

Conclusion: Pass

A.5. Band Edges Compliance

Method of Measurement: See ANSI C63.10-2013-clause 6.10.4

Connect the spectrum analyzer to the EUT using an appropriate RF cable connected to the EUT output. Configure the spectrum analyzer settings as described below.

- a) Set Span = 100MHz
- b) Sweep Time: coupled
- c) Set the RBW= 100 kHz
- c) Set the VBW= 300 kHz
- d) Detector: Peak
- e) Trace: Max hold

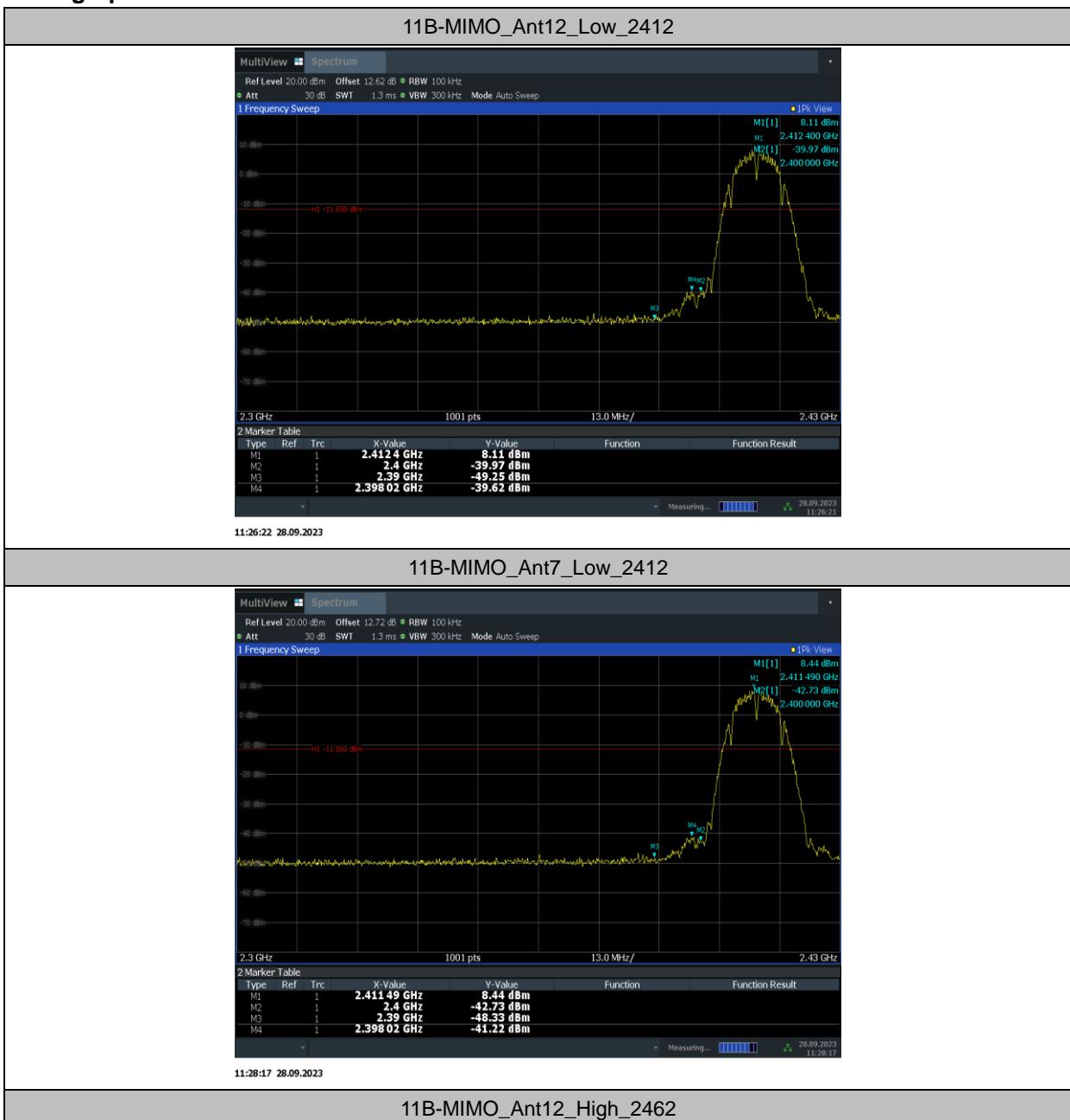
Measurement Limit:

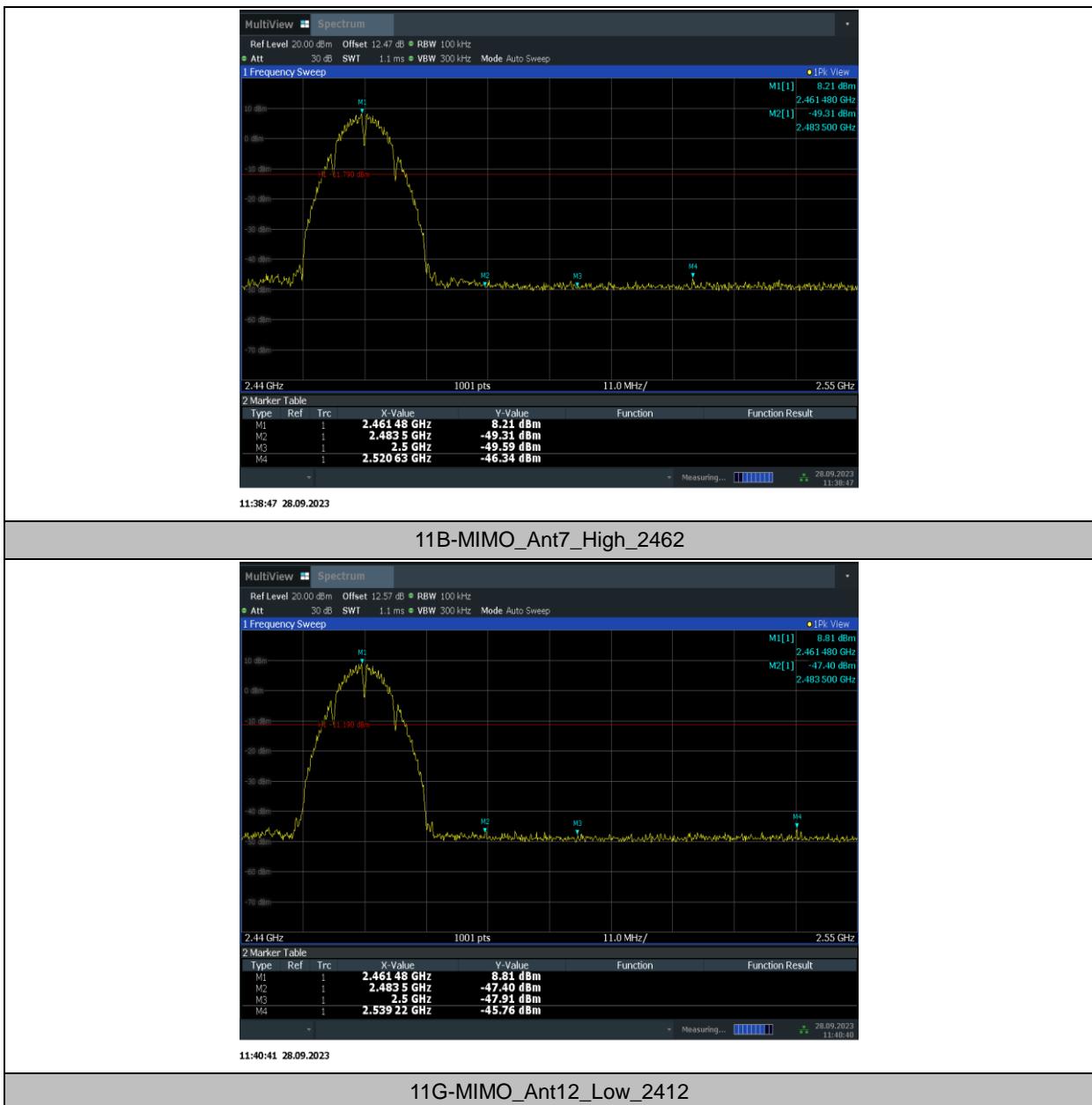
Standard	Limit (dBc)
FCC 47 CFR Part 15.247 (d)	> 20

EUT ID: UT01a

Measurement Result:

Test Mode	Antenna	ChName	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit[dBm]	Verdict
11B-MIMO	Ant12	Low	2412	8.11	-39.62	≤-11.89	PASS
	Ant7	Low	2412	8.44	-41.22	≤-11.56	PASS
	Ant12	High	2462	8.21	-46.34	≤-11.79	PASS
	Ant7	High	2462	8.81	-45.76	≤-11.19	PASS
11G-MIMO	Ant12	Low	2412	5.64	-29.52	≤-14.36	PASS
	Ant7	Low	2412	6.55	-31.24	≤-13.45	PASS
	Ant12	High	2462	6.36	-46.68	≤-13.64	PASS
	Ant7	High	2462	6.79	-46.27	≤-13.21	PASS
11AX20 MIMO	Ant12	Low	2412	4.28	-34.82	≤-15.72	PASS
	Ant7	Low	2412	4.43	-38.3	≤-15.57	PASS
	Ant12	High	2462	4.35	-46.17	≤-15.65	PASS
	Ant7	High	2462	4.22	-46.48	≤-15.78	PASS
11BE40 MIMO	Ant12	Low	2422	-0.47	-39.7	≤-20.47	PASS
	Ant7	Low	2422	-0.66	-40.28	≤-20.66	PASS
	Ant12	High	2452	-0.85	-46.3	≤-20.85	PASS
	Ant7	High	2452	-0.21	-46.77	≤-20.21	PASS

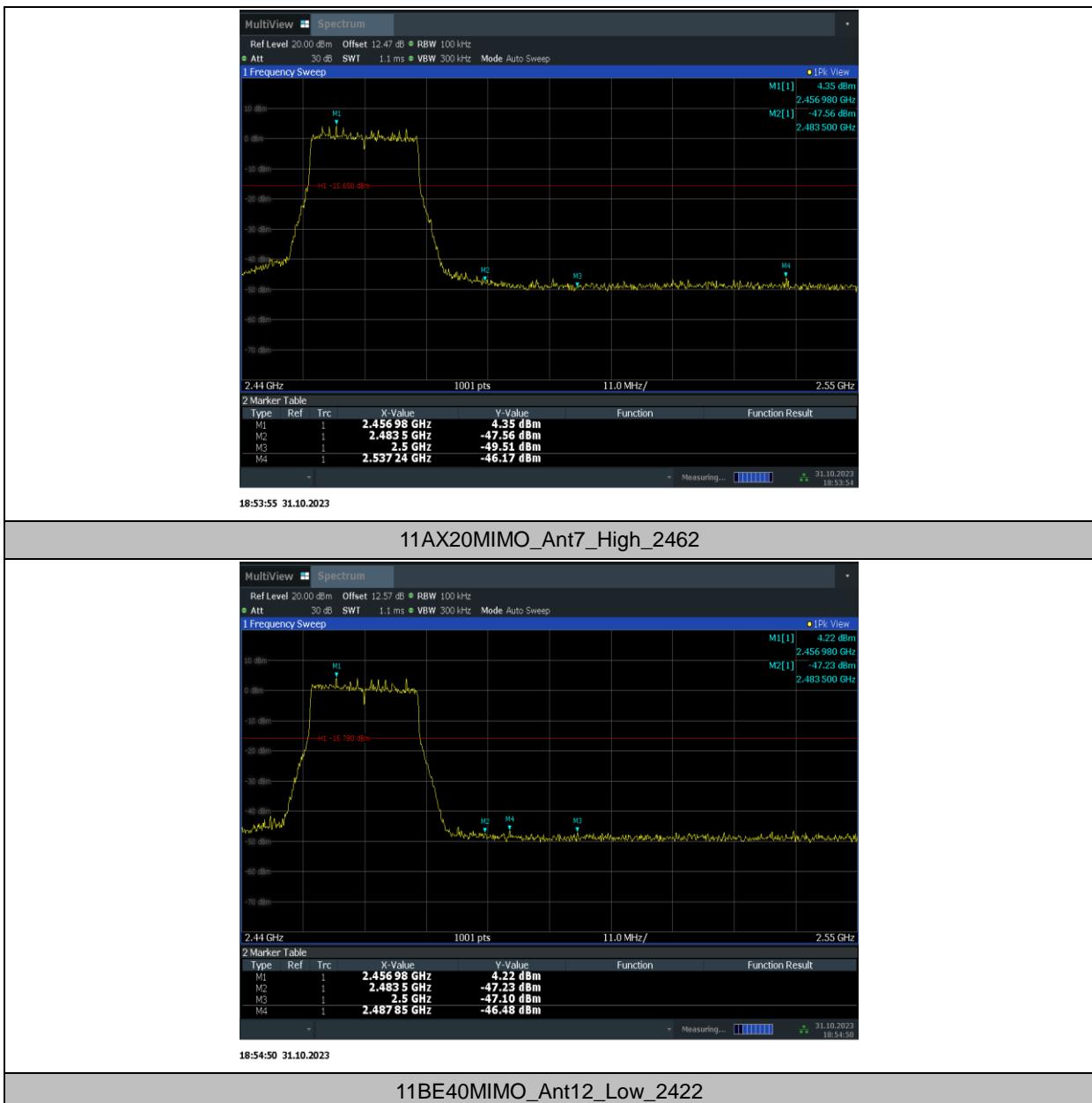
Test graphs as below:




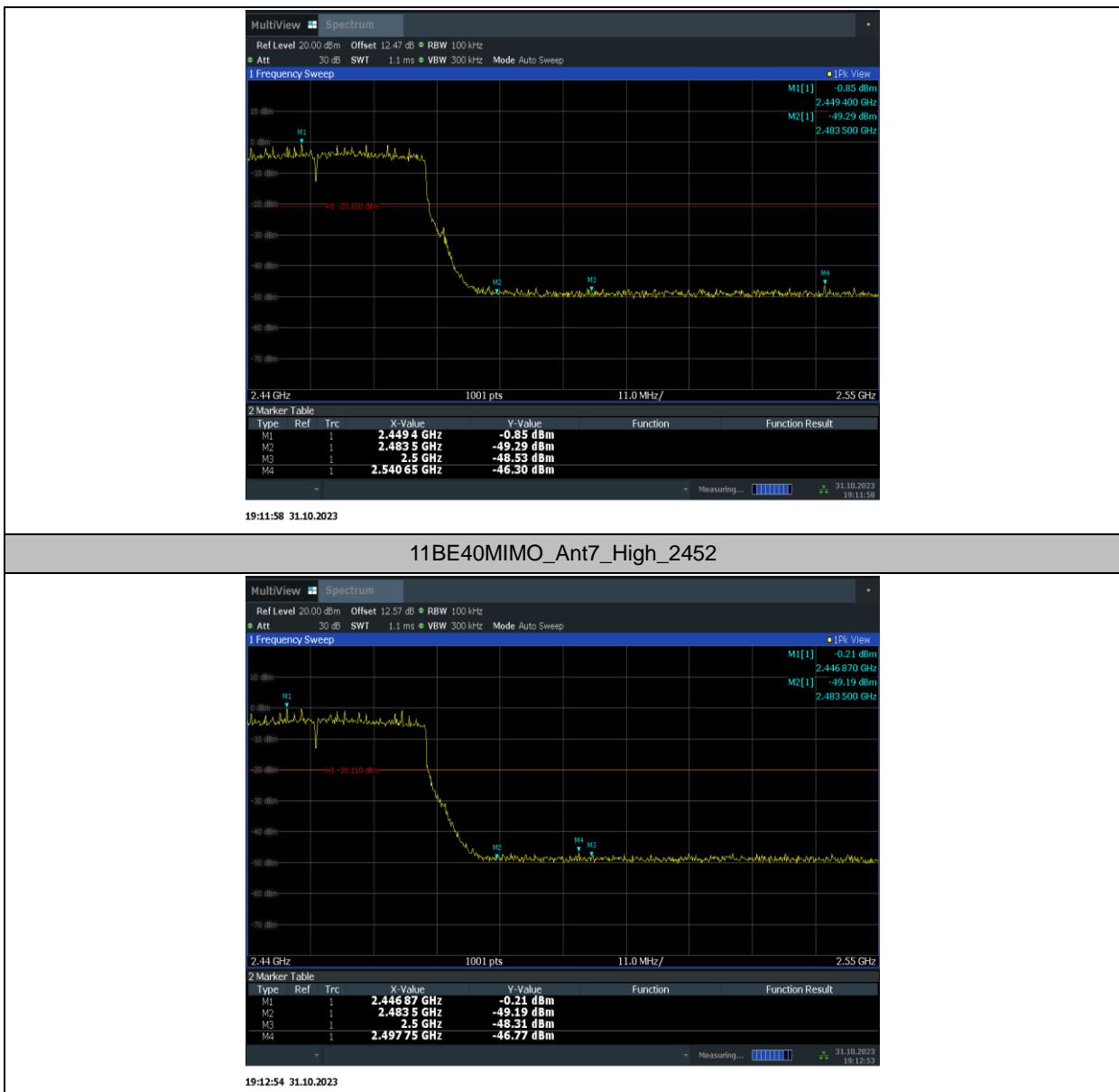






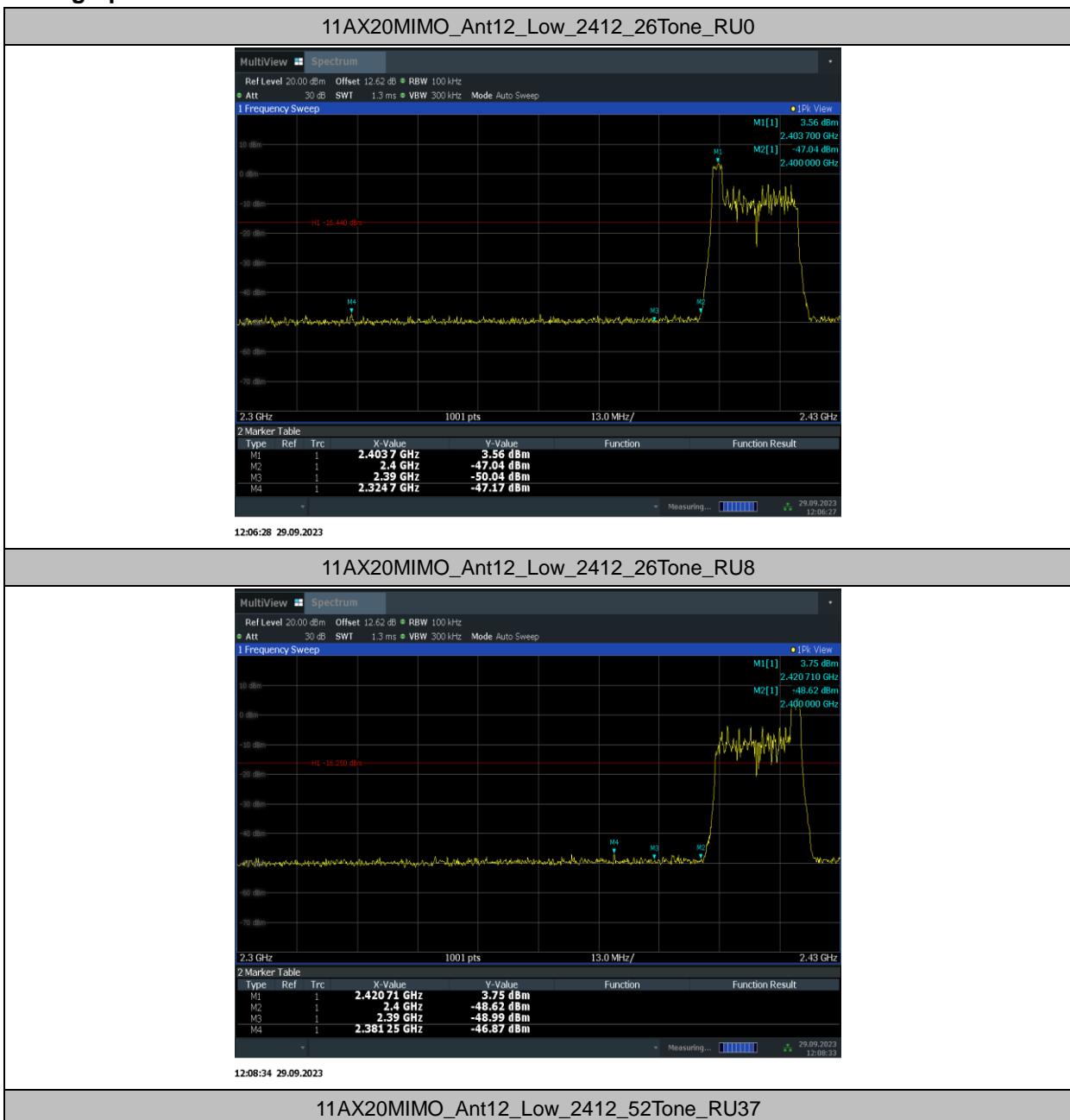






RU Mode

Test Mode	Antenn a	ChNam e	Frequency [MHz]	Ru Size	Ru Index	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdic t
11AX20MIMO	Ant12	Low	2412	26Tone	RU0	3.56	-47.17	≤-16.44	PASS
					RU8	3.75	-46.87	≤-16.25	PASS
				52Tone	RU37	4.14	-42.77	≤-15.86	PASS
					RU40	5.09	-46.46	≤-14.91	PASS
				106Ton e	RU53	4.57	-33.79	≤-15.43	PASS
					RU54	4.68	-38.89	≤-15.32	PASS
	Ant7	Low	2412	26Tone	RU0	4.37	-46.82	≤-15.63	PASS
					RU8	3.53	-47.44	≤-16.47	PASS
				52Tone	RU37	5.00	-42.55	≤-15	PASS
					RU40	4.21	-46.93	≤-15.79	PASS
				106Ton e	RU53	5.22	-36.09	≤-14.78	PASS
					RU54	5.14	-42.94	≤-14.86	PASS
	Ant12	High	2462	26Tone	RU0	4.28	-47.03	≤-15.72	PASS
					RU8	3.19	-46.73	≤-16.81	PASS
				52Tone	RU37	4.24	-46.41	≤-15.76	PASS
					RU40	3.98	-46.84	≤-16.02	PASS
				106Ton e	RU53	5.02	-45.67	≤-14.98	PASS
					RU54	4.05	-46.22	≤-15.95	PASS
	Ant7	High	2462	26Tone	RU0	5.11	-46.52	≤-14.89	PASS
					RU8	3.42	-46.2	≤-16.58	PASS
				52Tone	RU37	5.34	-46.47	≤-14.66	PASS
					RU40	3.85	-46.61	≤-16.15	PASS
				106Ton e	RU53	5.56	-46.62	≤-14.44	PASS
					RU54	4.61	-46.57	≤-15.39	PASS

Test graphs as below:


















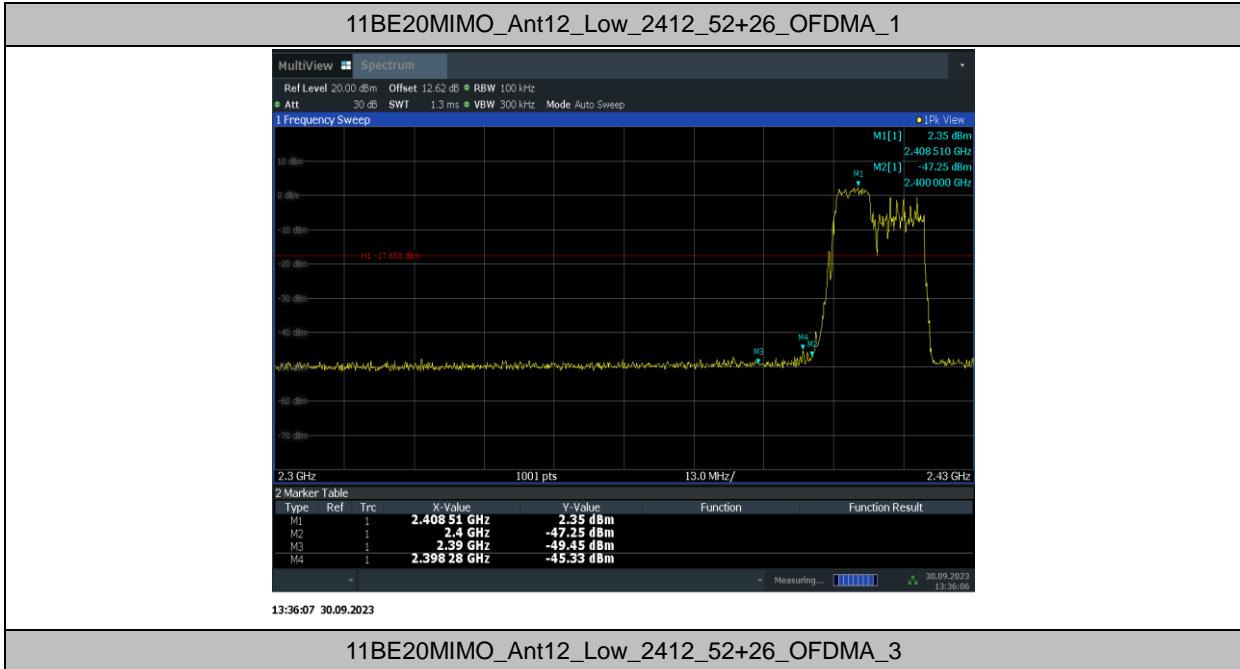






MRU

Test Mode	Antenna	ChName	Channel	Mru Type	Mru Index	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11BE20MIMO	Ant12	Low	2412	52+26_OFDMA	1	2.35	-45.33	≤-17.65	PASS
					3	2.11	-45.51	≤-17.89	PASS
		Low	2412	106+26_OFDMA	1	3.52	-33.53	≤-16.48	PASS
					2	3.93	-35.35	≤-16.07	PASS
	Ant7	Low	2412	52+26_OFDMA	1	0.05	-47.3	≤-19.95	PASS
					3	2.86	-46.42	≤-17.14	PASS
		High	2462	106+26_OFDMA	1	4.70	-36.15	≤-15.3	PASS
					2	4.04	-39.4	≤-15.96	PASS
	Ant12	High	2462	52+26_OFDMA	1	2.62	-46.96	≤-17.38	PASS
					3	1.84	-46.74	≤-18.16	PASS
		High	2462	106+26_OFDMA	1	4.32	-46.41	≤-15.68	PASS
					2	3.39	-46.62	≤-16.61	PASS
	Ant7	High	2462	52+26_OFDMA	1	3.42	-46.57	≤-16.58	PASS
					3	1.99	-45.42	≤-18.01	PASS
		High	2462	106+26_OFDMA	1	4.10	-46.84	≤-15.9	PASS
					2	4.32	-46.54	≤-15.68	PASS

Test graphs as below:


















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: UT01a

Measurement Results:

TestMode	Antenn a	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdic t
11B-MIMO	Ant12	2412	Reference	8.54	8.54	---	PASS
			30~1000	8.54	-57.36	≤ -11.46	PASS
			1000~2650 0	8.54	-43.74	≤ -11.46	PASS
	Ant7	2412	Reference	9.05	9.05	---	PASS

			30~1000	9.05	-57.19	≤-10.95	PASS
			1000~2650 0	9.05	-44.29	≤-10.95	PASS
	Ant12	2437	Reference	8.24	8.24	---	PASS
			30~1000	8.24	-57.31	≤-11.76	PASS
			1000~2650 0	8.24	-44.47	≤-11.76	PASS
	Ant7	2437	Reference	8.55	8.55	---	PASS
			30~1000	8.55	-56.94	≤-11.45	PASS
			1000~2650 0	8.55	-44.64	≤-11.45	PASS
	Ant12	2462	Reference	8.44	8.44	---	PASS
			30~1000	8.44	-57.09	≤-11.56	PASS
			1000~2650 0	8.44	-44.49	≤-11.56	PASS
	Ant7	2462	Reference	9.06	9.06	---	PASS
			30~1000	9.06	-57.52	≤-10.94	PASS
			1000~2650 0	9.06	-44.42	≤-10.94	PASS
11G-MIMO	Ant12	2412	Reference	6.11	6.11	---	PASS
			30~1000	6.11	-57.46	≤-13.89	PASS
			1000~2650 0	6.11	-44.14	≤-13.89	PASS
	Ant7	2412	Reference	6.55	6.55	---	PASS
			30~1000	6.55	-56.85	≤-13.45	PASS
			1000~2650 0	6.55	-44.07	≤-13.45	PASS
	Ant12	2437	Reference	6.16	6.16	---	PASS
			30~1000	6.16	-57.04	≤-13.84	PASS
			1000~2650 0	6.16	-44.65	≤-13.84	PASS
	Ant7	2437	Reference	6.79	6.79	---	PASS
			30~1000	6.79	-56.75	≤-13.21	PASS
			1000~2650 0	6.79	-43.88	≤-13.21	PASS
	Ant12	2462	Reference	6.31	6.31	---	PASS
			30~1000	6.31	-56.94	≤-13.69	PASS
			1000~2650 0	6.31	-44.95	≤-13.69	PASS
	Ant7	2462	Reference	6.98	6.98	---	PASS
			30~1000	6.98	-56.89	≤-13.02	PASS
			1000~2650	6.98	-43.7	≤-13.02	PASS

			0				
11AX20MIMO	Ant12	2412	Reference	6.02	6.02	---	PASS
			30~1000	6.02	-57.08	\leq 13.98	PASS
			1000~26500	6.02	-44.61	\leq 13.98	PASS
	Ant7	2412	Reference	6.66	6.66	---	PASS
			30~1000	6.66	-57.35	\leq 13.34	PASS
			1000~26500	6.66	-44.21	\leq 13.34	PASS
	Ant12	2437	Reference	6.16	6.16	---	PASS
			30~1000	6.16	-57.44	\leq 13.84	PASS
			1000~26500	6.16	-43.57	\leq 13.84	PASS
	Ant7	2437	Reference	6.63	6.63	---	PASS
			30~1000	6.63	-56.98	\leq 13.37	PASS
			1000~26500	6.63	-43.75	\leq 13.37	PASS
	Ant12	2462	Reference	6.42	6.42	---	PASS
			30~1000	6.42	-57.45	\leq 13.58	PASS
			1000~26500	6.42	-44.05	\leq 13.58	PASS
	Ant7	2462	Reference	6.66	6.66	---	PASS
			30~1000	6.66	-56.74	\leq 13.34	PASS
			1000~26500	6.66	-44.64	\leq 13.34	PASS
11BE40MIMO	Ant12	2422	Reference	3.21	3.21	---	PASS
			30~1000	3.21	-57.33	\leq 16.79	PASS
			1000~26500	3.21	-44.02	\leq 16.79	PASS
	Ant7	2422	Reference	2.98	2.98	---	PASS
			30~1000	2.98	-57.27	\leq 17.02	PASS
			1000~26500	2.98	-44.13	\leq 17.02	PASS
	Ant12	2437	Reference	3.47	3.47	---	PASS
			30~1000	3.47	-56.72	\leq 16.53	PASS
			1000~26500	3.47	-44.24	\leq 16.53	PASS
	Ant7	2437	Reference	3.21	3.21	---	PASS
			30~1000	3.21	-56.1	\leq 16.79	PASS
			1000~26500	3.21	-44.66	\leq 16.79	PASS
	Ant12	2452	Reference	3.23	3.23	---	PASS

	Ant7	2452	30~1000	3.23	-57.5	≤-16.77	PASS
			1000~2650 0	3.23	-44.77	≤-16.77	PASS
			Reference	3.82	3.82	---	PASS
			30~1000	3.82	-56.7	≤-16.18	PASS
			1000~2650 0	3.82	-44.49	≤-16.18	PASS

Test graphs as below:
