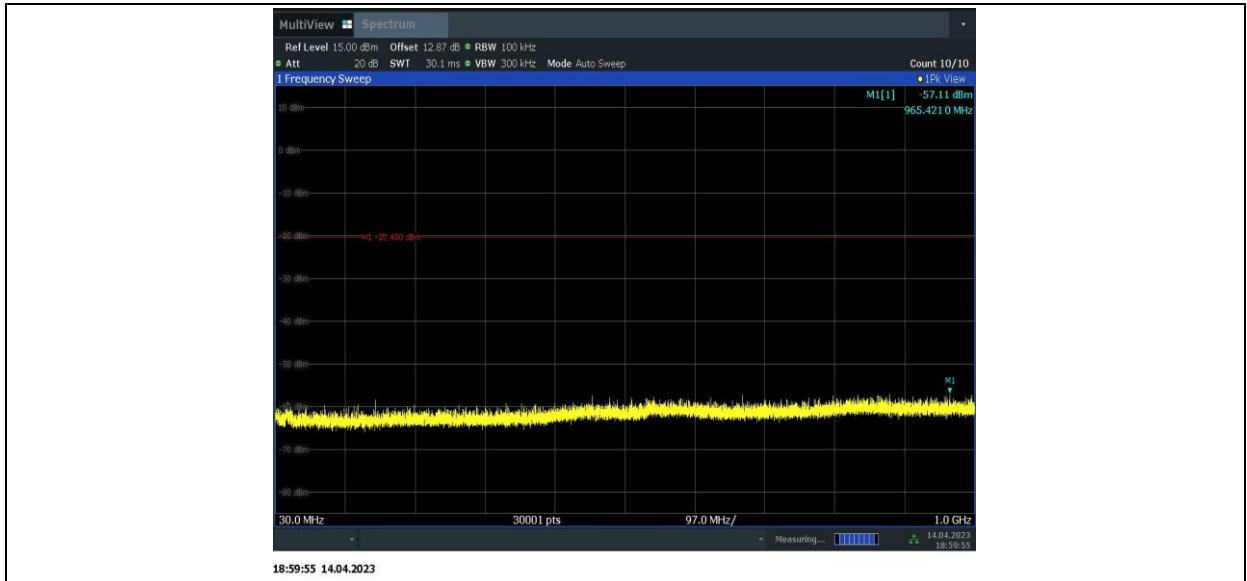
11BE40MIMO_Ant1_2422_1000~26500



11BE40MIMO_Ant2_2422_0~Reference



11BE40MIMO_Ant2_2422_30~1000



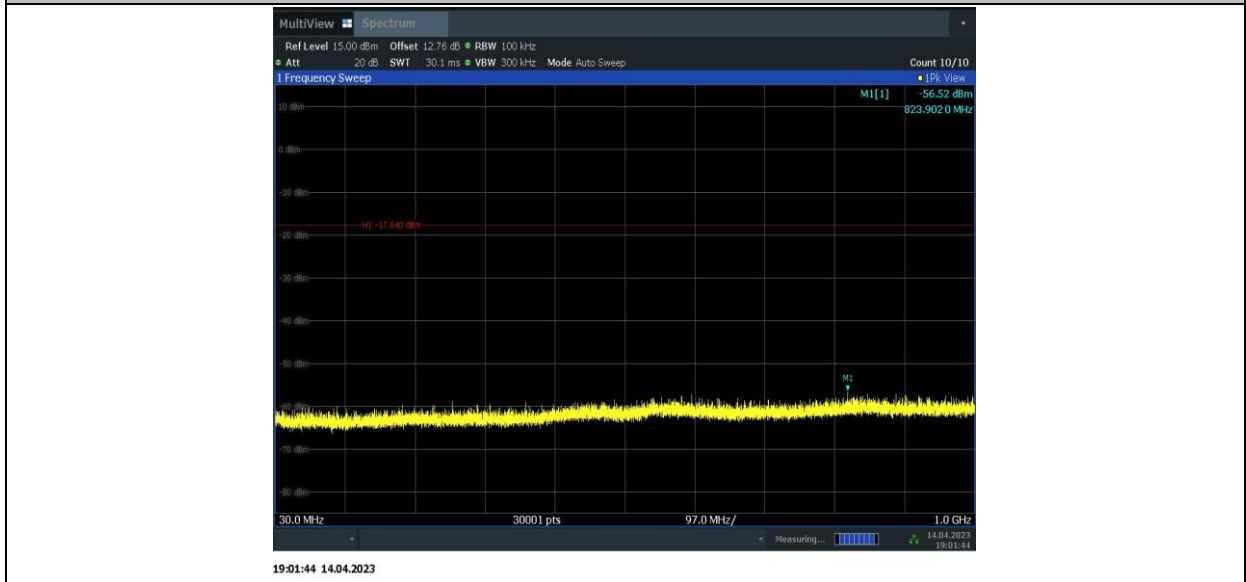
11BE40MIMO_Ant2_2422_1000~26500



11BE40MIMO_Ant1_2437_0~Reference



11BE40MIMO_Ant1_2437_30~1000



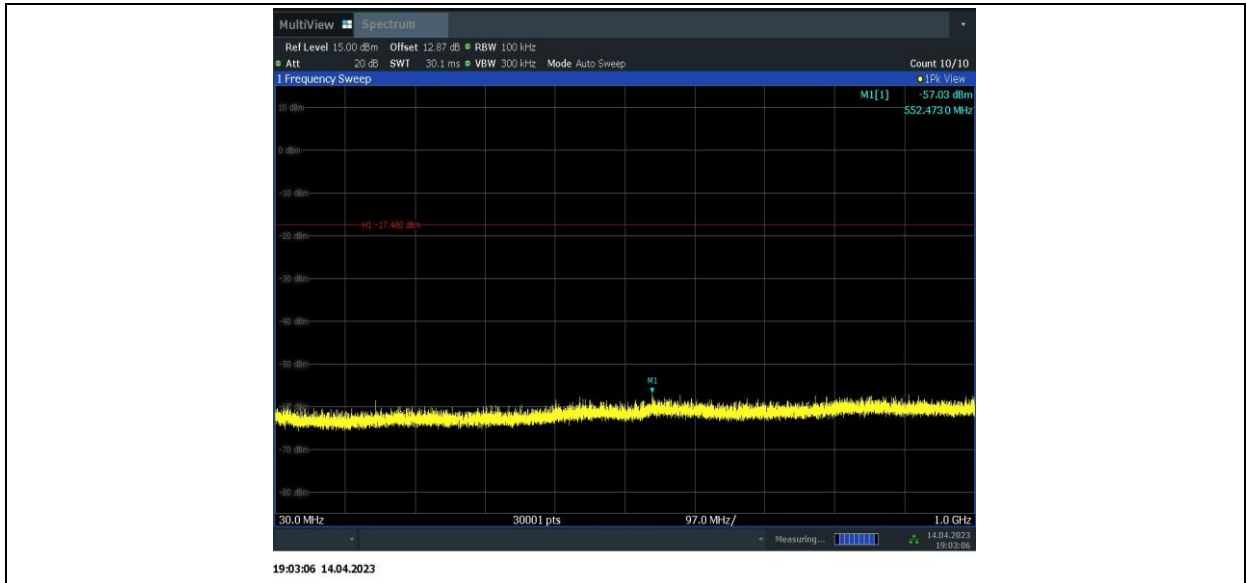
11BE40MIMO_Ant1_2437_1000~26500



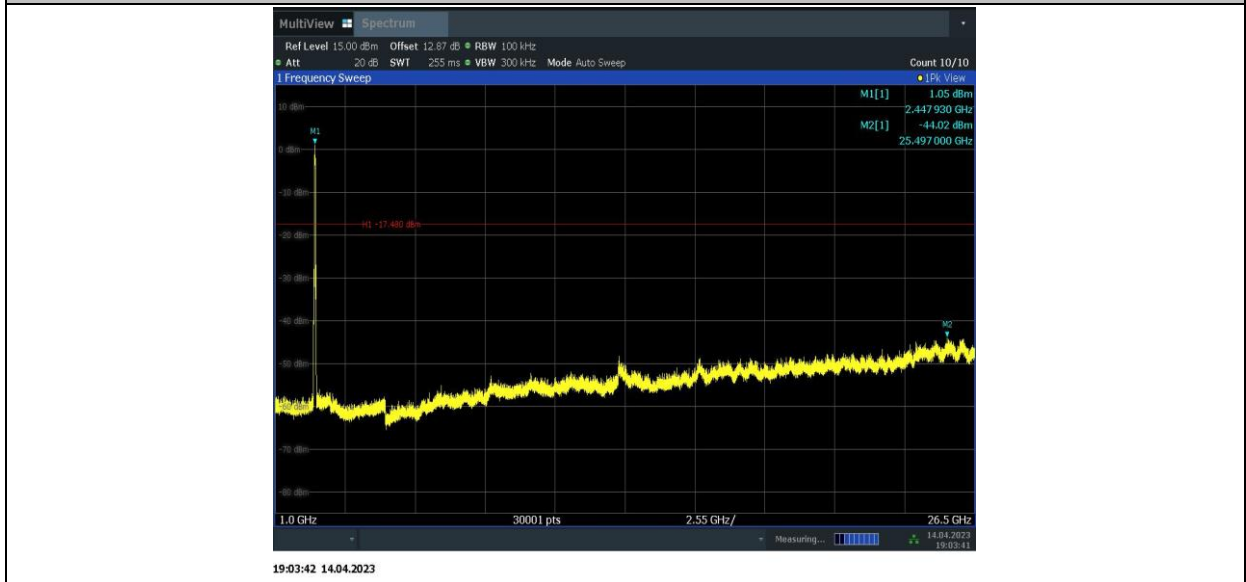
11BE40MIMO_Ant2_2437_0~Reference



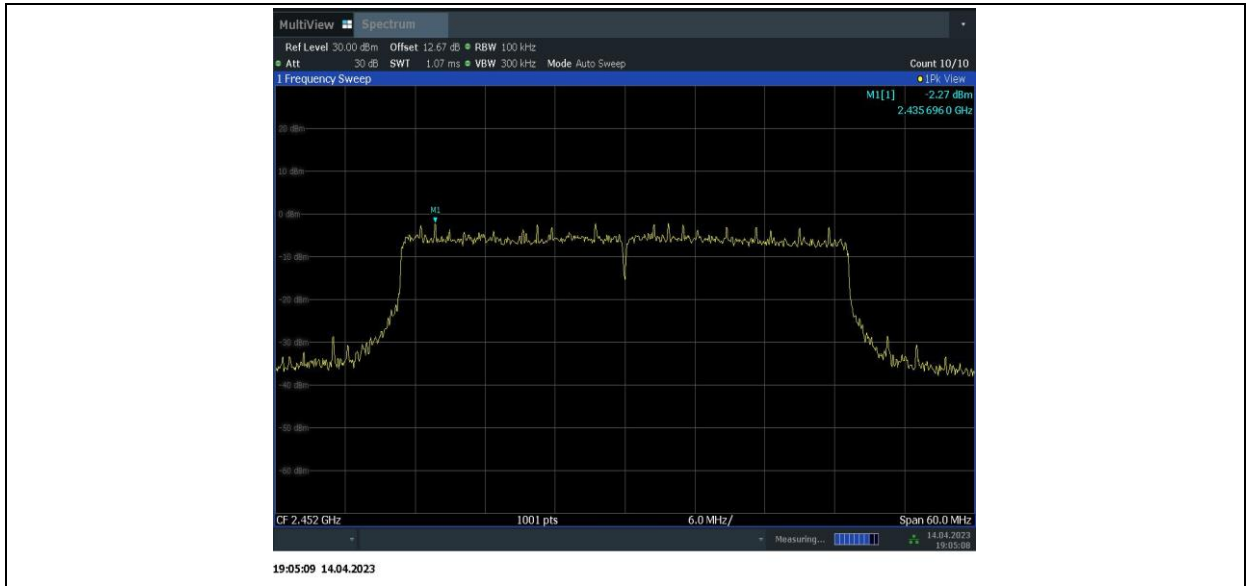
11BE40MIMO_Ant2_2437_30~1000



11BE40MIMO_Ant2_2437_1000~26500



11BE40MIMO_Ant1_2452_0~Reference



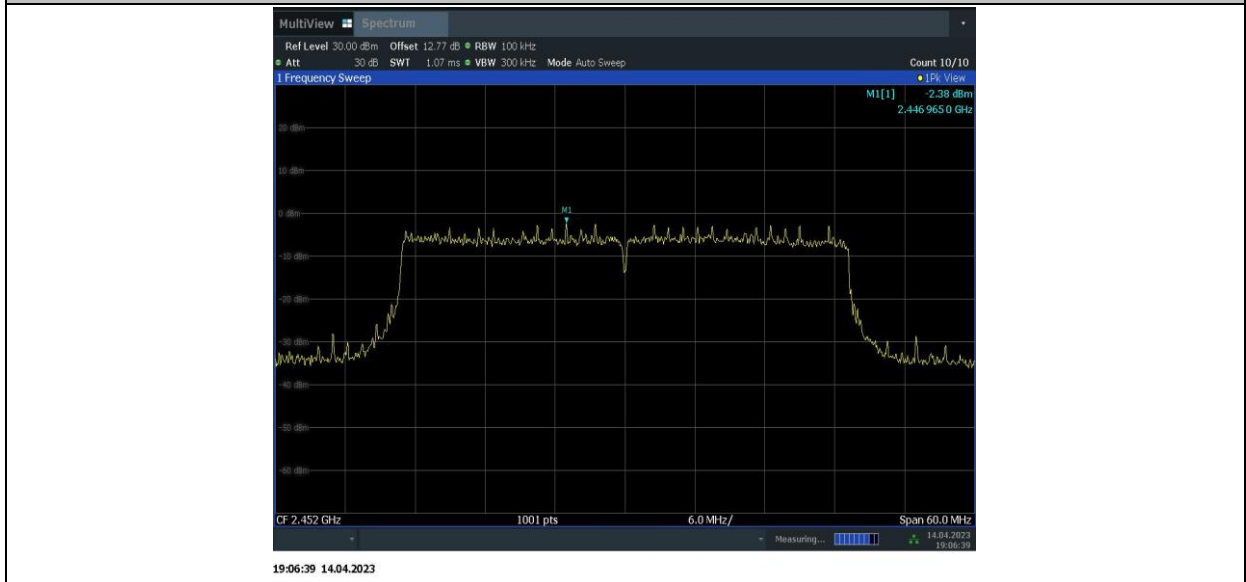
11BE40MIMO_Ant1_2452_30~1000



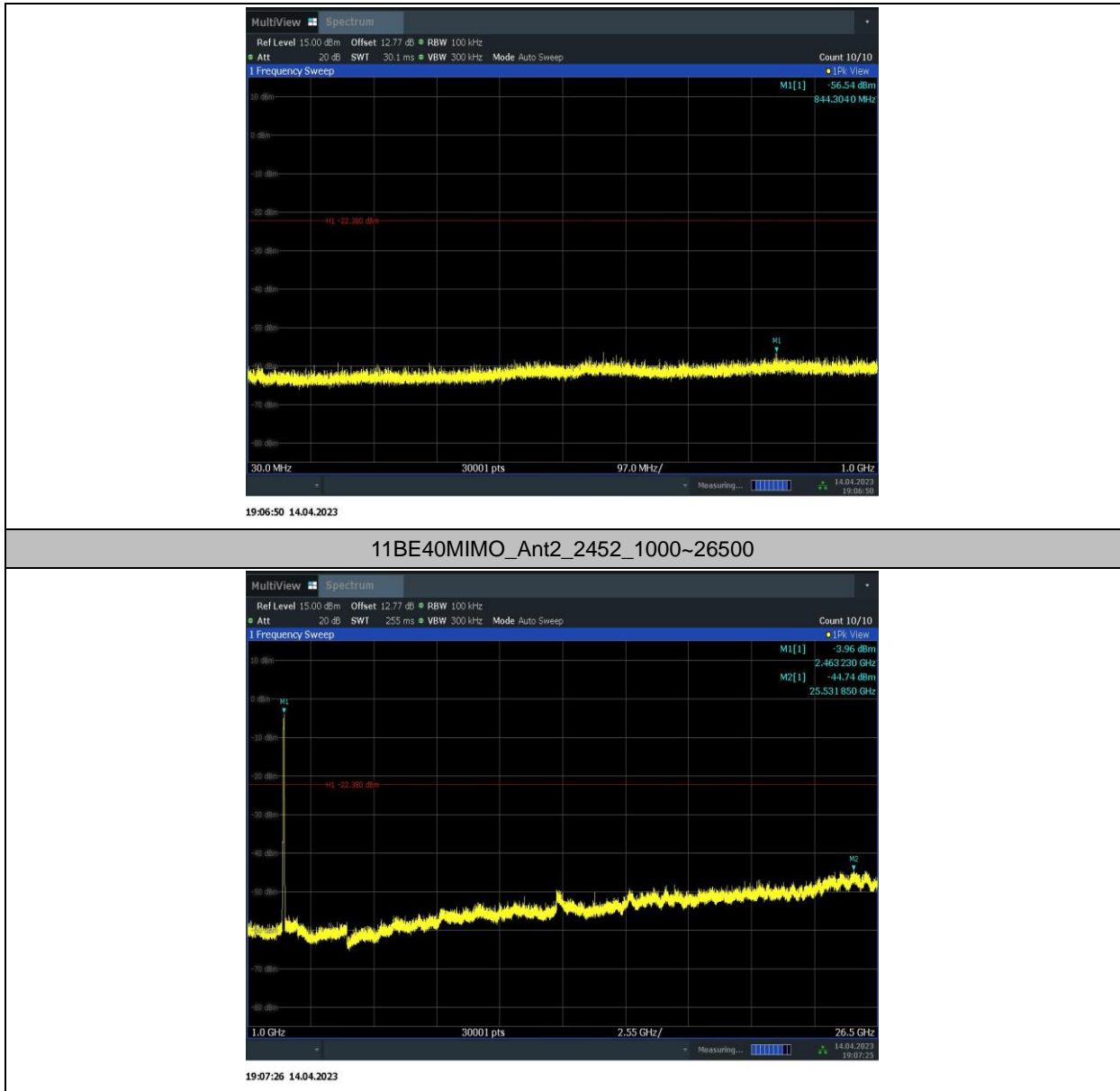
11BE40MIMO_Ant1_2452_1000~26500



11BE40MIMO_Ant2_2452_0~Reference



11BE40MIMO_Ant2_2452_30~1000



AX RU

Note: Ant1 of the result table and result graph corresponds to ant5 of the EUT, ant2 of the result table and result graph corresponds to ant6 of the EUT.

Test Mode	Antenna	Fre [MHz]	Ru Size	Ru Index	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11BE20 MIMO	Ant1	2412	26Tone	RU0	Reference	4.54	4.54	---	PASS
				RU0	30~1000	4.54	-56.67	≤-15.46	PASS
				RU0	1000~26500	4.54	-43.28	≤-15.46	PASS
				RU8	Reference	3.51	3.51	---	PASS
				RU8	30~1000	3.51	-56.80	≤-16.49	PASS
				RU8	1000~26500	3.51	-44.30	≤-16.49	PASS
			52Tone	RU37	Reference	4.16	4.16	---	PASS
				RU37	30~1000	4.16	-56.80	≤-15.84	PASS

				RU37	1000~26500	4.16	-43.71	≤-15.84	PASS		
				RU40	Reference	3.91	3.91	---	PASS		
				RU40	30~1000	3.91	-56.84	≤-16.09	PASS		
				RU40	1000~26500	3.91	-43.68	≤-16.09	PASS		
				106Tone	RU53	Reference	4.35	4.35	---	PASS	
					RU53	30~1000	4.35	-56.66	≤-15.65	PASS	
			RU53		1000~26500	4.35	-43.73	≤-15.65	PASS		
			RU54		Reference	4.20	4.20	---	PASS		
			RU54		30~1000	4.20	-56.74	≤-15.8	PASS		
			RU54		1000~26500	4.20	-44.31	≤-15.8	PASS		
			Ant2	2412	26Tone	RU0	Reference	4.28	4.28	---	PASS
						RU0	30~1000	4.28	-56.69	≤-15.72	PASS
	RU0	1000~26500				4.28	-44.21	≤-15.72	PASS		
	RU8	Reference				4.01	4.01	---	PASS		
	RU8	30~1000				4.01	-56.73	≤-15.99	PASS		
	RU8	1000~26500				4.01	-43.77	≤-15.99	PASS		
	52Tone	RU37			Reference	3.95	3.95	---	PASS		
		RU37			30~1000	3.95	-56.13	≤-16.05	PASS		
		RU37			1000~26500	3.95	-43.76	≤-16.05	PASS		
		RU40			Reference	4.03	4.03	---	PASS		
		RU40			30~1000	4.03	-56.40	≤-15.97	PASS		
		RU40			1000~26500	4.03	-44.00	≤-15.97	PASS		
	106Tone	RU53			Reference	4.16	4.16	---	PASS		
		RU53			30~1000	4.16	-56.63	≤-15.84	PASS		
		RU53			1000~26500	4.16	-44.18	≤-15.84	PASS		
		RU54			Reference	4.03	4.03	---	PASS		
		RU54			30~1000	4.03	-56.64	≤-15.97	PASS		
		RU54			1000~26500	4.03	-44.03	≤-15.97	PASS		
	Ant1	2437	26Tone	RU0	Reference	4.59	4.59	---	PASS		
				RU0	30~1000	4.59	-56.95	≤-15.41	PASS		
RU0				1000~26500	4.59	-44.12	≤-15.41	PASS			
RU8				Reference	4.18	4.18	---	PASS			
RU8				30~1000	4.18	-56.53	≤-15.82	PASS			
RU8				1000~26500	4.18	-44.54	≤-15.82	PASS			
52Tone			RU37	Reference	4.49	4.49	---	PASS			
			RU37	30~1000	4.49	-56.35	≤-15.51	PASS			
			RU37	1000~26500	4.49	-44.48	≤-15.51	PASS			
			RU40	Reference	4.25	4.25	---	PASS			
			RU40	30~1000	4.25	-56.54	≤-15.75	PASS			
			RU40	1000~26500	4.25	-43.75	≤-15.75	PASS			
106Tone	RU53	Reference	8.64	8.64	---	PASS					
	RU53	30~1000	8.64	-57.14	≤-11.36	PASS					

				RU53	1000~26500	8.64	-44.22	≤ -11.36	PASS
				RU54	Reference	3.84	3.84	---	PASS
				RU54	30~1000	3.84	-57.26	≤ -16.16	PASS
				RU54	1000~26500	3.84	-44.26	≤ -16.16	PASS
	Ant2	2437	26Tone	RU0	Reference	4.75	4.75	---	PASS
				RU0	30~1000	4.75	-56.66	≤ -15.25	PASS
				RU0	1000~26500	4.75	-43.84	≤ -15.25	PASS
				RU8	Reference	4.24	4.24	---	PASS
				RU8	30~1000	4.24	-56.49	≤ -15.76	PASS
				RU8	1000~26500	4.24	-43.73	≤ -15.76	PASS
			52Tone	RU37	Reference	4.53	4.53	---	PASS
				RU37	30~1000	4.53	-56.30	≤ -15.47	PASS
				RU37	1000~26500	4.53	-43.67	≤ -15.47	PASS
				RU40	Reference	4.17	4.17	---	PASS
				RU40	30~1000	4.17	-56.37	≤ -15.83	PASS
				RU40	1000~26500	4.17	-43.11	≤ -15.83	PASS
			106Tone	RU53	Reference	4.37	4.37	---	PASS
				RU53	30~1000	4.37	-56.92	≤ -15.63	PASS
				RU53	1000~26500	4.37	-43.40	≤ -15.63	PASS
				RU54	Reference	3.67	3.67	---	PASS
				RU54	30~1000	3.67	-56.92	≤ -16.33	PASS
				RU54	1000~26500	3.67	-43.57	≤ -16.33	PASS
	Ant1	2462	26Tone	RU0	Reference	5.02	5.02	---	PASS
				RU0	30~1000	5.02	-56.98	≤ -14.98	PASS
				RU0	1000~26500	5.02	-44.41	≤ -14.98	PASS
				RU8	Reference	3.32	3.32	---	PASS
				RU8	30~1000	3.32	-57.22	≤ -16.68	PASS
				RU8	1000~26500	3.32	-44.21	≤ -16.68	PASS
			52Tone	RU37	Reference	4.86	4.86	---	PASS
				RU37	30~1000	4.86	-56.39	≤ -15.14	PASS
RU37				1000~26500	4.86	-44.34	≤ -15.14	PASS	
RU40				Reference	3.95	3.95	---	PASS	
RU40				30~1000	3.95	-56.64	≤ -16.05	PASS	
RU40				1000~26500	3.95	-44.45	≤ -16.05	PASS	
106Tone			RU53	Reference	4.91	4.91	---	PASS	
			RU53	30~1000	4.91	-56.90	≤ -15.09	PASS	
			RU53	1000~26500	4.91	-43.50	≤ -15.09	PASS	
			RU54	Reference	3.88	3.88	---	PASS	
			RU54	30~1000	3.88	-56.72	≤ -16.12	PASS	
			RU54	1000~26500	3.88	-43.90	≤ -16.12	PASS	
Ant2	2462	26Tone	RU0	Reference	4.80	4.80	---	PASS	
			RU0	30~1000	4.80	-56.69	≤ -15.2	PASS	