

4.3.5.2.3 Radiated Spurious Emissions

- 1) The preliminary and final radiated measurements were performed to determine the frequency producing the maximum emissions in at a 10m anechoic chamber. The EUT was tested at a distance 3 meters.
- 2) The EUT was placed on the top of the 0.8 m height or 1.5 m height non-metallic table. To find the maximum emission levels, the height of a measuring antenna was changed and the turntable was rotated 360°.
- 3) The antenna polarization was also changed from vertical to horizontal. The spectrum was scanned from 9 kHz to 30 MHz using the loop antenna, and from 30 to 1 000 MHz using the TRILOG broadband antenna, and from 1 000 MHz to 25 000 MHz using the horn antenna.
- 4) Each frequency found during preliminary measurements was re-examined and investigated. The test-receiver system was set up to average, peak, and quasi-peak detector function with specified bandwidth.

NOTE1 : The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1 GHz.

NOTE2 : The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1 GHz.

The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz(1/T) for Average detection (AV) at frequency above 1 GHz. (where T= pulse width)

NOTE3 : The 0.8 m height is for below 1 GHz testing, and 1.5 m is for above 1 GHz testing

4.3.5.3 Note

- Below 1GHz

Note 1 : Loss : Cable loss - Amp gain

Note 2 : Result : Reading + Ant Factor + Loss

Note 3 : Measured distance : 3 m

- Above 1GHz

Note 1 : Factor : Ant Factor + Cable loss - Amp gain + Distance Factor

Note 2 : Peak Result : Reading + Factor

Note 3 : Average Result : Average Reading + Factor + Average Factor

Note 4 : Average Factor : $10\log(1/\text{Dutycycle})$ * Refer to 4.3.5.8

Note 5 : Measured distance : 1 m, Distance Factor = $20\log(1/3) = -9.54$

Note 6 : Average measurement did not take place because the peak data did not exceed Average Limit.

Note 7 : Not Detected means that peak data does not exceed the average limit.

4.3.5.4 Result

Comply (measurement data : refer to the next page)

4.3.5.5 Measurement data_Radiated Spurious Emissions

Test mode : Below 1 GHz

(Worst case : 2.4GHz(802.11n(HT40)))

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Ant Factor (dB)	Loss (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
63.77	QP	V	46.40	19.00	-29.10	36.30	40.00	3.70
105.54	QP	V	46.90	15.40	-28.40	33.90	43.50	9.60
250.01	QP	H	37.10	17.90	-27.20	27.80	46.00	18.20
500.03	QP	V	32.50	23.80	-26.70	29.60	46.00	16.40
750.04	QP	H	28.80	28.10	-26.90	30.00	46.00	16.00

Test mode : 802.11b / 2 412 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2389.87	PK	H	51.70	-4.44	-	47.26	74.00	26.74
2390.88	PK	V	51.60	-4.44	-	47.16	74.00	26.84
4824.00	PK	V	39.70	0.96	-	40.66	74.00	33.34
6250.50	PK	H	41.30	4.06	-	45.36	74.00	28.64
9240.16	PK	H	39.90	6.96	-	46.86	74.00	27.14
9648.00	PK	V	36.90	7.86	-	44.76	74.00	29.24

Test mode : 802.11b / 2 437 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4874.00	PK	V	37.20	0.96	-	38.16	74.00	35.84
7311.00	PK	H	42.40	4.86	-	47.26	74.00	26.74
	PK	V	40.90	4.86	-	45.76	74.00	28.24
9748.00	PK	H	37.00	7.86	-	44.86	74.00	29.14
	PK	V	36.60	7.86	-	44.46	74.00	29.54

Test mode : 802.11b / 2 462 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2483.69	PK	H	55.20	-4.04	-	51.16	74.00	22.84
2483.52	PK	V	58.60	-4.04	-	54.56	74.00	19.44
	AV	V	46.60	-4.04	0.00	42.56	54.00	11.44
6250.49	PK	H	41.30	4.06	-	45.36	74.00	28.64
	PK	V	39.70	4.06	-	43.76	74.00	30.24
7384.61	PK	H	41.20	4.86	-	46.06	74.00	27.94
	PK	V	39.00	4.86	-	43.86	74.00	30.14

Test mode : 802.11g / 2 412 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2389.74	PK	H	68.80	-4.44	-	64.36	74.00	9.64
	AV	H	51.20	-4.44	0.00	46.76	54.00	7.24
2390.00	PK	V	71.50	-4.44	-	67.06	74.00	6.94
	AV	V	52.40	-4.44	0.00	47.96	54.00	6.04
4824.00	PK	H	37.90	0.96	-	38.86	74.00	35.14
	PK	V	37.30	0.96	-	38.26	74.00	35.74
6250.50	PK	H	41.50	4.06	-	45.56	74.00	28.44
9240.04	PK	H	40.10	6.96	-	47.06	74.00	26.94

Test mode : 802.11g / 2 437 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4874.00	PK	H	36.90	0.96	-	37.86	74.00	36.14
	PK	V	36.60	0.96	-	37.56	74.00	36.44
6250.54	PK	H	41.80	4.06	-	45.86	74.00	28.14
	PK	V	39.20	4.06	-	43.26	74.00	30.74

Test mode : 802.11g / 2 462 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2483.60	PK	H	68.30	-4.04	-	64.26	74.00	9.74
	AV	H	50.50	-4.04	0.00	46.46	54.00	7.54
2483.50	PK	V	73.70	-4.04	-	69.66	74.00	4.34
	AV	V	55.20	-4.04	0.00	51.16	54.00	2.84
4924.00	PK	H	36.50	1.06	-	37.56	74.00	36.44
	PK	V	37.40	1.06	-	38.46	74.00	35.54
6250.54	PK	H	41.30	4.06	-	45.36	74.00	28.64
	PK	V	39.80	4.06	-	43.86	74.00	30.14
9240.02	PK	H	40.00	6.96	-	46.96	74.00	27.04

Test mode : 802.11n(HT20) / 2 412 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2390.00	PK	H	75.30	-4.44	-	70.86	74.00	3.14
	AV	H	56.30	-4.44	0.14	52.00	54.00	2.00
2390.00	PK	V	75.00	-4.44	-	70.56	74.00	3.44
	AV	V	56.30	-4.44	0.14	52.00	54.00	2.00
4824.00	PK	H	37.50	0.96	-	38.46	74.00	35.54
	PK	V	36.70	0.96	-	37.66	74.00	36.34
6250.59	PK	H	40.70	4.06	-	44.76	74.00	29.24
	PK	V	39.60	4.06	-	43.66	74.00	30.34
9648.00	PK	V	36.90	7.86	-	44.76	74.00	29.24

Test mode : 802.11n(HT20) / 2 437 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4874.00	PK	H	36.40	0.96	-	37.36	74.00	36.64
	PK	V	37.50	0.96	-	38.46	74.00	35.54
6250.48	PK	H	40.90	4.06	-	44.96	74.00	29.04
	PK	V	39.90	4.06	-	43.96	74.00	30.04

Test mode : 802.11n(HT20) / 2 462 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2483.50	PK	H	70.40	-4.04	-	66.36	74.00	7.64
	AV	H	52.50	-4.04	0.14	48.60	54.00	5.40
2483.52	PK	V	75.50	-4.04	-	71.46	74.00	2.54
	AV	V	57.00	-4.04	0.14	53.10	54.00	0.90
4924.00	PK	H	37.00	1.06	-	38.06	74.00	35.94
	PK	V	36.40	1.06	-	37.46	74.00	36.54
6250.46	PK	H	41.50	4.06	-	45.56	74.00	28.44
	PK	V	40.20	4.06	-	44.26	74.00	29.74
9848.00	PK	H	37.00	7.96	-	44.96	74.00	29.04

Test mode : 802.11n(HT40) / 2 422 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2389.99	PK	H	67.50	-4.44	-	63.06	74.00	10.94
	AV	H	54.00	-4.44	0.11	49.67	54.00	4.33
2389.92	PK	V	68.90	-4.44	-	64.46	74.00	9.54
	AV	V	54.70	-4.44	0.11	50.37	54.00	3.63
4844.00	PK	H	37.80	0.96	-	38.76	74.00	35.24
	PK	V	37.70	0.96	-	38.66	74.00	35.34
6250.49	PK	H	40.80	4.06	-	44.86	74.00	29.14
	PK	V	40.60	4.06	-	44.66	74.00	29.34
9240.02	PK	H	40.40	6.96	-	47.36	74.00	26.64

Test mode : 802.11n(HT40) / 2 437 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4874.00	PK	H	37.10	0.96	-	38.06	74.00	35.94
	PK	V	37.30	0.96	-	38.26	74.00	35.74
6250.61	PK	H	41.00	4.06	-	45.06	74.00	28.94
	PK	V	39.40	4.06	-	43.46	74.00	30.54
9239.89	PK	H	40.20	6.96	-	47.16	74.00	26.84

Test mode : 802.11n(HT40) / 2 452 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2483.50	PK	H	67.80	-4.04	-	63.76	74.00	10.24
	AV	H	51.60	-4.04	0.11	47.67	54.00	6.33
2483.50	PK	V	72.30	-4.04	-	68.26	74.00	5.74
	AV	V	57.40	-4.04	0.11	53.47	54.00	0.53
4904.00	PK	H	36.90	0.96	-	37.86	74.00	36.14
	PK	V	37.00	0.96	-	37.96	74.00	36.04
6250.53	PK	H	40.70	4.06	-	44.76	74.00	29.24
	PK	V	40.50	4.06	-	44.56	74.00	29.44
9240.02	PK	H	40.10	6.96	-	47.06	74.00	26.94

Test mode : 802.11ax(HE20) / 2 412 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2390.00	PK	H	69.00	-4.44	-	64.56	74.00	9.44
	AV	H	52.60	-4.44	0.00	48.16	54.00	5.84
2390.00	PK	V	72.60	-4.44	-	68.16	74.00	5.84
	AV	V	54.30	-4.44	0.00	49.86	54.00	4.14
4824.00	PK	H	38.00	0.96	-	38.96	74.00	35.04
	PK	V	37.90	0.96	-	38.86	74.00	35.14
6250.37	PK	H	40.90	4.06	-	44.96	74.00	29.04
	PK	V	40.50	4.06	-	44.56	74.00	29.44

Test mode : 802.11ax(HE20) / 2 437 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4874.00	PK	H	37.50	0.96	-	38.46	74.00	35.54
	PK	V	37.20	0.96	-	38.16	74.00	35.84
6250.40	PK	H	41.80	4.06	-	45.86	74.00	28.14
	PK	V	40.60	4.06	-	44.66	74.00	29.34
9240.07	PK	H	40.60	6.96	-	47.56	74.00	26.44

Test mode : 802.11ax(HE20) / 2 462 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2483.50	PK	H	68.50	-4.04	-	64.46	74.00	9.54
	AV	H	51.10	-4.04	0.00	47.06	54.00	6.94
2483.50	PK	V	73.20	-4.04	-	69.16	74.00	4.84
	AV	V	56.80	-4.04	0.00	52.76	54.00	1.24
4924.00	PK	H	36.30	1.06	-	37.36	74.00	36.64
	PK	V	37.20	1.06	-	38.26	74.00	35.74
6250.43	PK	H	40.10	4.06	-	44.16	74.00	29.84
	PK	V	40.40	4.06	-	44.46	74.00	29.54
9240.01	PK	H	40.00	6.96	-	46.96	74.00	27.04

Test mode : 802.11ax(HE40) / 2 422 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2390.00	PK	H	70.60	-4.44	-	66.16	74.00	7.84
	AV	H	54.30	-4.44	0.10	49.96	54.00	4.04
2390.00	PK	V	71.60	-4.44	-	67.16	74.00	6.84
	AV	V	54.80	-4.44	0.10	50.46	54.00	3.54
4844.00	PK	H	37.20	0.96	-	38.16	74.00	35.84
	PK	V	36.60	0.96	-	37.56	74.00	36.44
6250.58	PK	H	41.20	4.06	-	45.26	74.00	28.74
	PK	V	40.00	4.06	-	44.06	74.00	29.94
9240.07	PK	H	39.40	6.96	-	46.36	74.00	27.64

Test mode : 802.11ax(HE40) / 2 437 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4874.00	PK	H	37.10	0.96	-	38.06	74.00	35.94
	PK	V	36.50	0.96	-	37.46	74.00	36.54
6250.49	PK	H	40.40	4.06	-	44.46	74.00	29.54
	PK	V	39.50	4.06	-	43.56	74.00	30.44

Test mode : 802.11ax(HE40) / 2 452 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2483.56	PK	H	66.70	-4.04	-	62.66	74.00	11.34
	AV	H	51.40	-4.04	0.10	47.46	54.00	6.54
2483.50	PK	V	71.60	-4.04	-	67.56	74.00	6.44
	AV	V	57.10	-4.04	0.10	53.16	54.00	0.84
4904.00	PK	H	36.20	0.96	-	37.16	74.00	36.84
	PK	V	36.90	0.96	-	37.86	74.00	36.14
6250.47	PK	H	41.50	4.06	-	45.56	74.00	28.44
	PK	V	40.00	4.06	-	44.06	74.00	29.94
9240.00	PK	H	40.60	6.96	-	47.56	74.00	26.44

Test mode : 802.11be(EHT20) / 2 412 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2390.00	PK	H	75.10	-4.44	-	70.66	74.00	3.34
	AV	H	54.10	-4.44	0.12	49.78	54.00	4.22
2389.98	PK	V	75.30	-4.44	-	70.86	74.00	3.14
	AV	V	53.80	-4.44	0.12	49.48	54.00	4.52
4824.000	PK	H	36.60	0.96	-	37.56	74.00	36.44
	PK	V	36.50	0.96	-	37.46	74.00	36.54
6250.368	PK	H	39.10	4.06	-	43.16	74.00	30.84
	PK	V	40.60	4.06	-	44.66	74.00	29.34
9239.925	PK	H	39.80	6.96	-	46.76	74.00	27.24

Test mode : 802.11be(EHT20) / 2 437 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4874.00	PK	H	37.20	0.96	-	38.16	74.00	35.84
	PK	V	36.70	0.96	-	37.66	74.00	36.34
6250.50	PK	H	40.60	4.06	-	44.66	74.00	29.34
	PK	V	40.90	4.06	-	44.96	74.00	29.04

Test mode : 802.11be(EHT20) / 2 462 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2483.51	PK	H	68.00	-4.04	-	63.96	74.00	10.04
	AV	H	51.20	-4.04	0.12	47.28	54.00	6.72
2483.50	PK	V	73.00	-4.04	-	68.96	74.00	5.04
	AV	V	56.80	-4.04	0.12	52.88	54.00	1.12
4924.00	PK	H	36.90	1.06	-	37.96	74.00	36.04
	PK	V	37.30	1.06	-	38.36	74.00	35.64
6250.49	PK	H	39.50	4.06	-	43.56	74.00	30.44
	PK	V	41.60	4.06	-	45.66	74.00	28.34
9240.16	PK	H	39.10	6.96	-	46.06	74.00	27.94

Test mode : 802.11be(EHT40) / 2 422 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2390.00	PK	H	70.50	-4.44	-	66.06	74.00	7.94
	AV	H	53.30	-4.44	0.00	48.86	54.00	5.14
2390.00	PK	V	70.80	-4.44	-	66.36	74.00	7.64
	AV	V	54.20	-4.44	0.00	49.76	54.00	4.24
4844.00	PK	H	37.20	0.96	-	38.16	74.00	35.84
	PK	V	36.80	0.96	-	37.76	74.00	36.24
6250.48	PK	H	40.70	4.06	-	44.76	74.00	29.24
	PK	V	40.10	4.06	-	44.16	74.00	29.84
9239.96	PK	H	40.90	6.96	-	47.86	74.00	26.14

Test mode : 802.11be(EHT40) / 2 437 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4874.000	PK	H	36.90	0.96	-	37.86	74.00	36.14
4874.000	PK	V	36.50	0.96	-	37.46	74.00	36.54
6250.481	PK	H	41.90	4.06	-	45.96	74.00	28.04
6250.481	PK	V	40.40	4.06	-	44.46	74.00	29.54
9240.153	PK	H	40.20	6.96	-	47.16	74.00	26.84

Test mode : 802.11be(EHT40) / 2 452 MHz

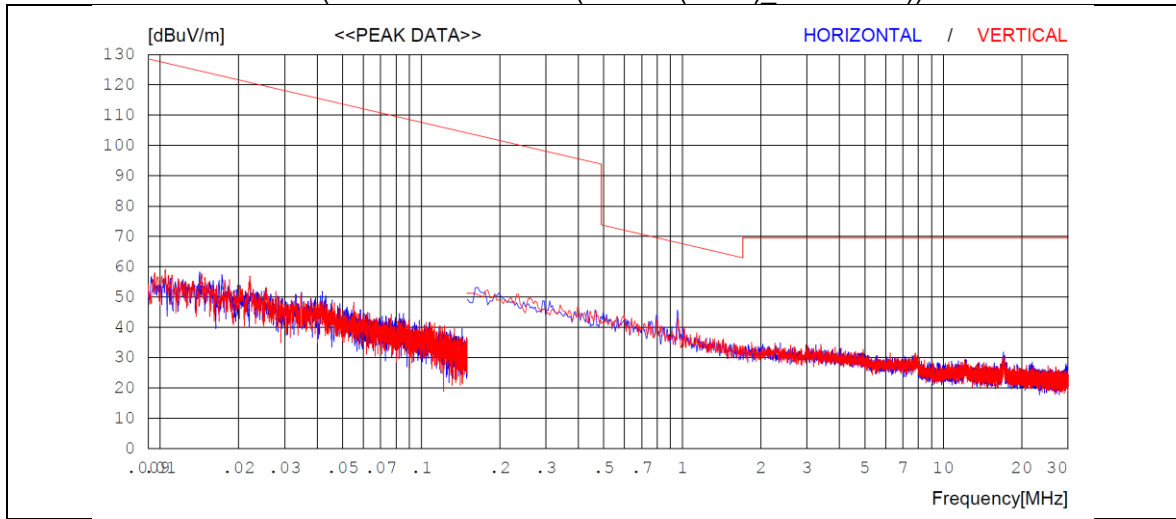
Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2483.52	PK	H	66.50	-4.04	-	62.46	74.00	11.54
	AV	H	51.50	-4.04	0.00	47.46	54.00	6.54
2483.52	PK	V	72.10	-4.04	-	68.06	74.00	5.94
	AV	V	56.70	-4.04	0.00	52.66	54.00	1.34
4904.00	PK	H	36.80	0.96	-	37.76	74.00	36.24
	PK	V	36.40	0.96	-	37.36	74.00	36.64
6250.50	PK	H	42.40	4.06	-	46.46	74.00	27.54
	PK	V	40.40	4.06	-	44.46	74.00	29.54
9239.94	PK	H	40.20	6.96	-	47.16	74.00	26.84

Test mode : 2.4G + 5G + 6G

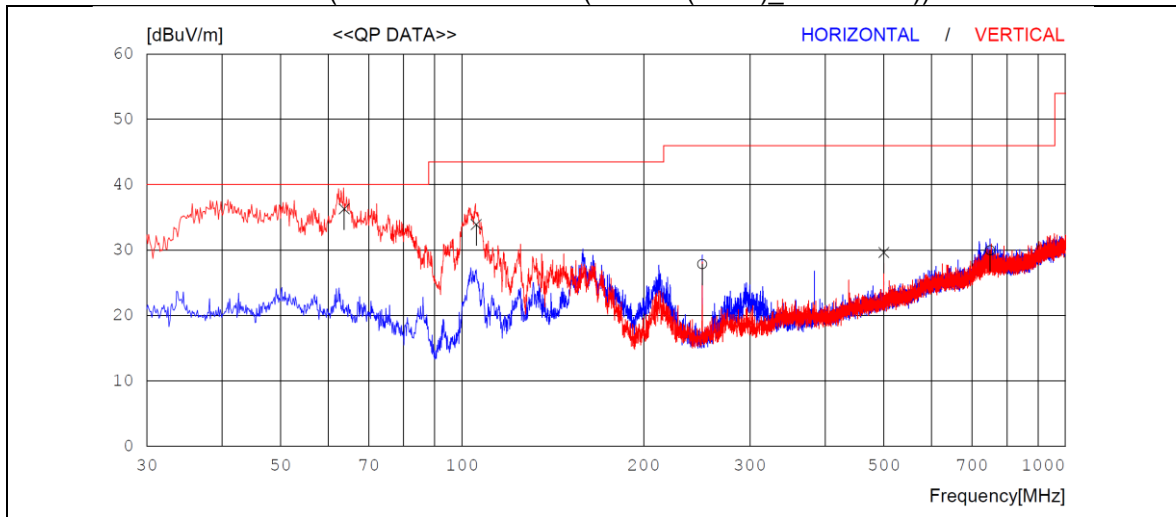
Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1055.35	PK	H	68.00	-12.04	-	55.96	74.00	18.04
	AV	H	39.70	-12.04	0.13	27.79	54.00	26.21
1377.59	PK	H	73.10	-10.64	-	62.46	74.00	11.54
	AV	H	41.80	-10.64	0.13	31.29	54.00	22.71
1042.58	PK	V	71.80	-12.14	-	59.66	74.00	14.34
	AV	V	40.50	-12.14	0.13	28.49	54.00	25.51
1378.57	PK	V	80.70	-10.64	-	70.06	74.00	3.94
	AV	V	42.70	-10.64	0.13	32.19	54.00	21.81
2151.99	PK	V	69.70	-5.34	-	64.36	88.20	23.84
	AV	V	38.30	-5.34	0.13	33.09	68.20	35.11
4262.81	PK	V	62.00	-0.24	-	61.76	74.00	12.24
	AV	V	38.90	-0.24	0.13	38.79	54.00	15.21
8388.28	PK	V	63.00	5.86	-	68.86	74.00	5.14
	AV	V	37.50	5.86	0.13	43.49	54.00	10.51
9008.19	PK	H	41.30	6.36	-	47.66	74.00	26.34

4.3.5.6 Measurement Plot_Radiated Spurious Emissions

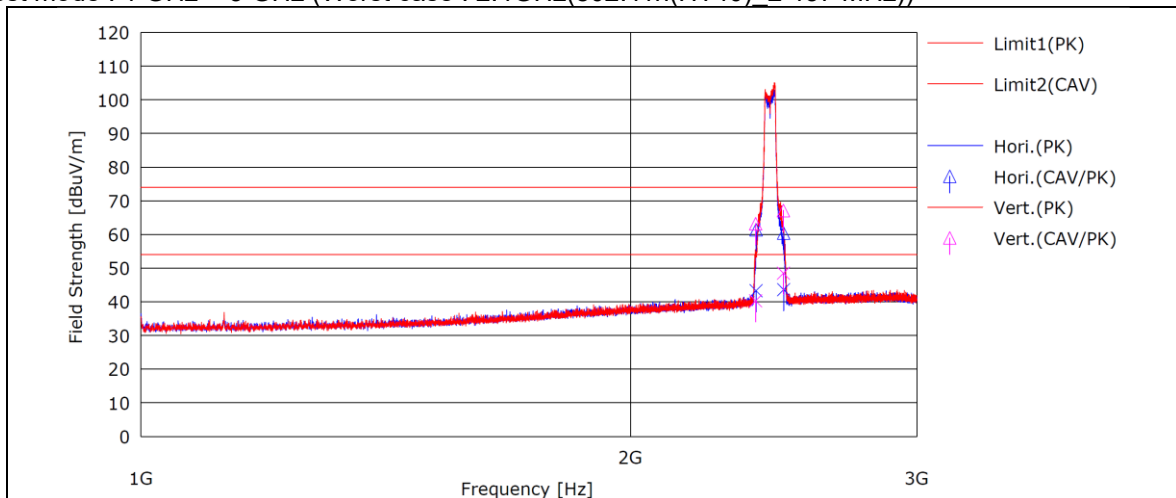
Test mode : 9 kHz ~ 30 MHz (Worst case : 2.4GHz(802.11n(HT40)_ 2 437 MHz))



Test mode : 30 MHz ~ 1 GHz (Worst case : 2.4GHz(802.11n(HT40)_ 2 437 MHz))

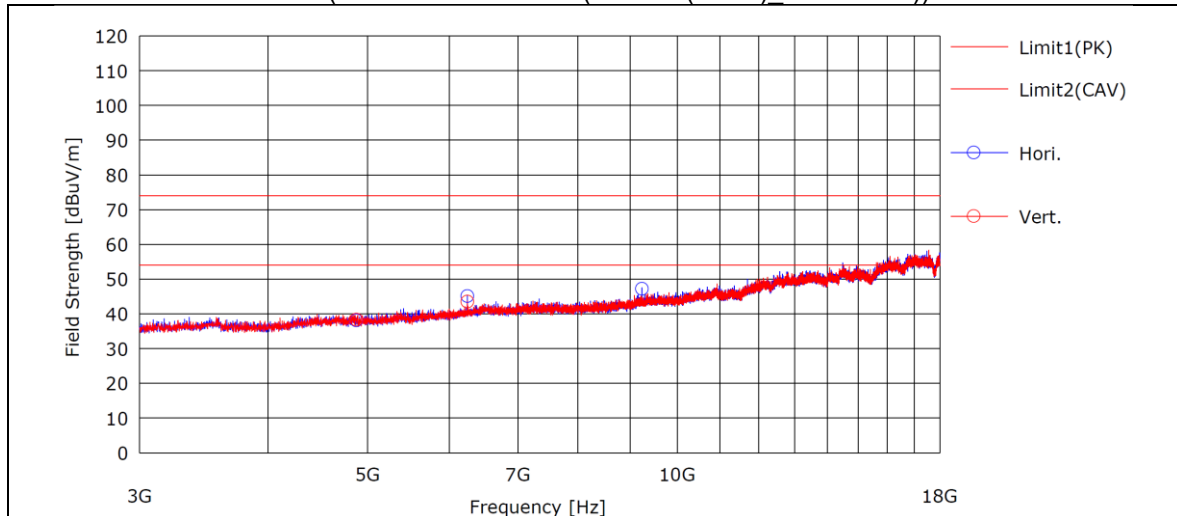


Test mode : 1 GHz ~ 3 GHz (Worst case : 2.4GHz(802.11n(HT40)_ 2 437 MHz))



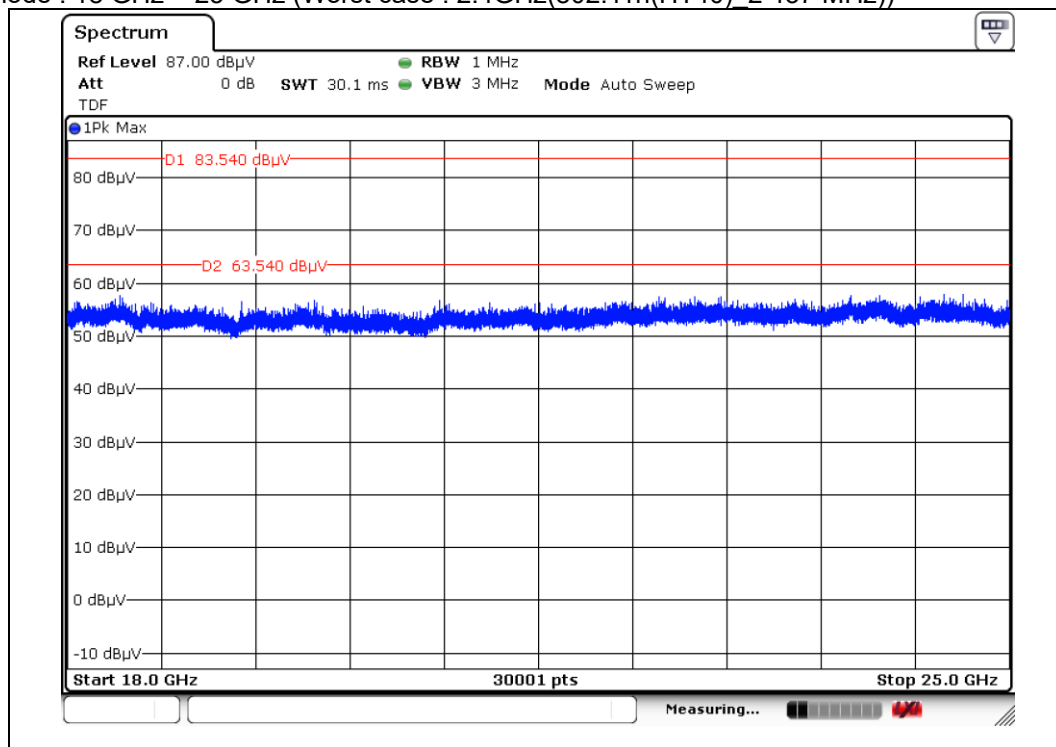
Note 1 : Measured distance : 1 m
Note 2 : Limit : Peak : 74 dBuV/m, Average : 54 dBuV/m

Test mode : 3 GHz ~ 18 GHz (Worst case : 2.4GHz(802.11n(HT40)_2 437 MHz))



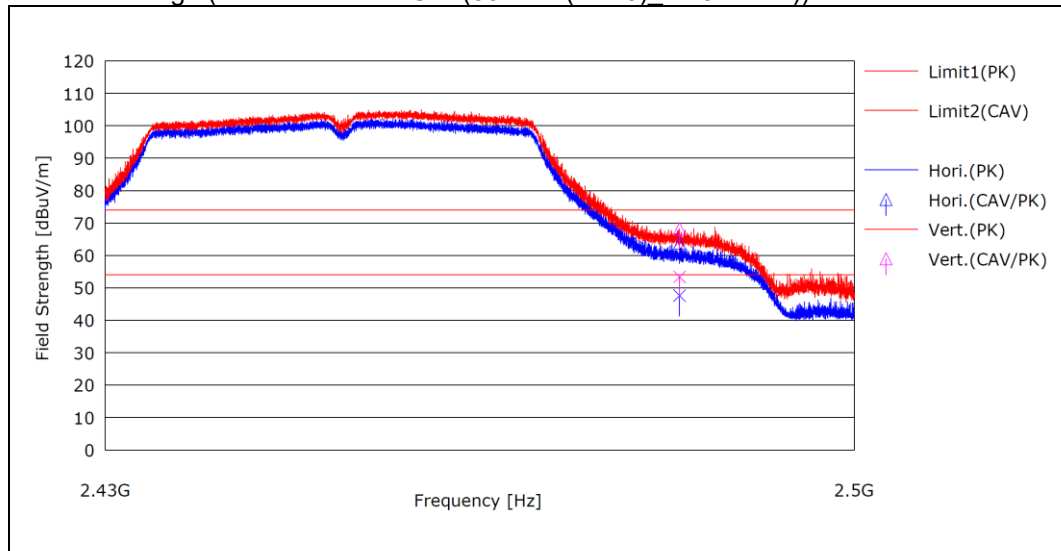
Note 1 : Measured distance : 1 m
Note 2 : Limit : Peak : 74 dBuV/m, Average : 54 dBuV/m

Test mode : 18 GHz ~ 25 GHz (Worst case : 2.4GHz(802.11n(HT40)_2 437 MHz))



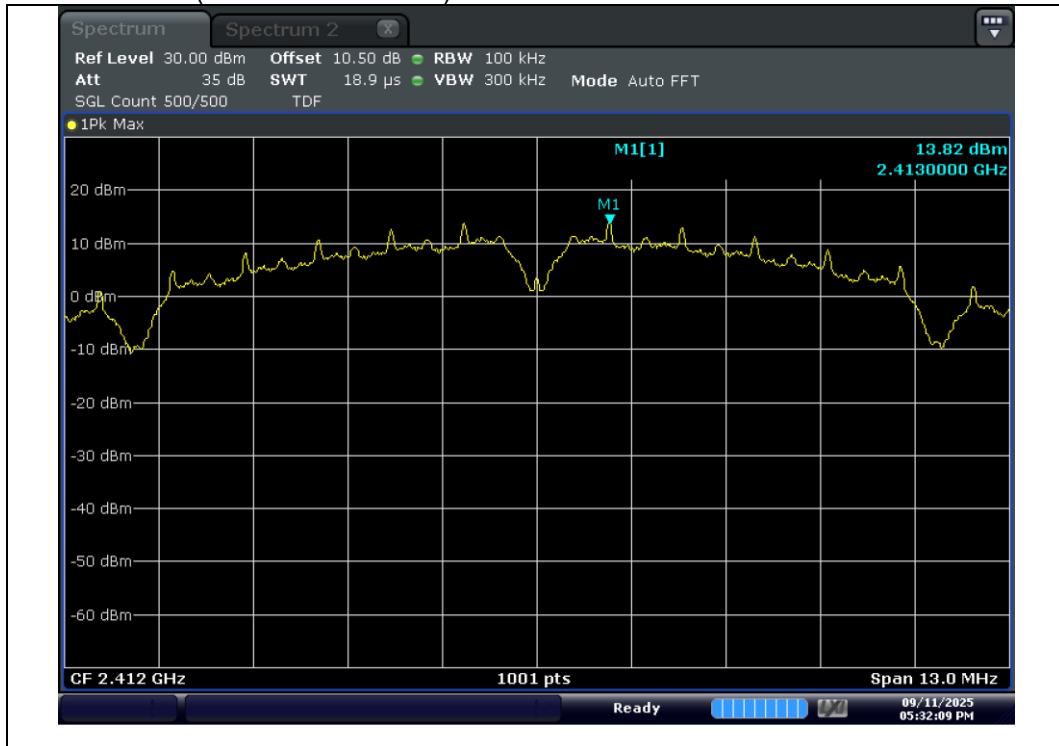
NOTE 1 : Measured distance : 1 m
NOTE 2 : Limit : Peak : 83.54 dBuV/m, Average : 63.54 dBuV/m

Test mode : Bandedge (Worst case : 2.4GHz(802.11n(HT40) 2 452 MHz))

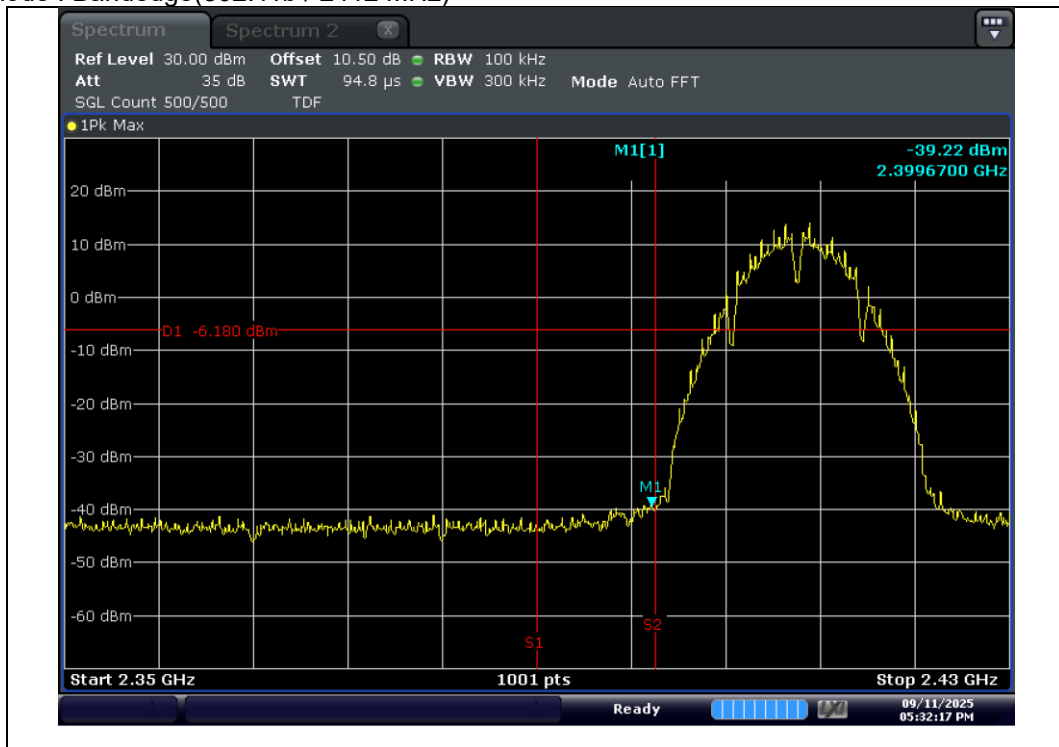


4.3.5.7 Measurement data_Conducted Spurious Emissions

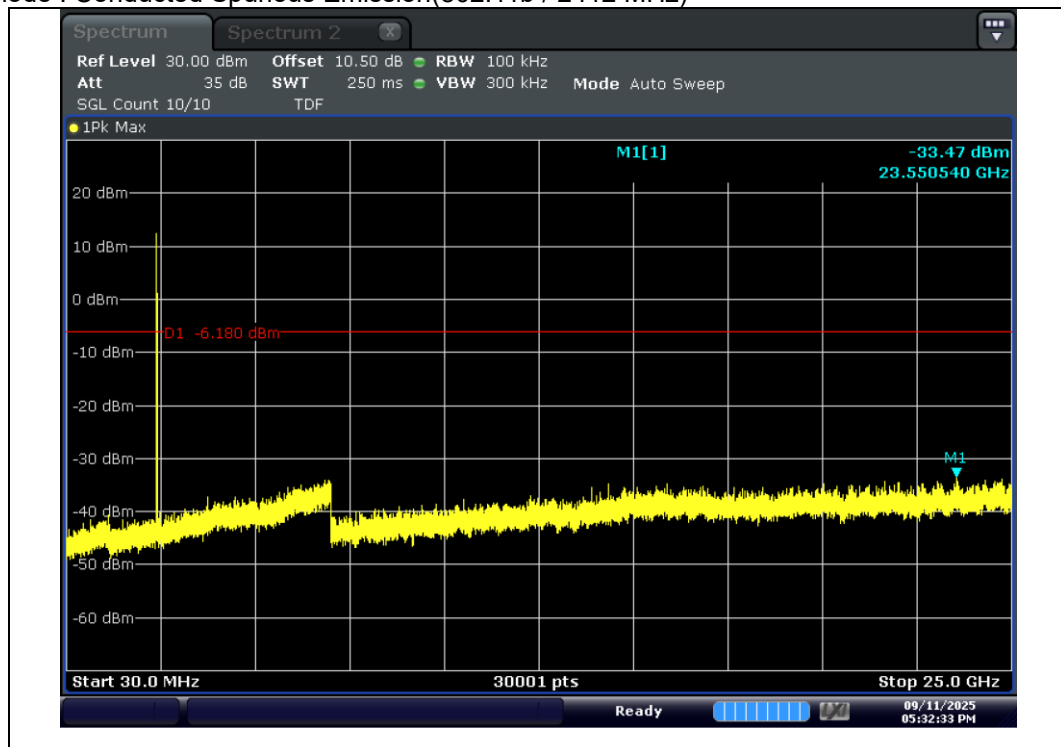
Test mode : Reference(802.11b / 2412 MHz)



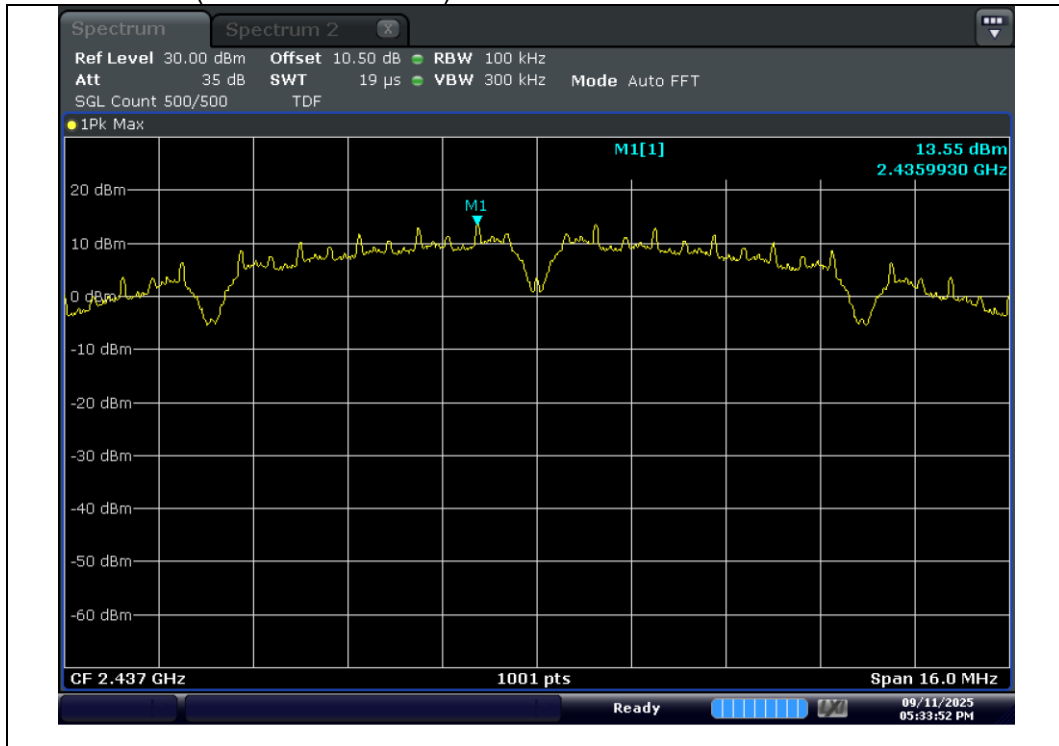
Test mode : Bandedge(802.11b / 2412 MHz)



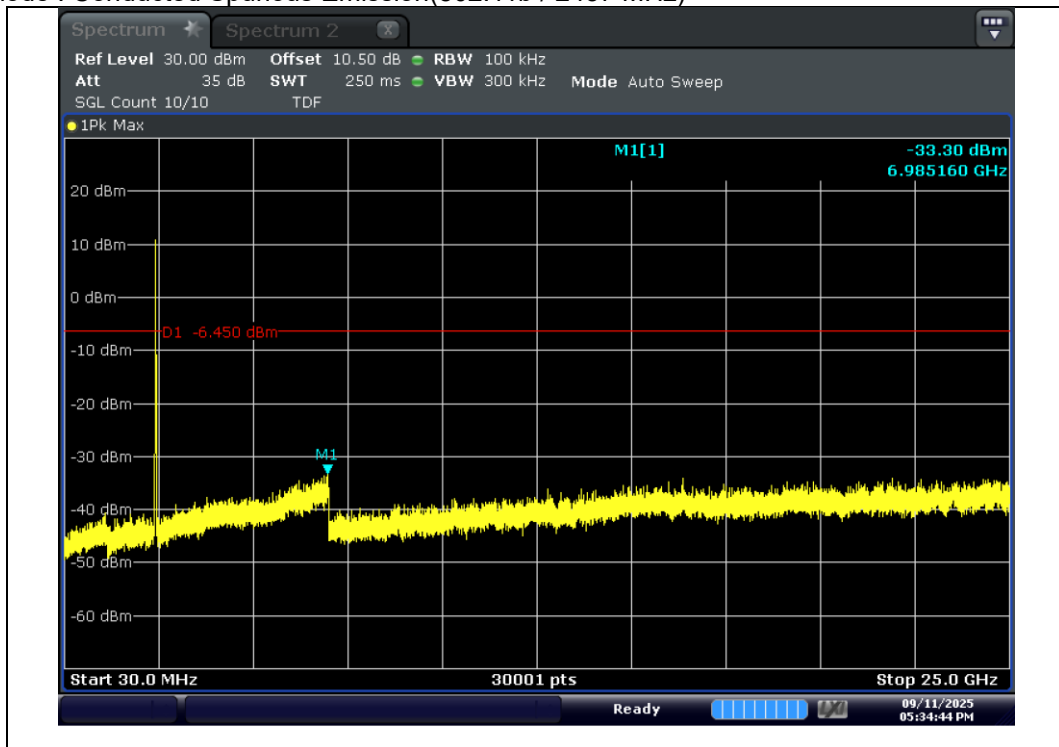
Test mode : Conducted Spurious Emission(802.11b / 2412 MHz)



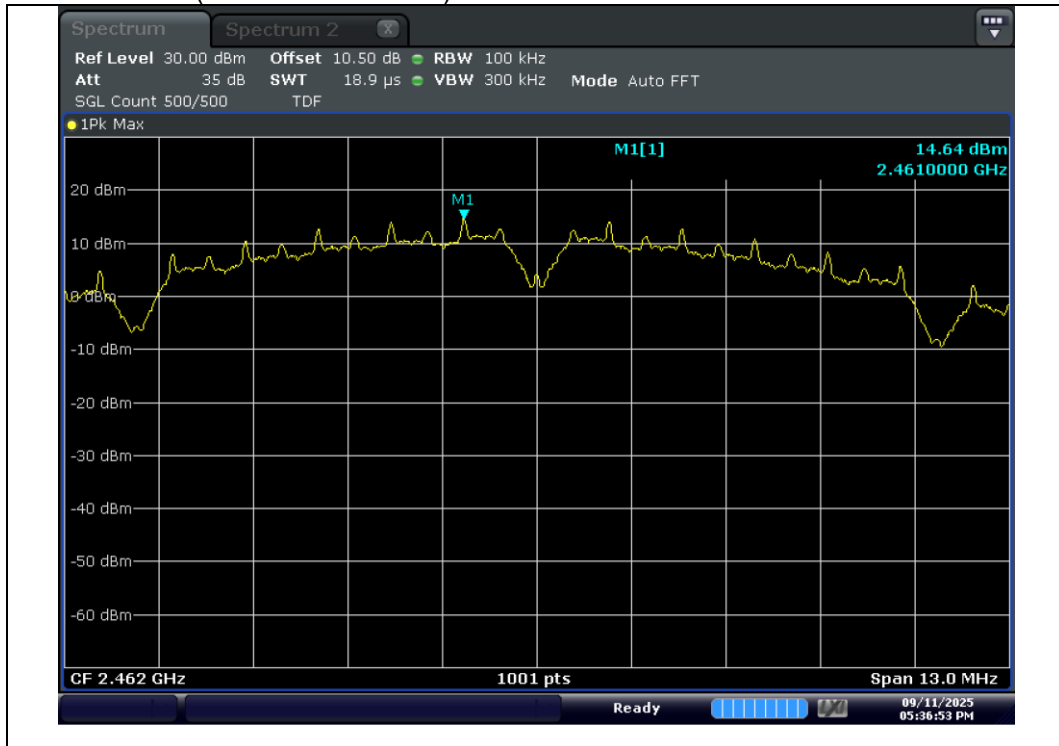
Test mode : Reference(802.11b / 2437 MHz)



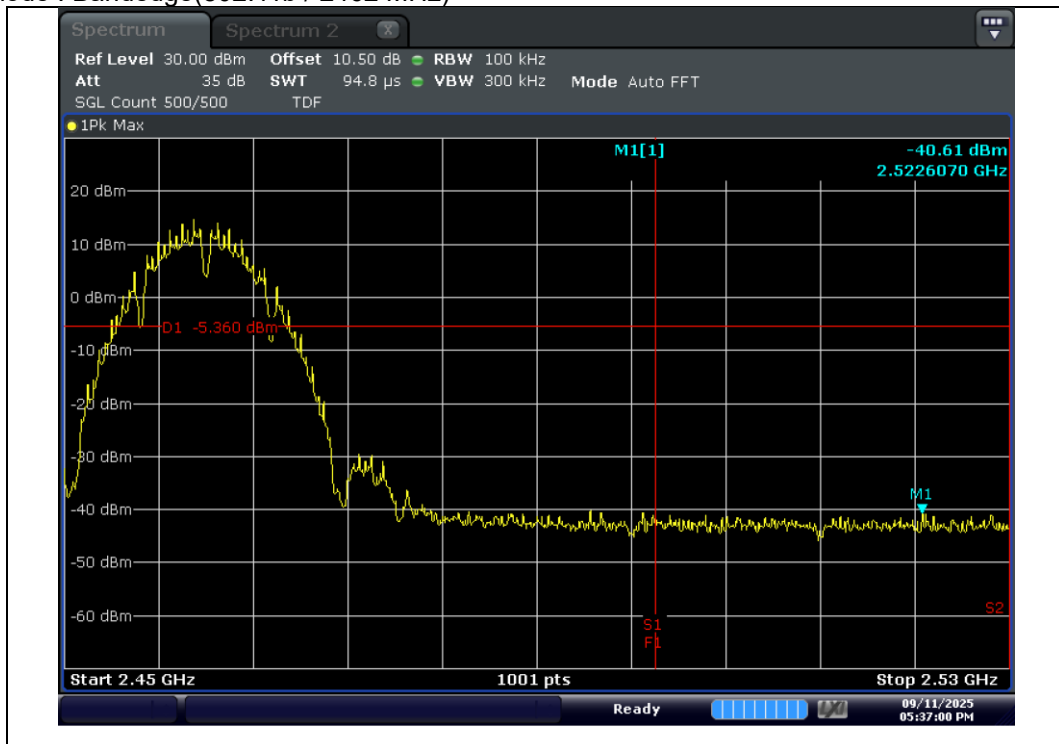
Test mode : Conducted Spurious Emission(802.11b / 2437 MHz)



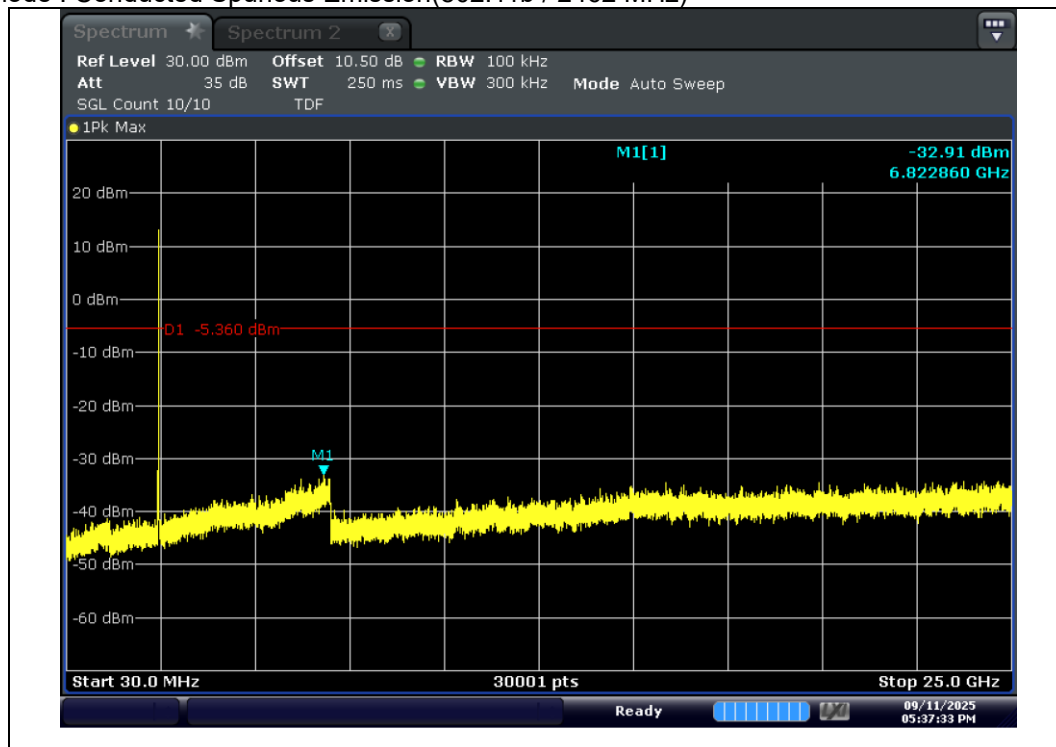
Test mode : Reference(802.11b / 2462 MHz)



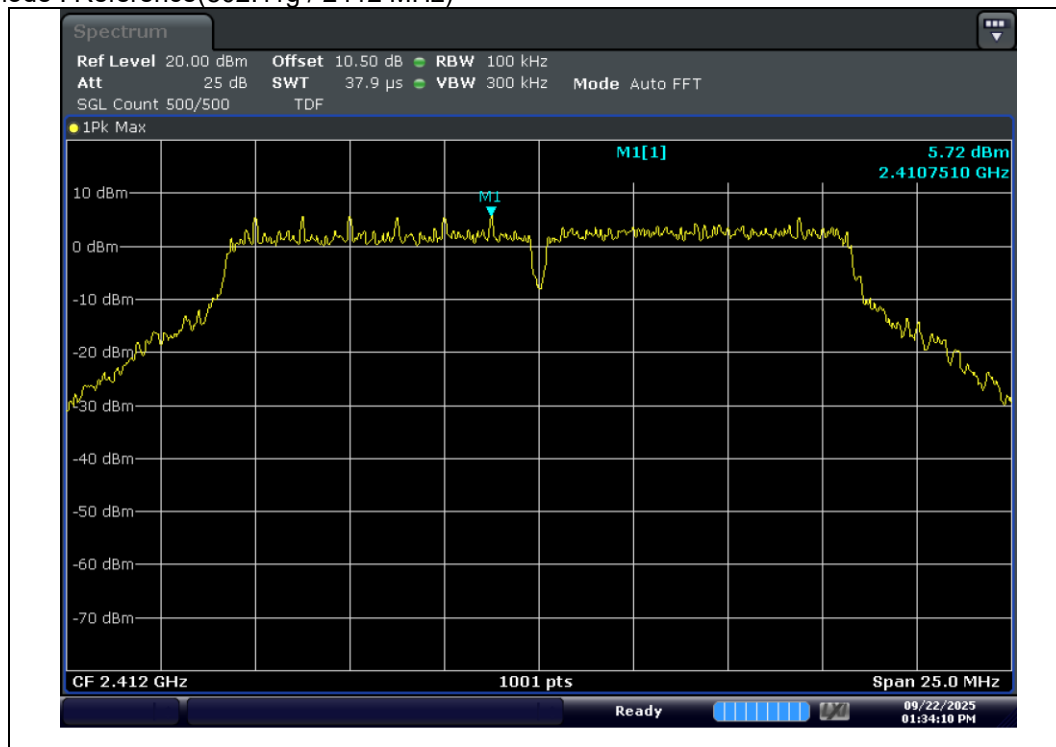
Test mode : Bandedge(802.11b / 2462 MHz)



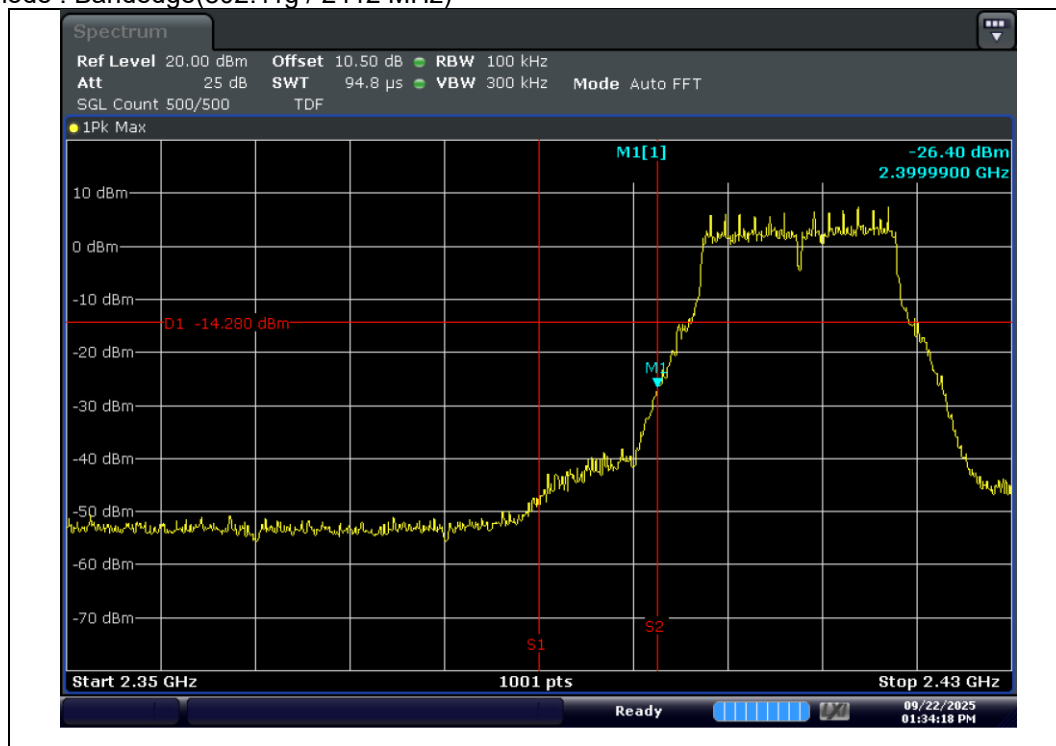
Test mode : Conducted Spurious Emission(802.11b / 2462 MHz)



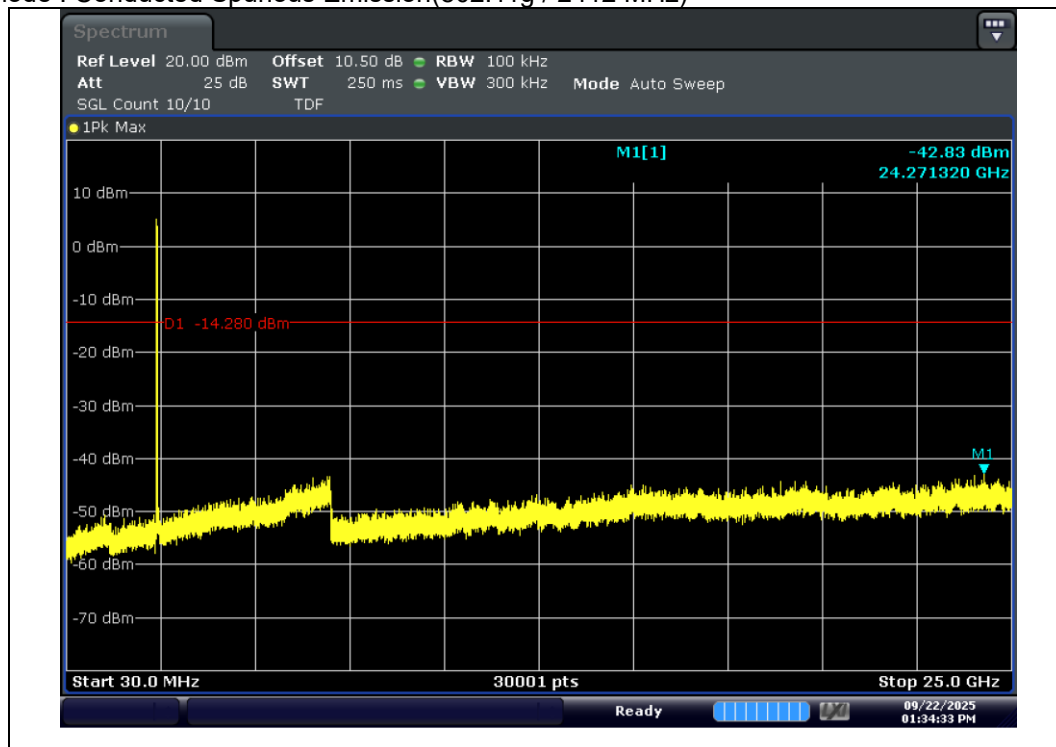
Test mode : Reference(802.11g / 2412 MHz)



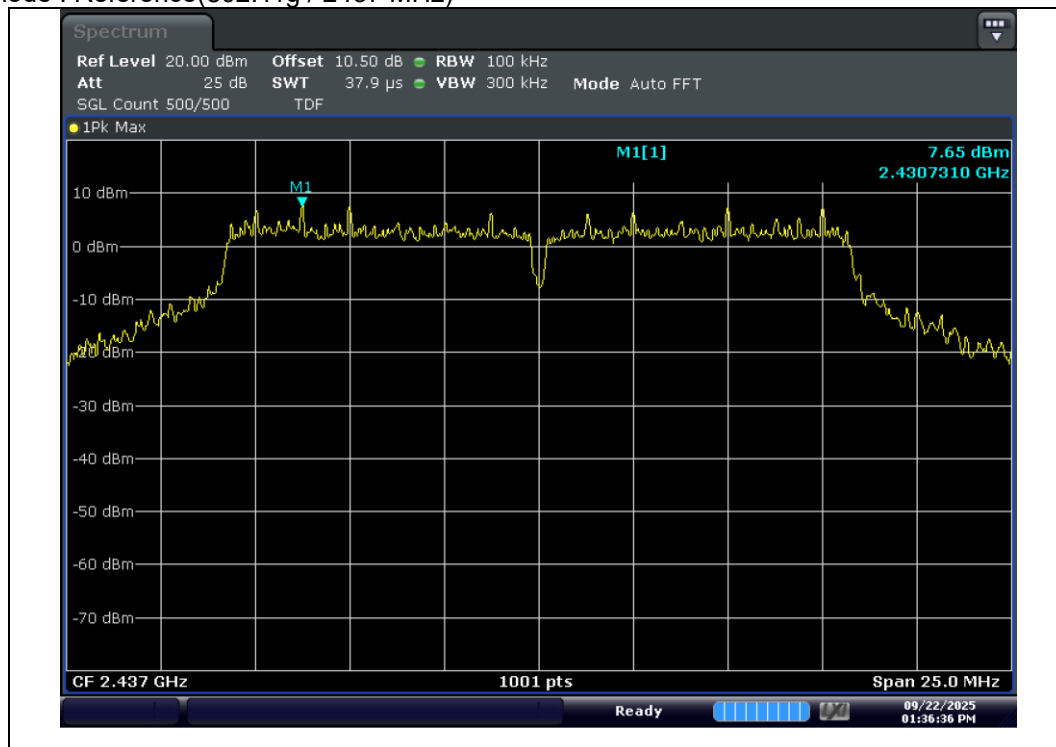
Test mode : Bandedge(802.11g / 2412 MHz)



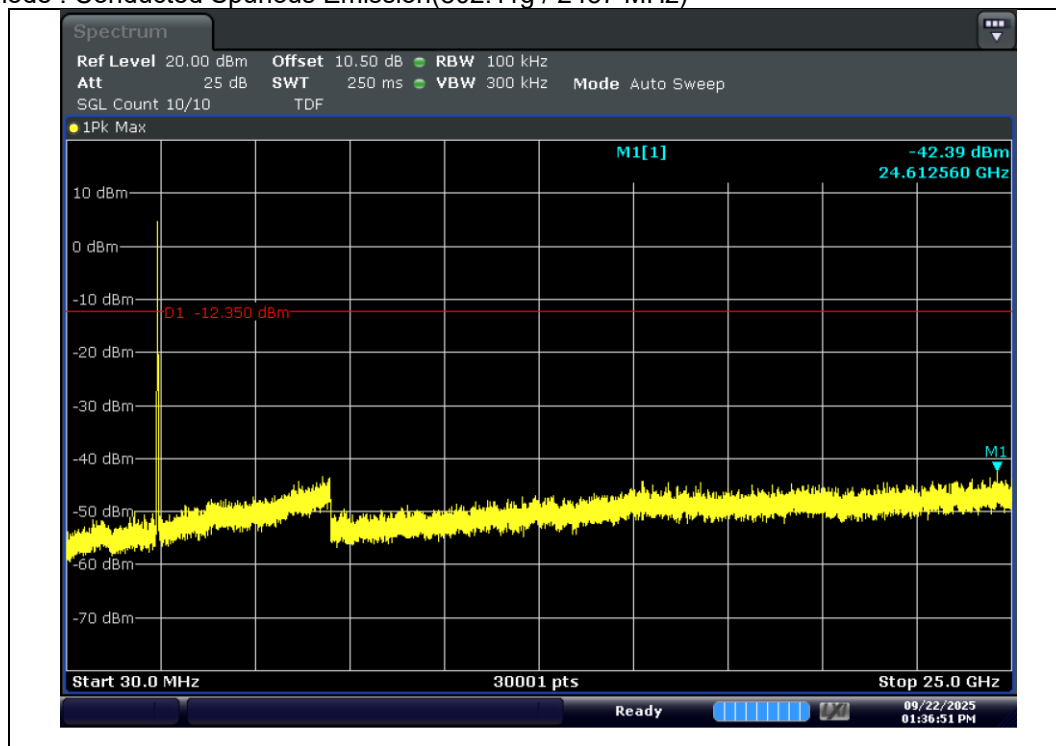
Test mode : Conducted Spurious Emission(802.11g / 2412 MHz)



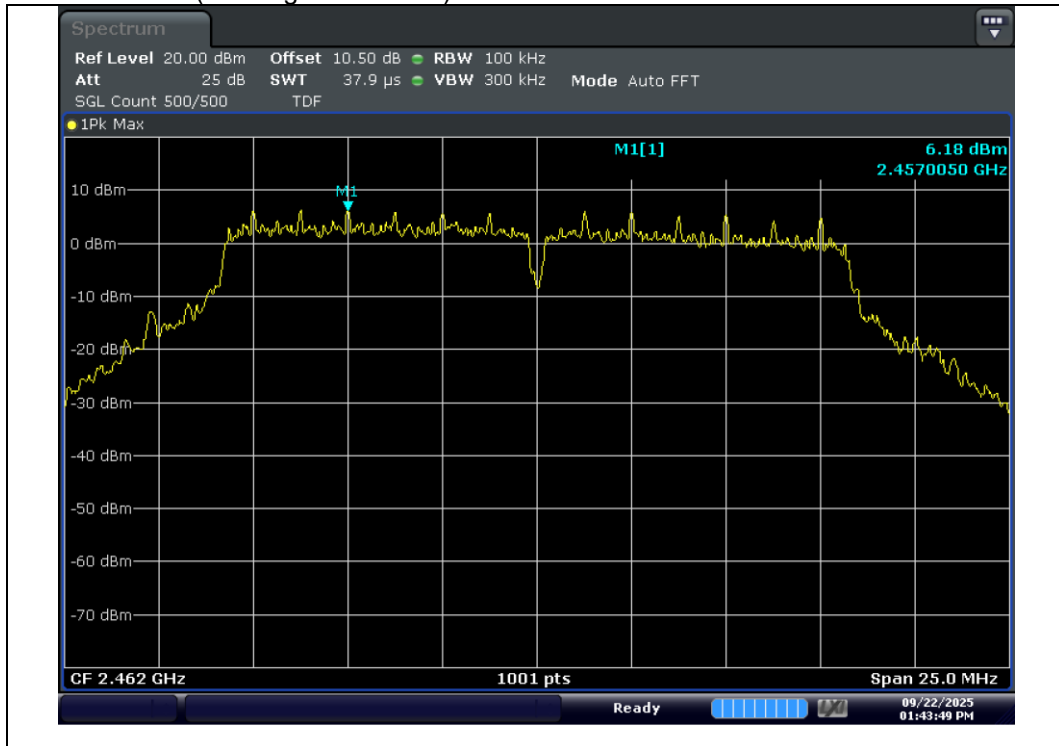
Test mode : Reference(802.11g / 2437 MHz)



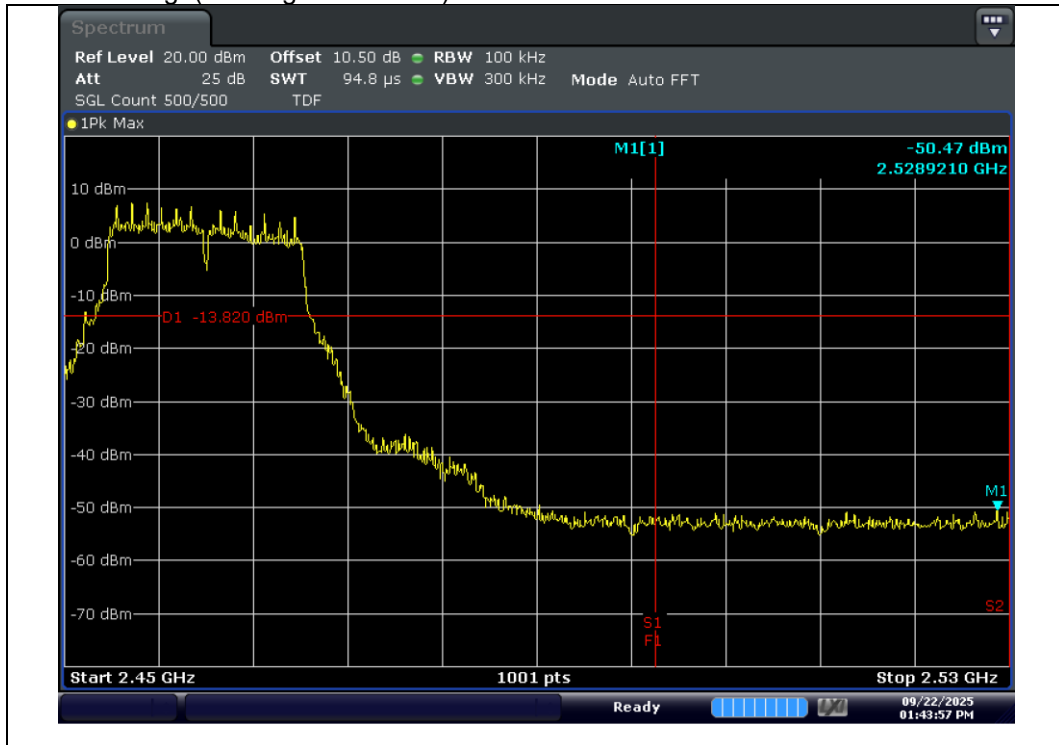
Test mode : Conducted Spurious Emission(802.11g / 2437 MHz)



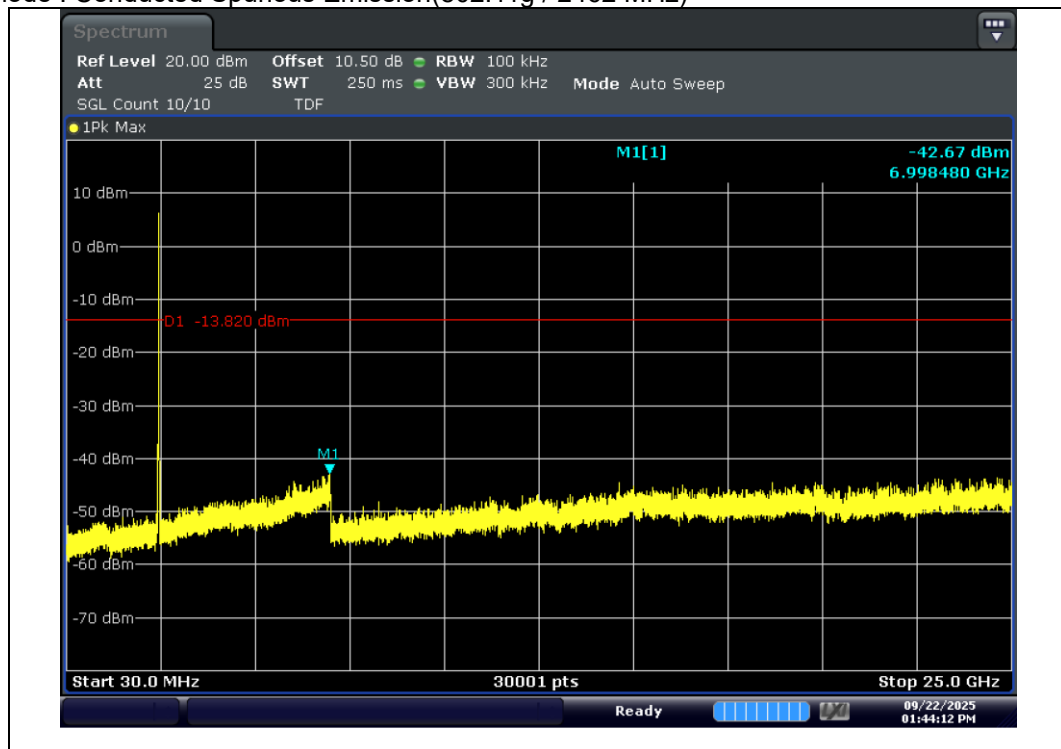
Test mode : Reference(802.11g / 2462 MHz)



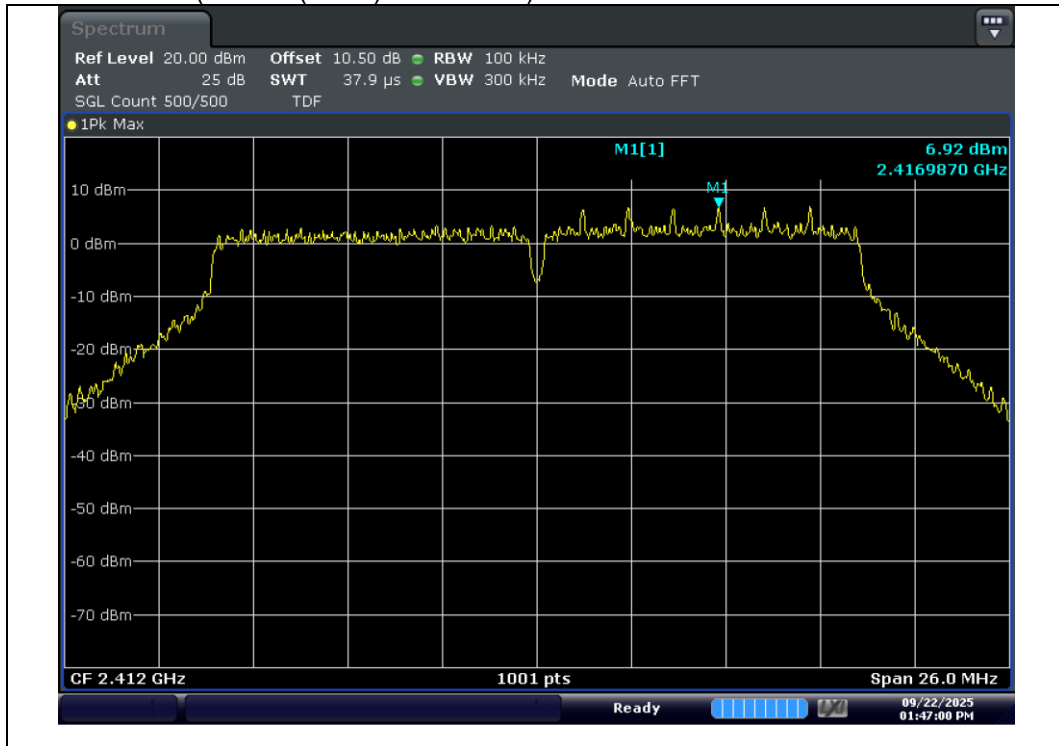
Test mode : Bandedge(802.11g / 2462 MHz)



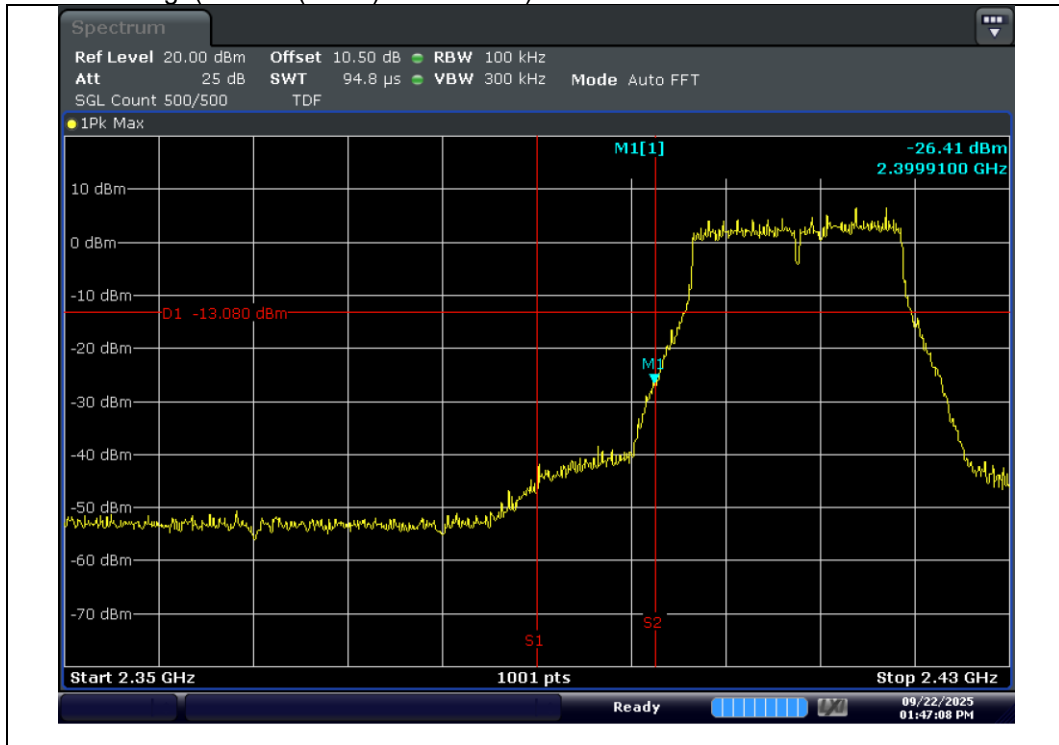
Test mode : Conducted Spurious Emission(802.11g / 2462 MHz)



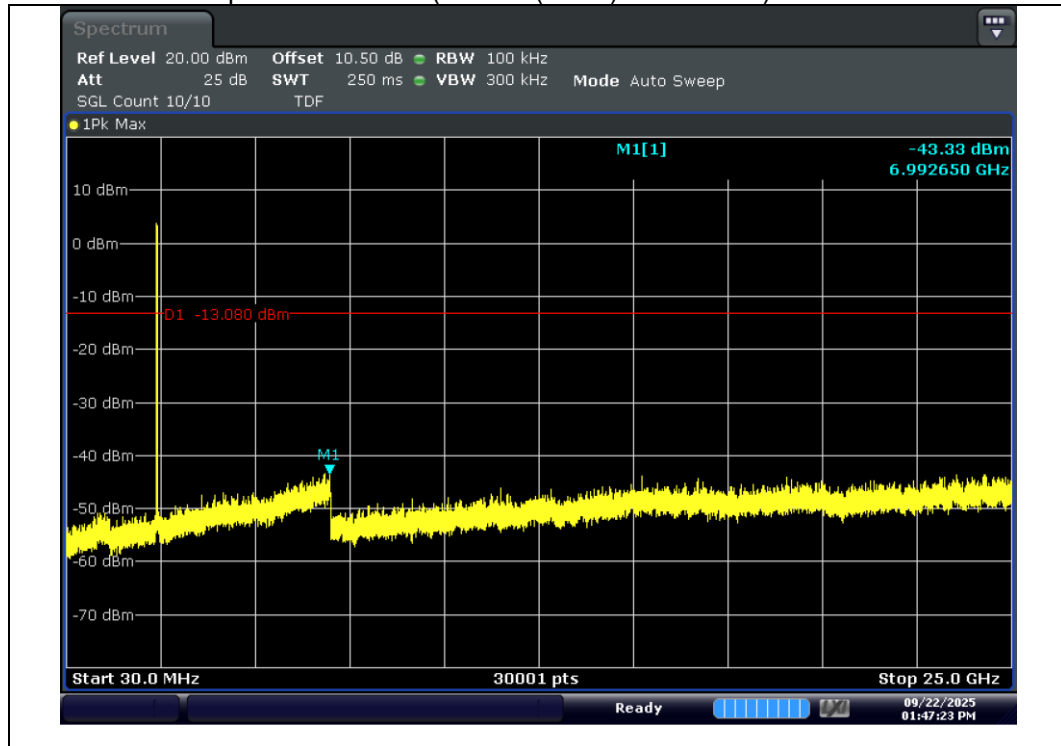
Test mode : Reference(802.11n(HT20) / 2412 MHz)



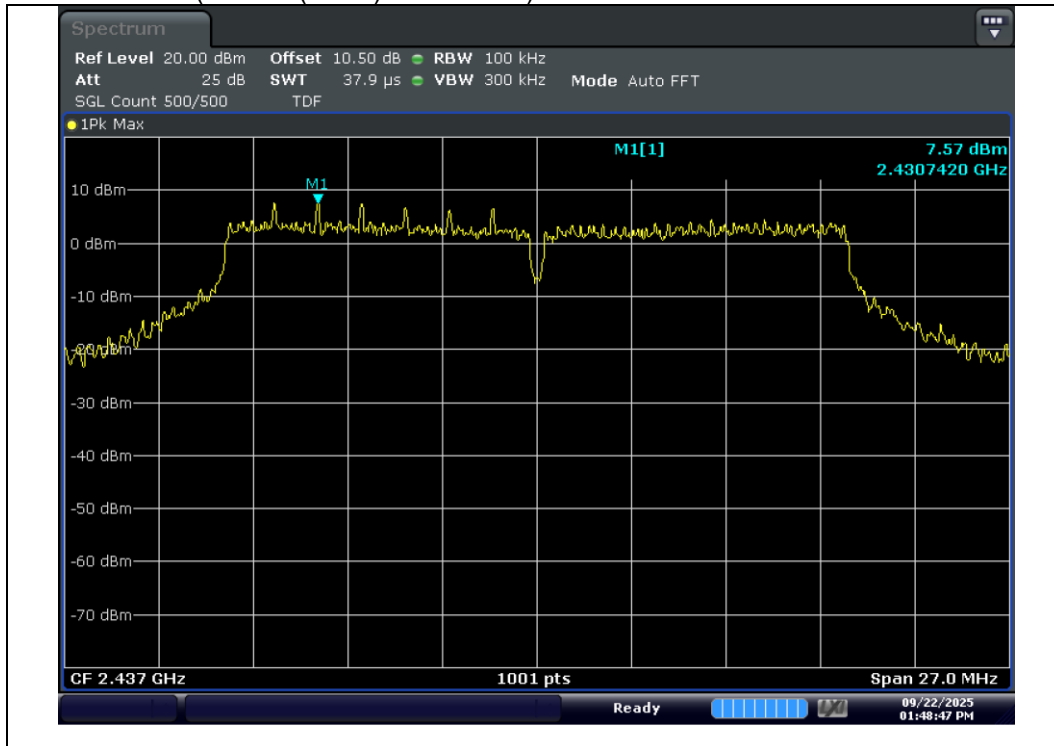
Test mode : Bandedge(802.11n(HT20) / 2412 MHz)



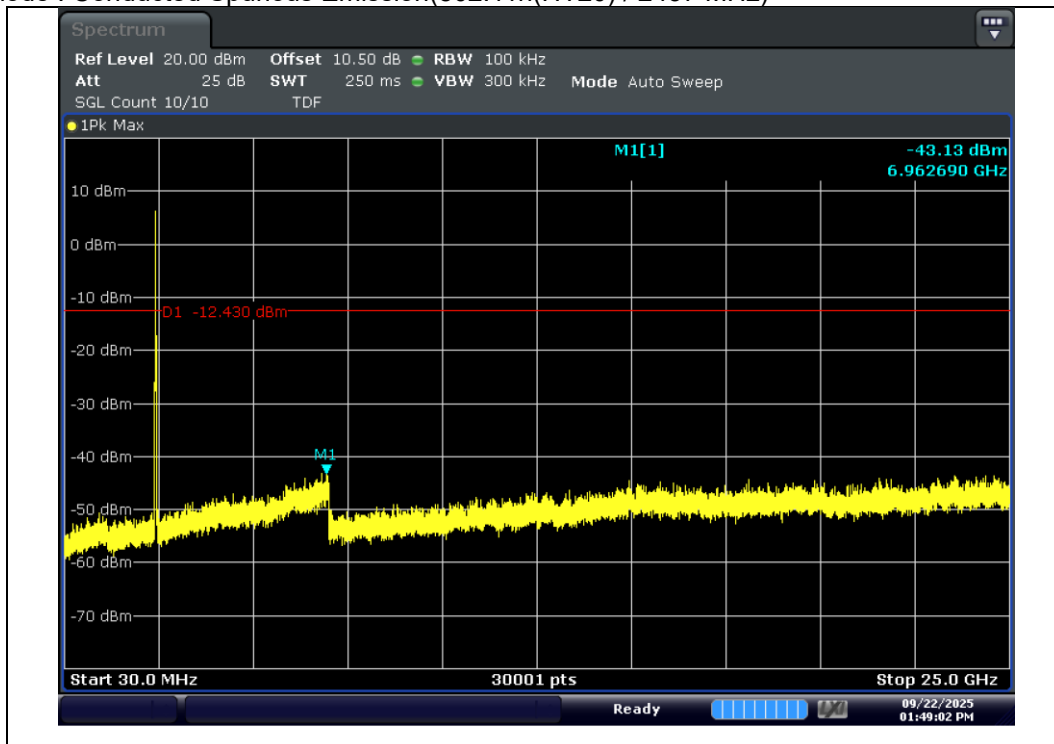
Test mode : Conducted Spurious Emission(802.11n(HT20) / 2412 MHz)



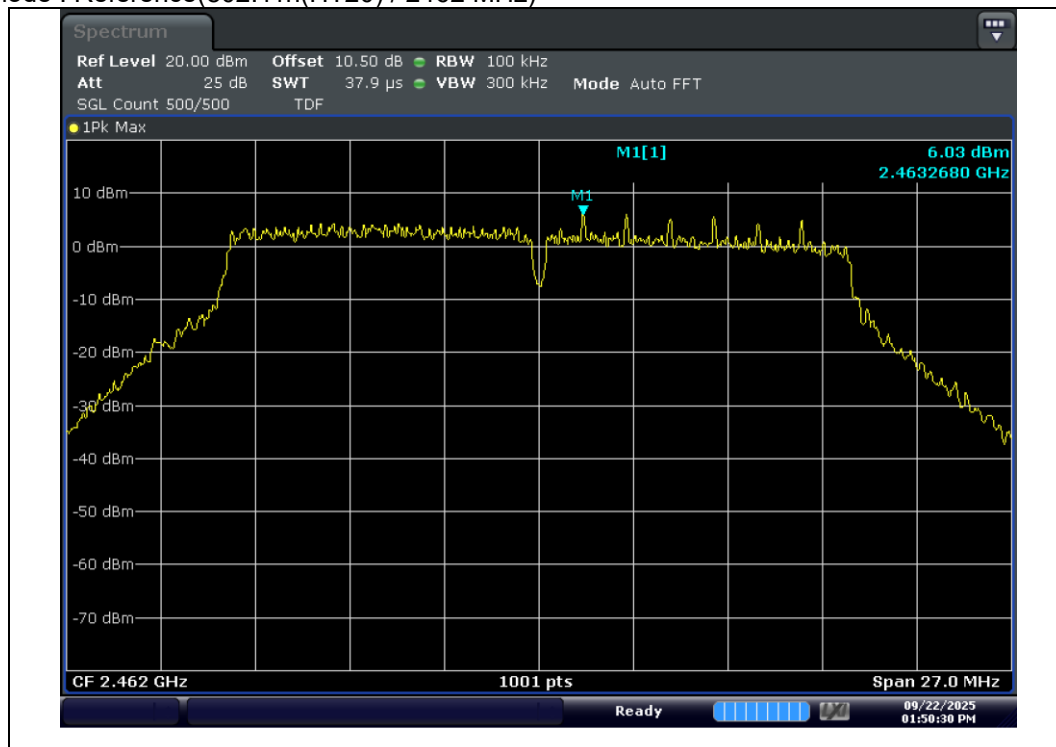
Test mode : Reference(802.11n(HT20) / 2437 MHz)



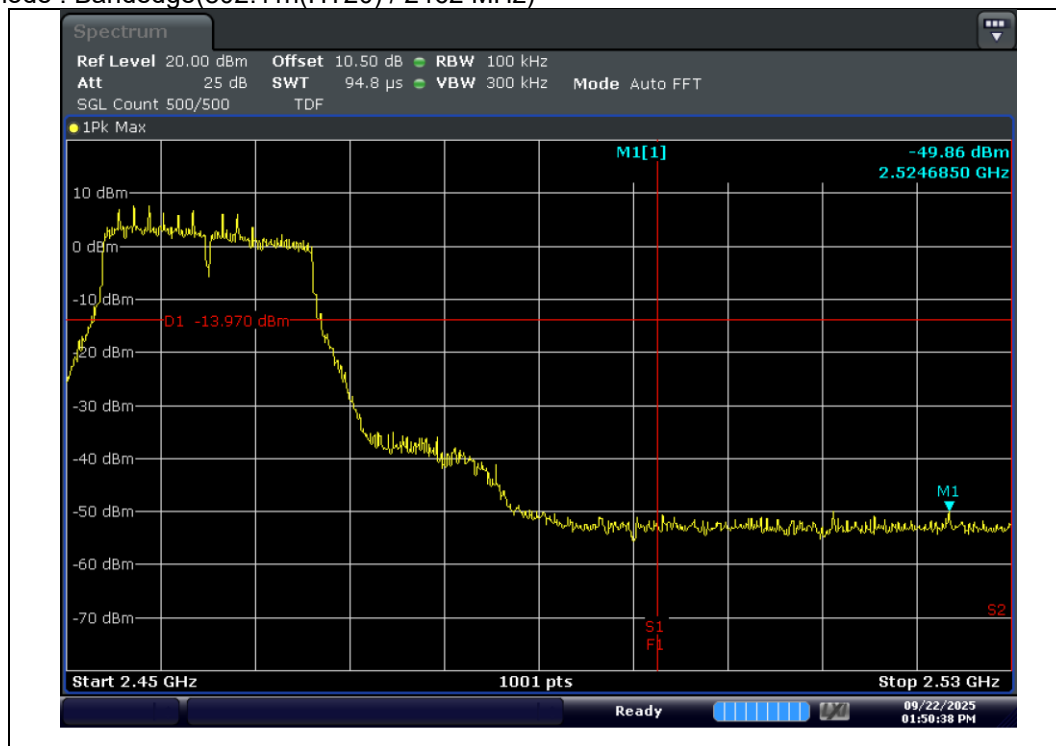
Test mode : Conducted Spurious Emission(802.11n(HT20) / 2437 MHz)



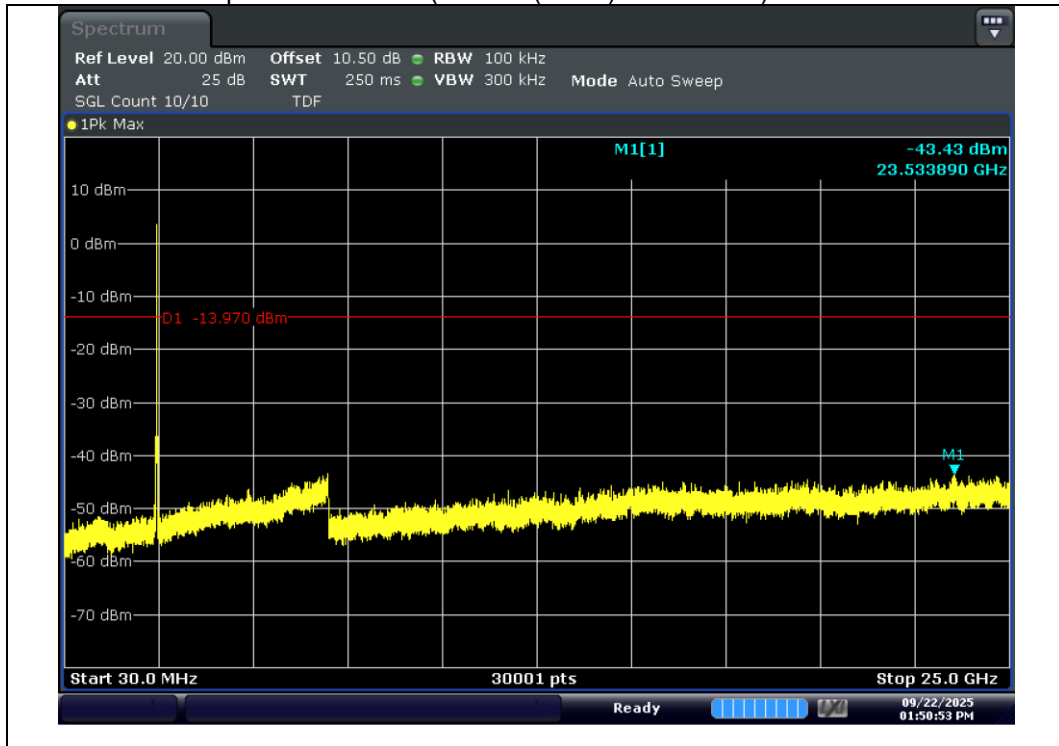
Test mode : Reference(802.11n(HT20) / 2462 MHz)



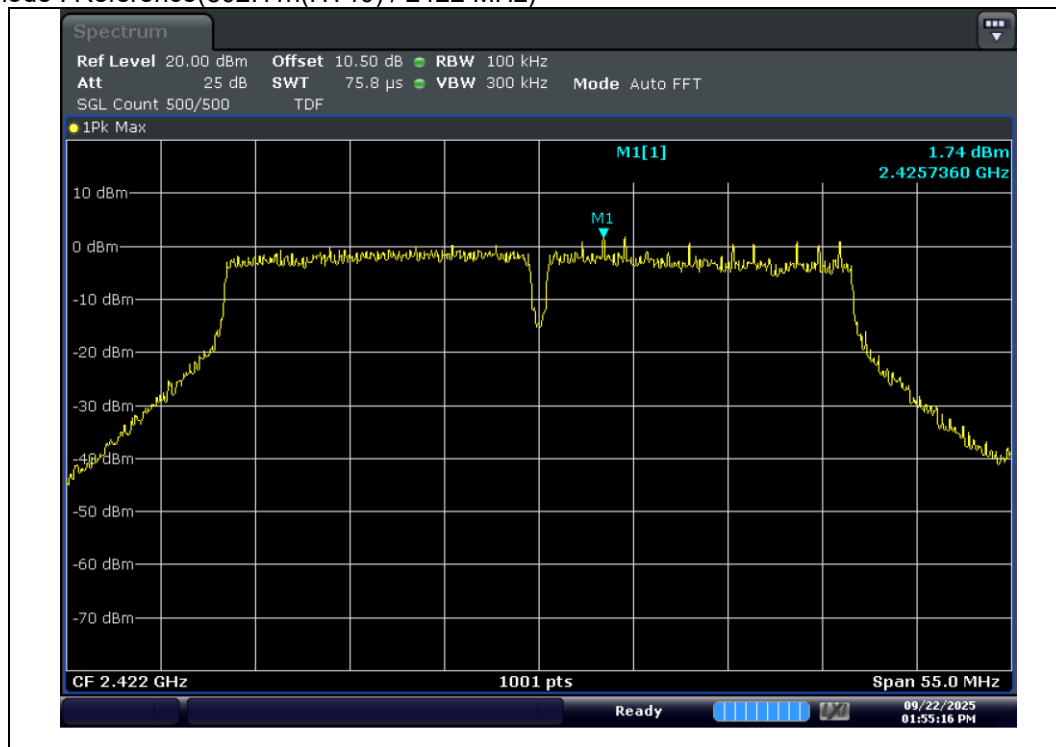
Test mode : Bandedge(802.11n(HT20) / 2462 MHz)



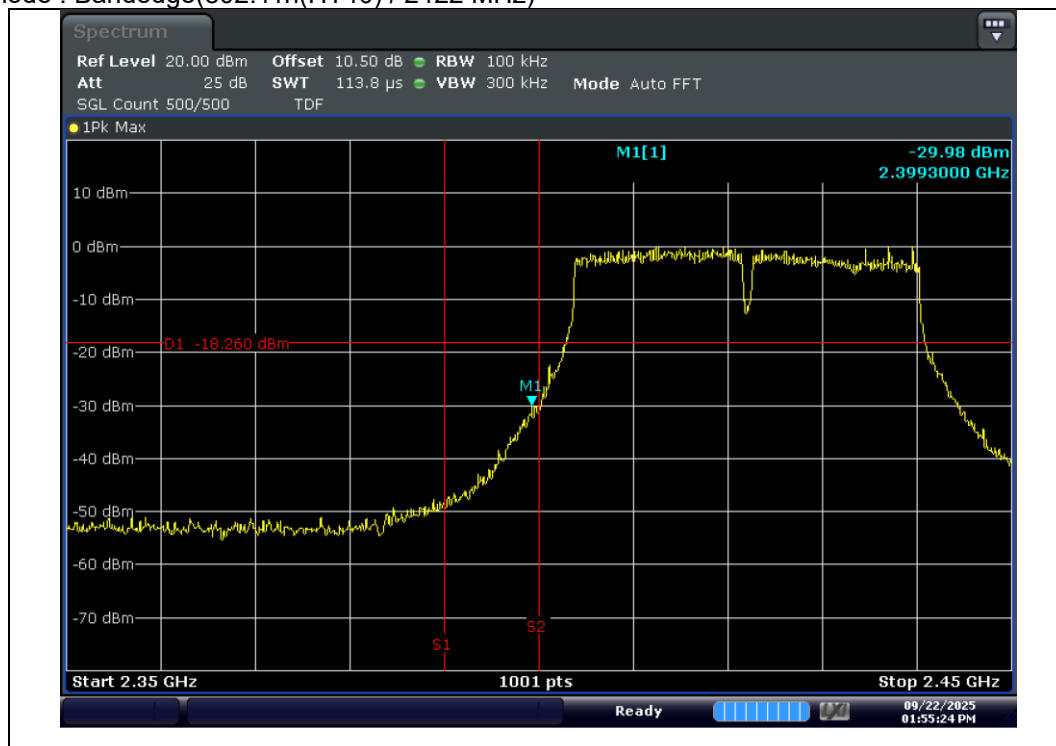
Test mode : Conducted Spurious Emission(802.11n(HT20) / 2462 MHz)



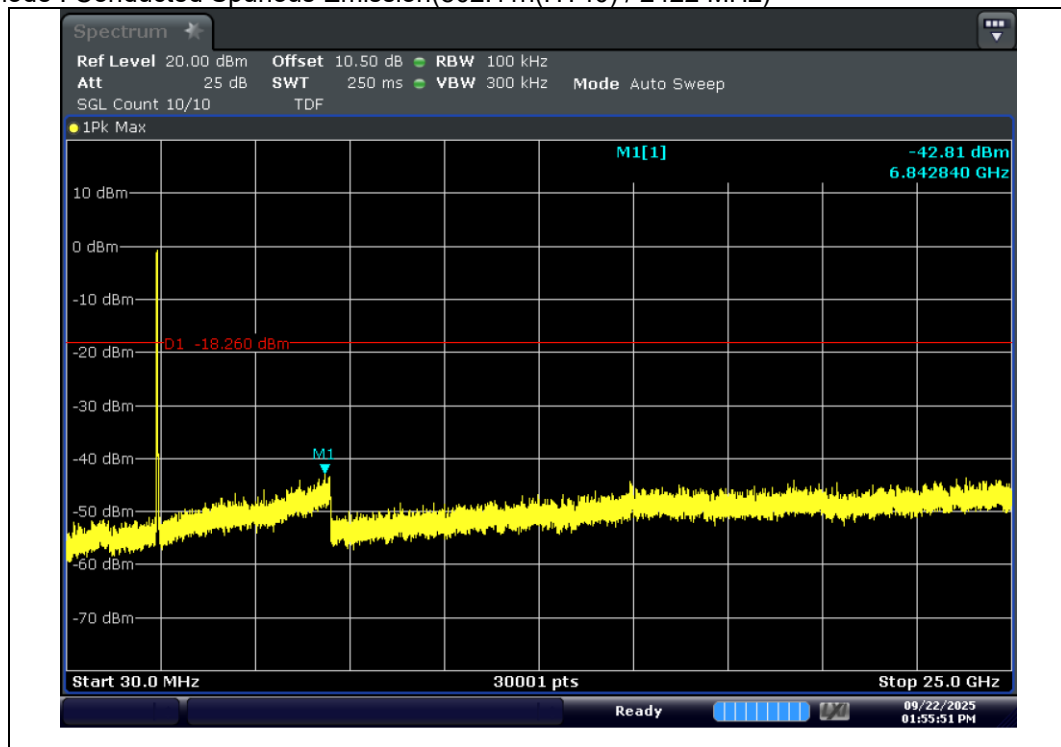
Test mode : Reference(802.11n(HT40) / 2422 MHz)



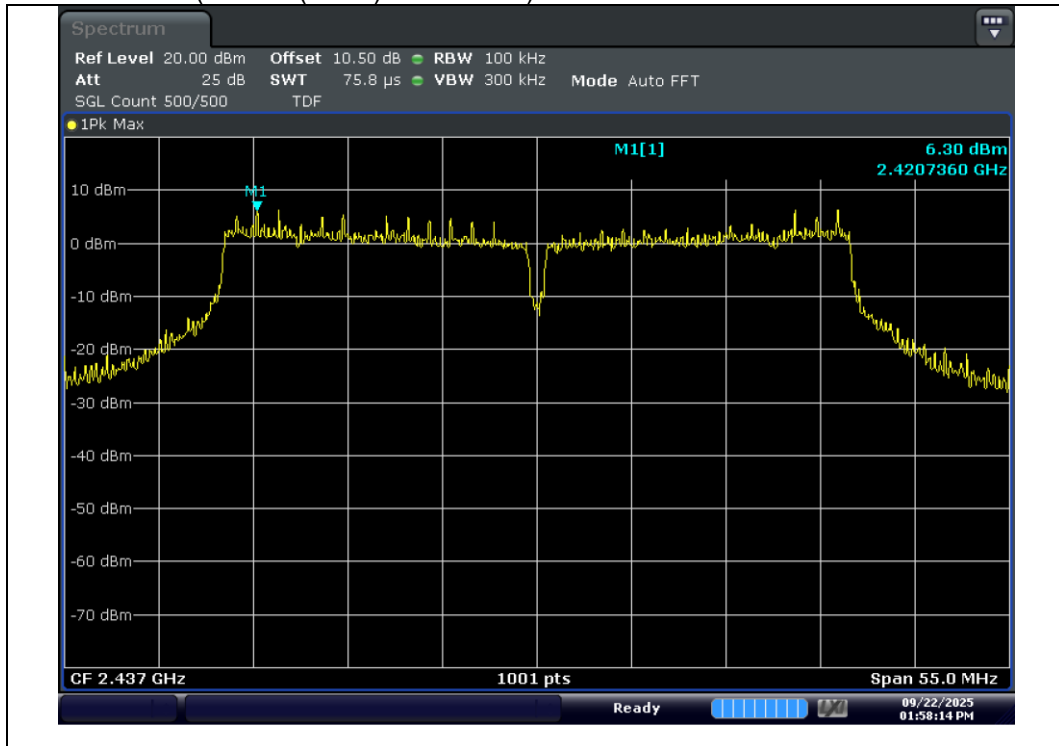
Test mode : Bandedge(802.11n(HT40) / 2422 MHz)



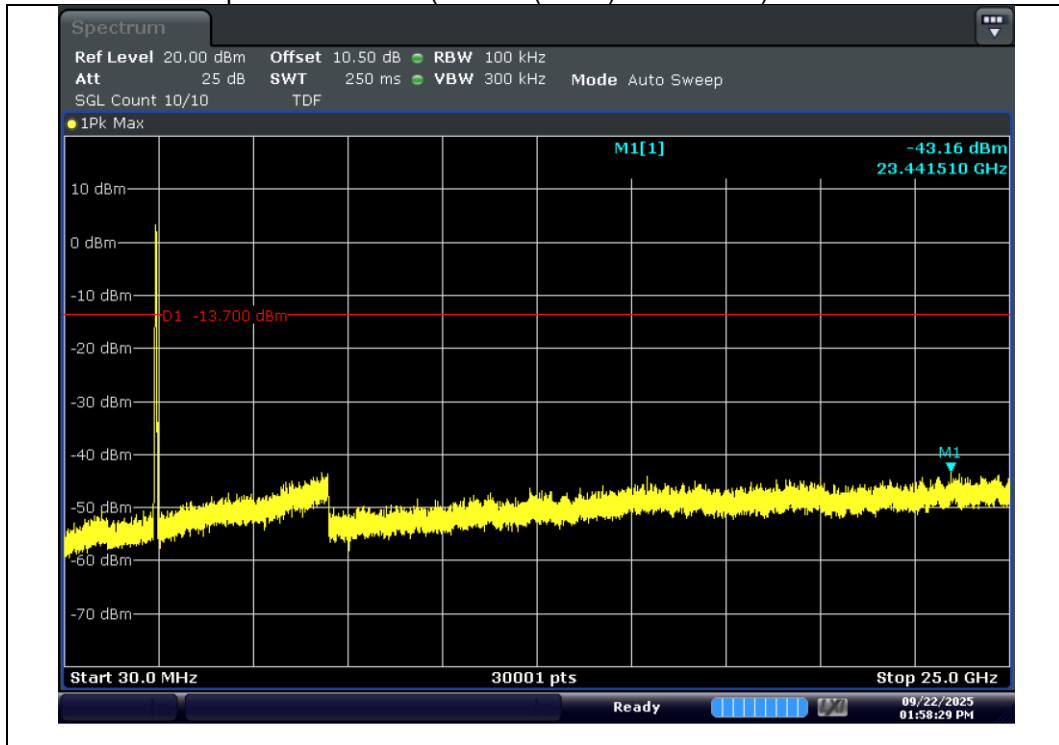
Test mode : Conducted Spurious Emission(802.11n(HT40) / 2422 MHz)



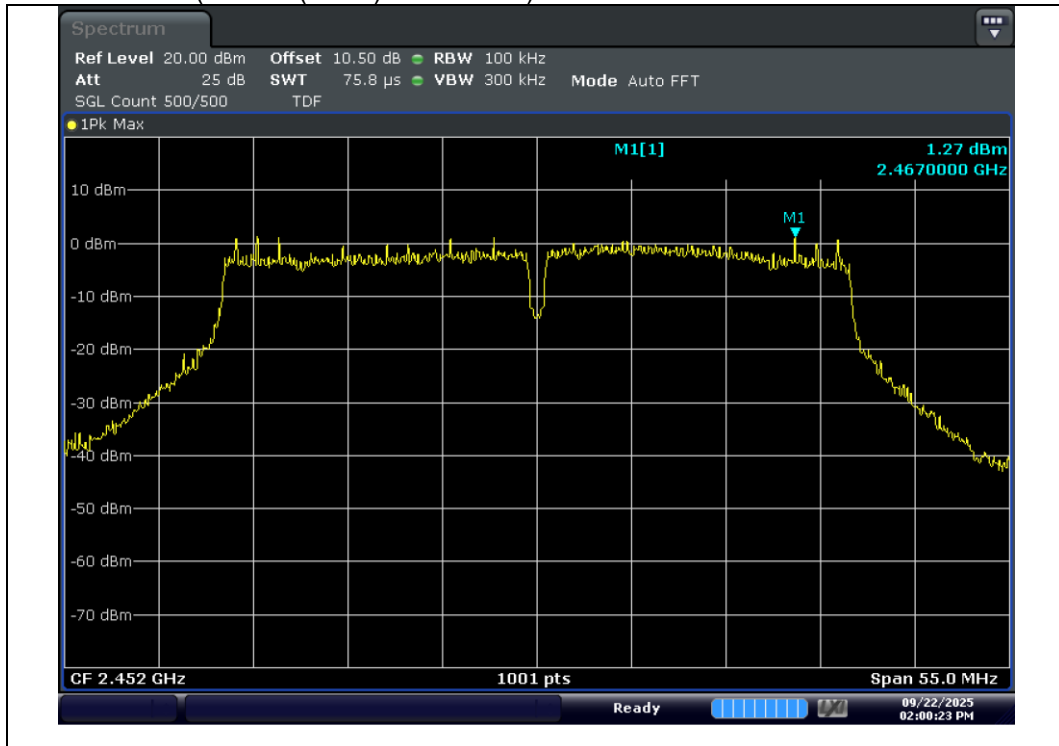
Test mode : Reference(802.11n(HT40) / 2437 MHz)



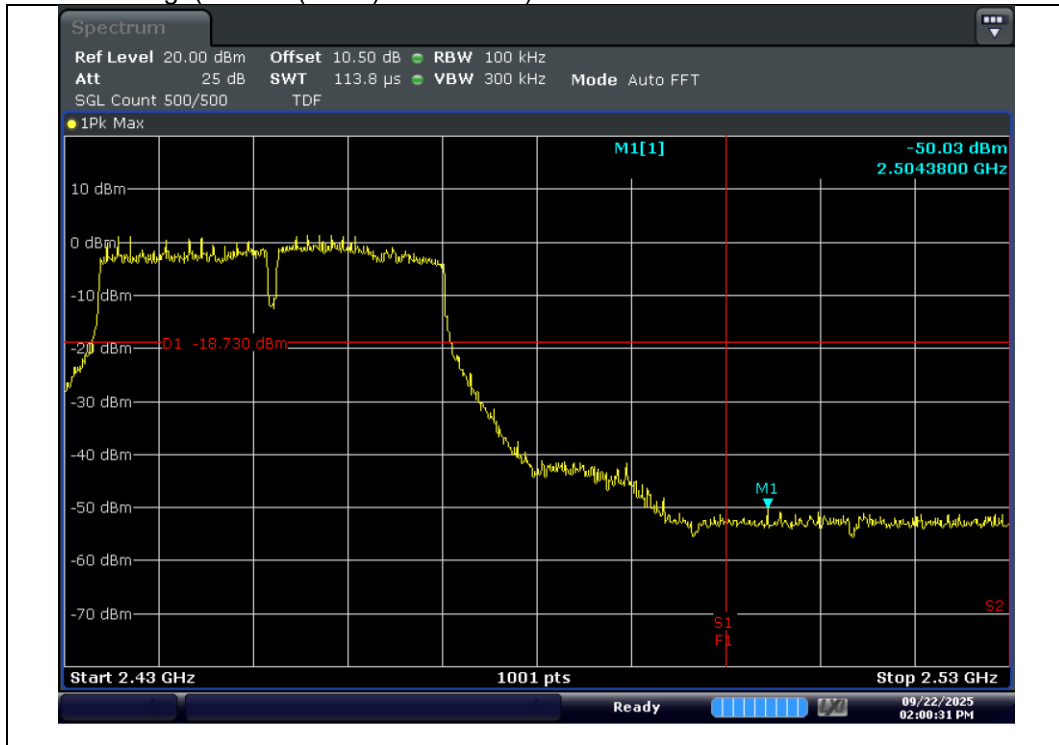
Test mode : Conducted Spurious Emission(802.11n(HT40) / 2437 MHz)



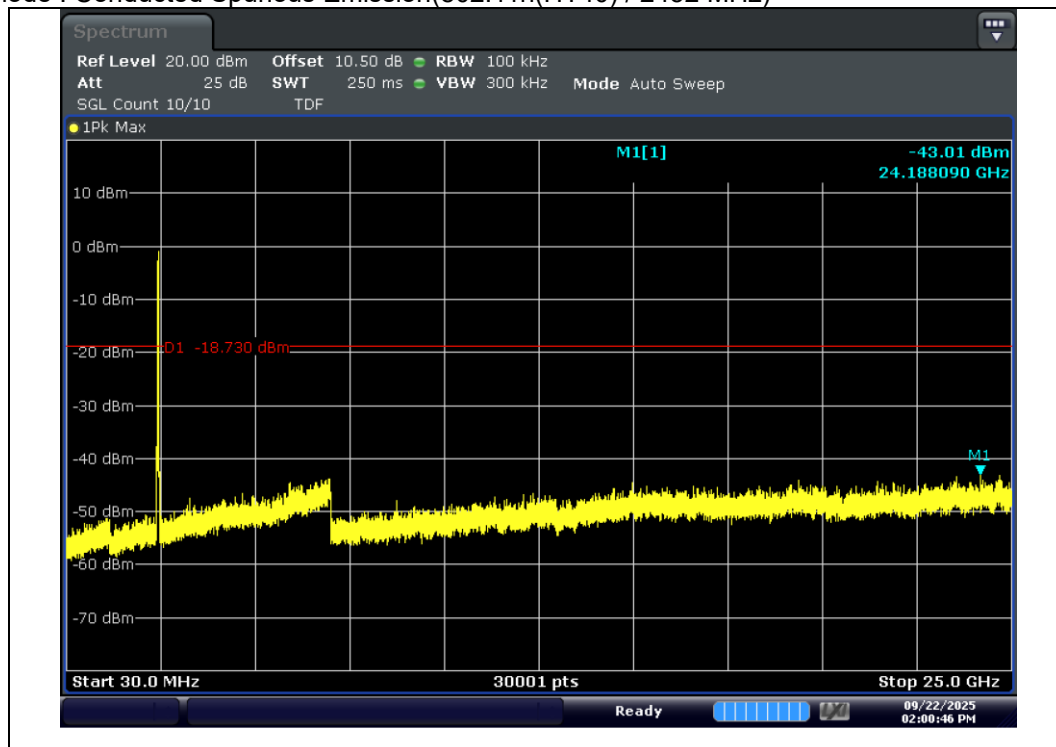
Test mode : Reference(802.11n(HT40) / 2452 MHz)



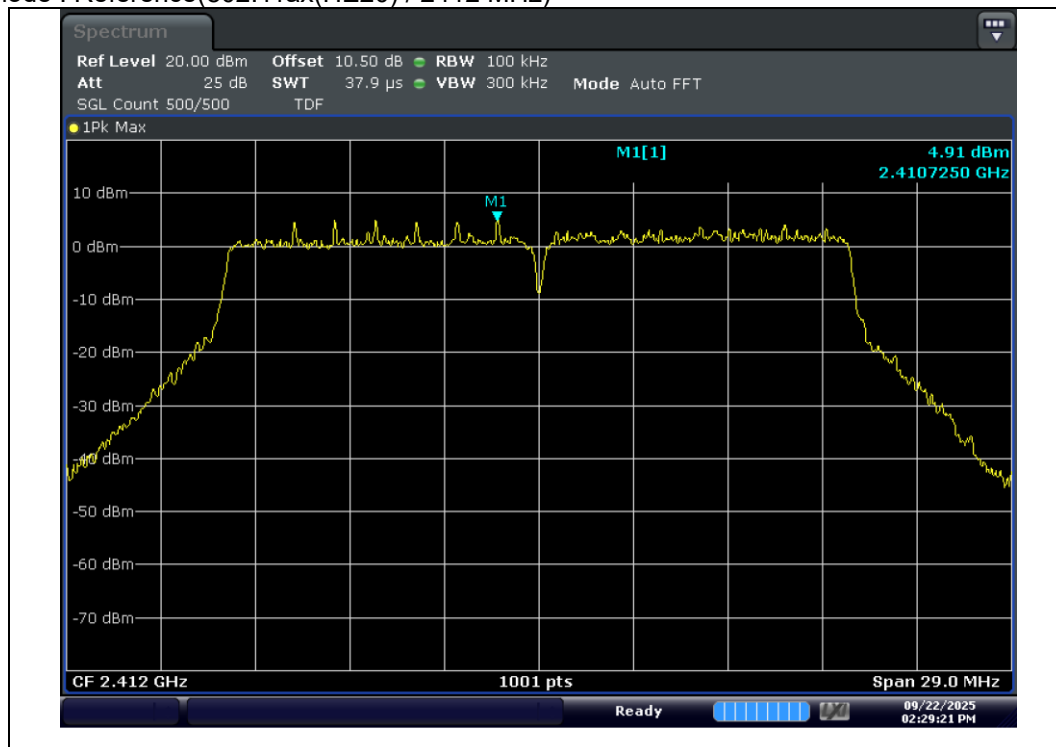
Test mode : Bandedge(802.11n(HT40) / 2452 MHz)



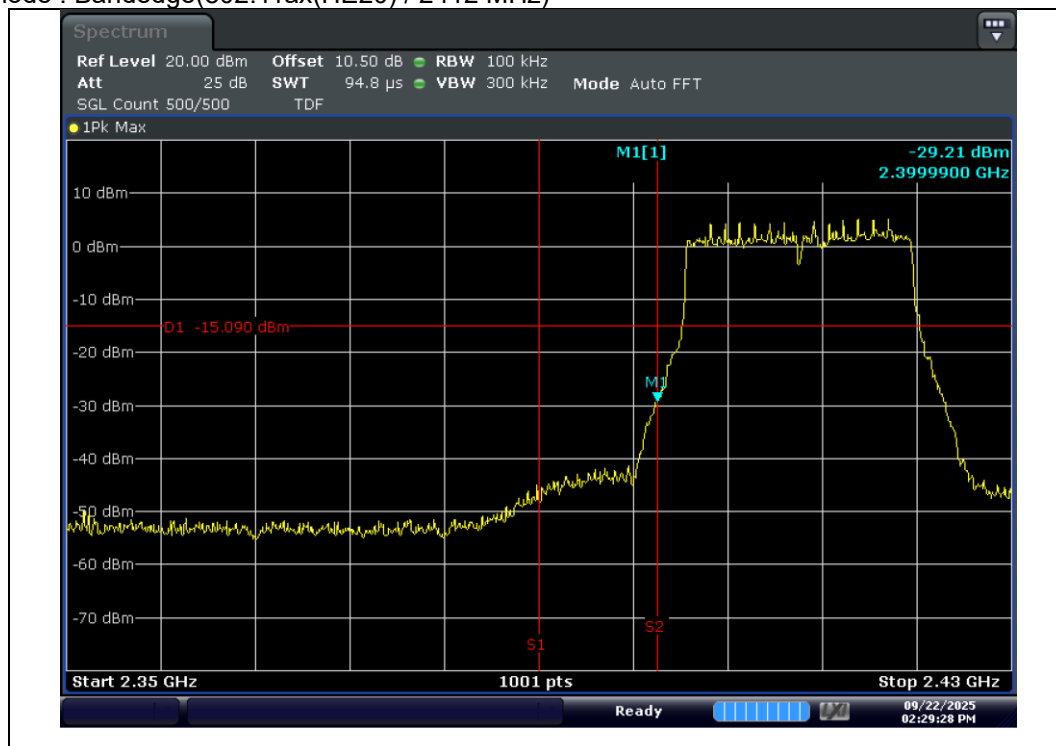
Test mode : Conducted Spurious Emission(802.11n(HT40) / 2452 MHz)



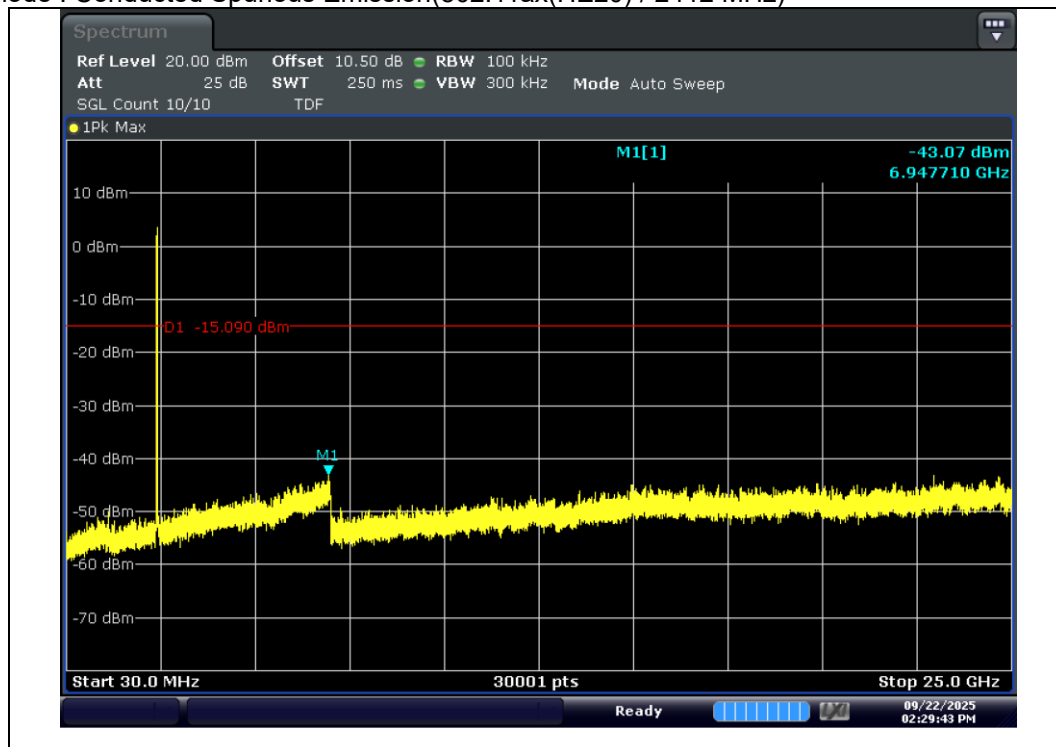
Test mode : Reference(802.11ax(HE20) / 2412 MHz)



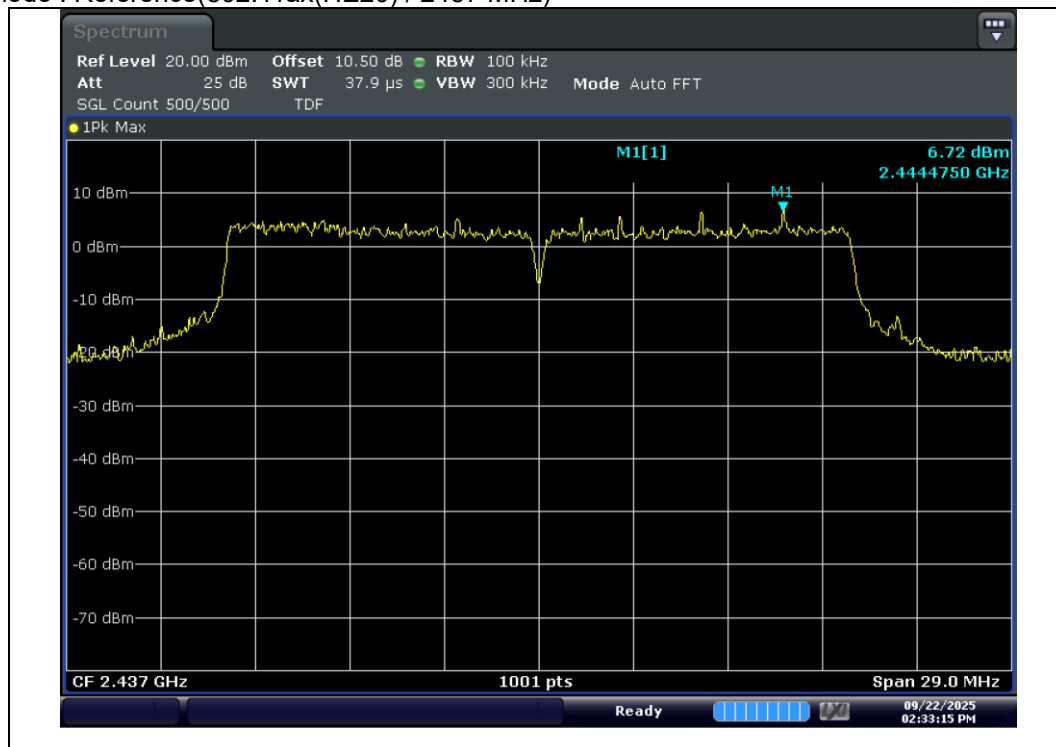
Test mode : Bandedge(802.11ax(HE20) / 2412 MHz)



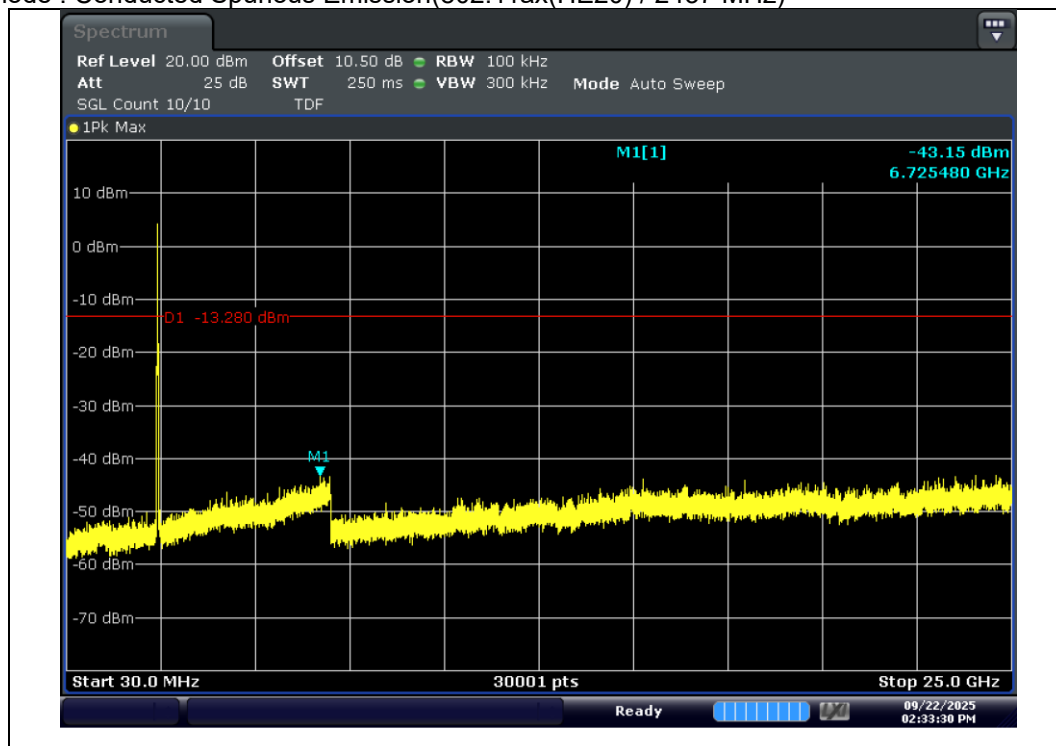
Test mode : Conducted Spurious Emission(802.11ax(HE20) / 2412 MHz)



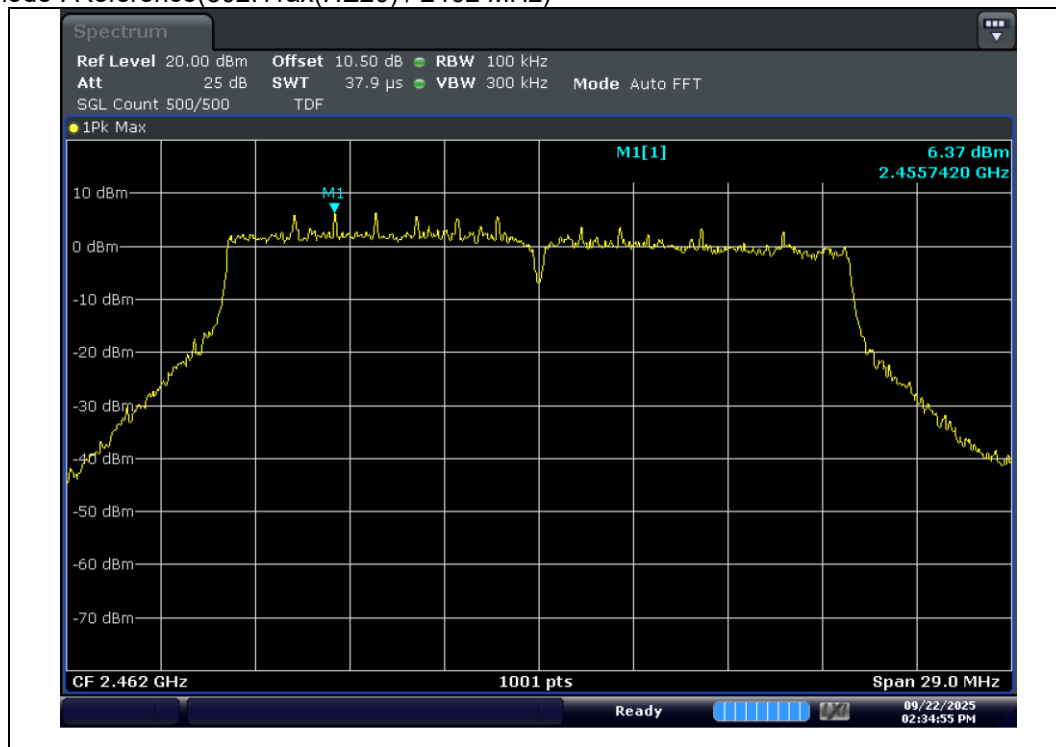
Test mode : Reference(802.11ax(HE20) / 2437 MHz)



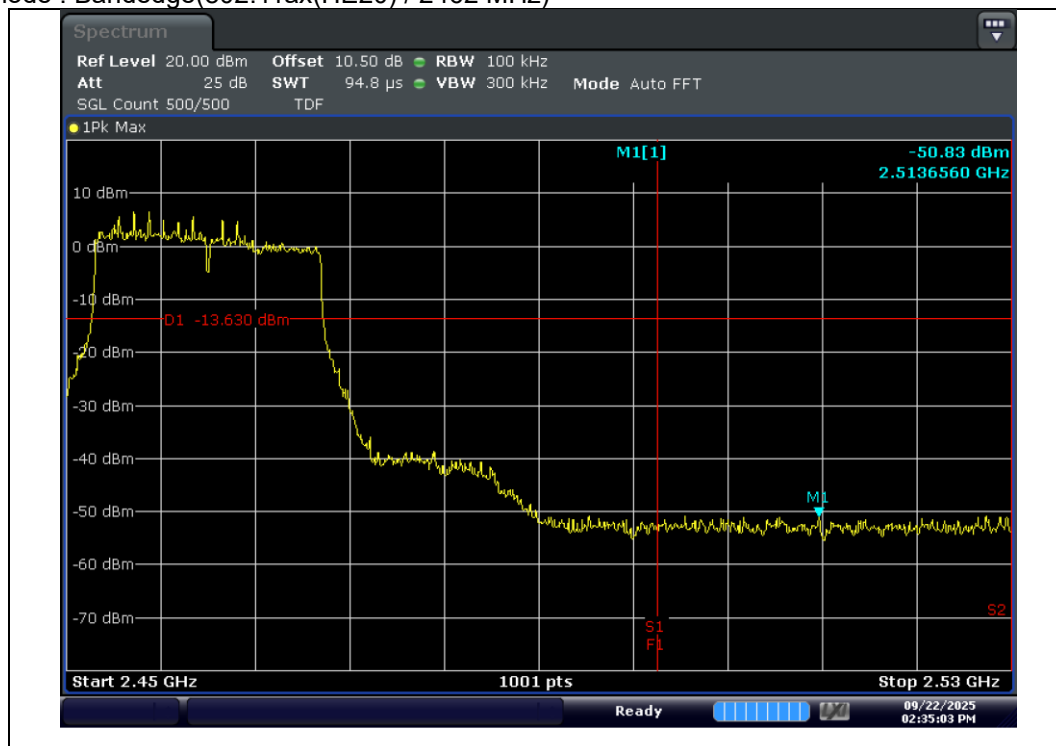
Test mode : Conducted Spurious Emission(802.11ax(HE20) / 2437 MHz)



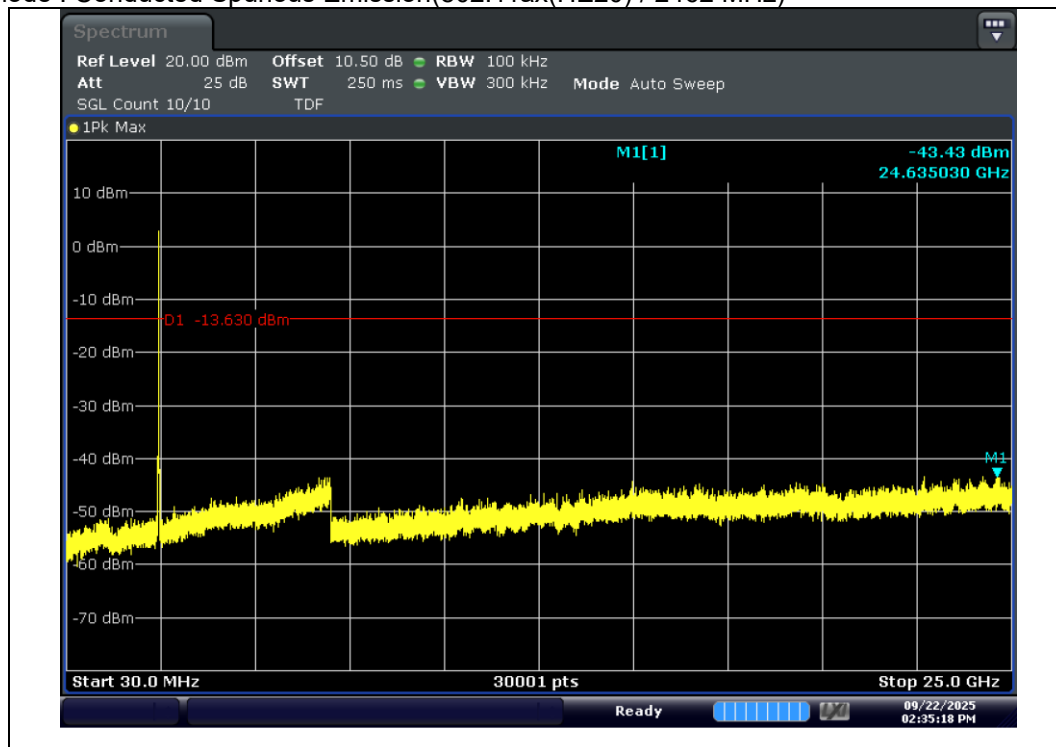
Test mode : Reference(802.11ax(HE20) / 2462 MHz)



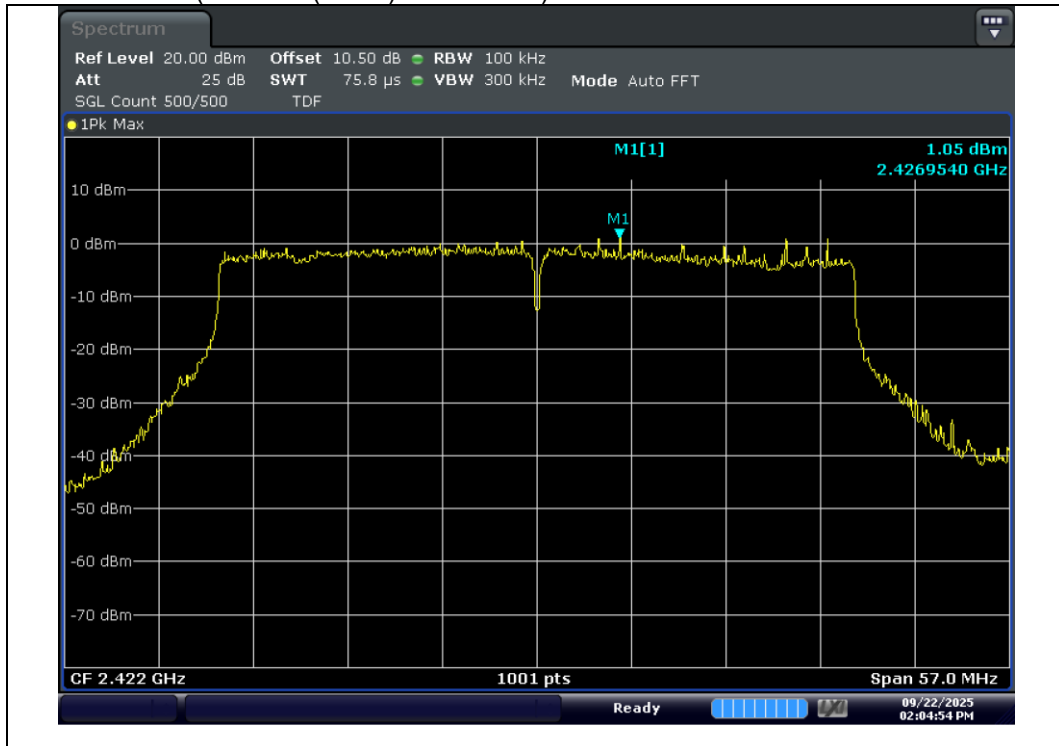
Test mode : Bandedge(802.11ax(HE20) / 2462 MHz)



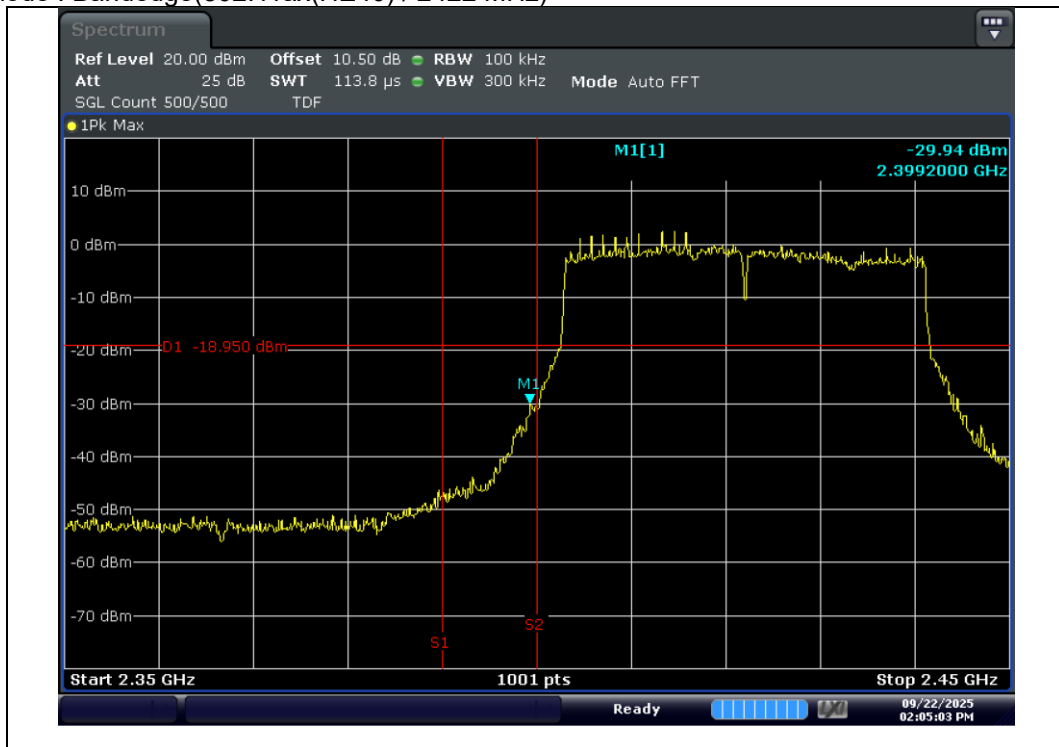
Test mode : Conducted Spurious Emission(802.11ax(HE20) / 2462 MHz)



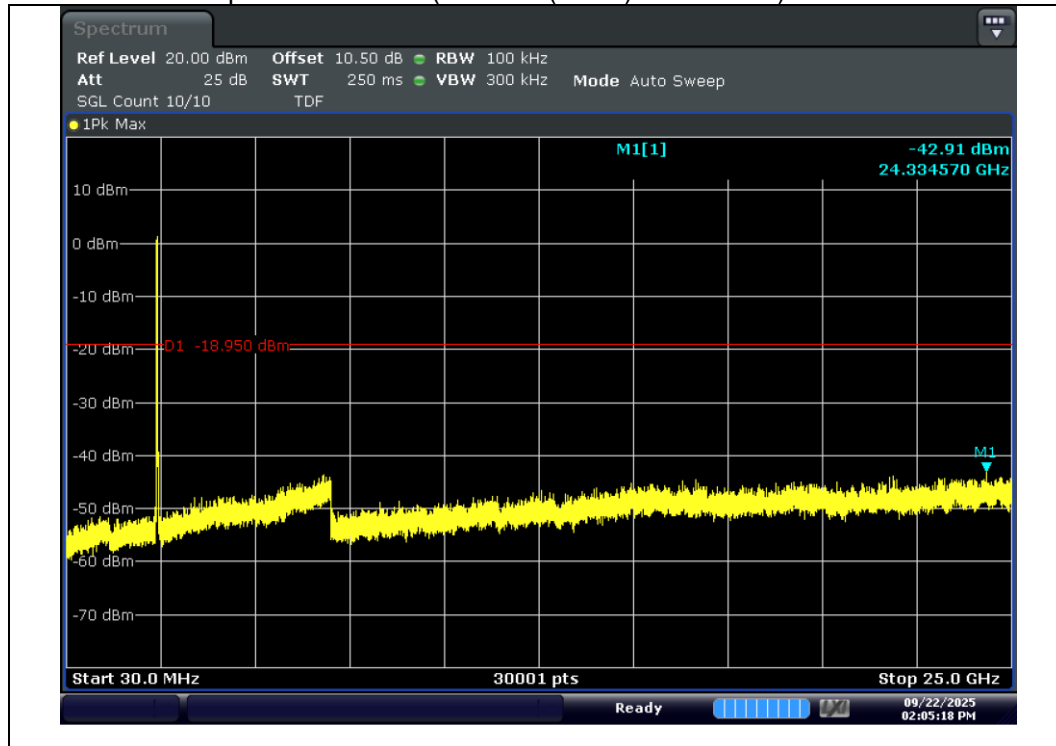
Test mode : Reference(802.11ax(HE40) / 2422 MHz)



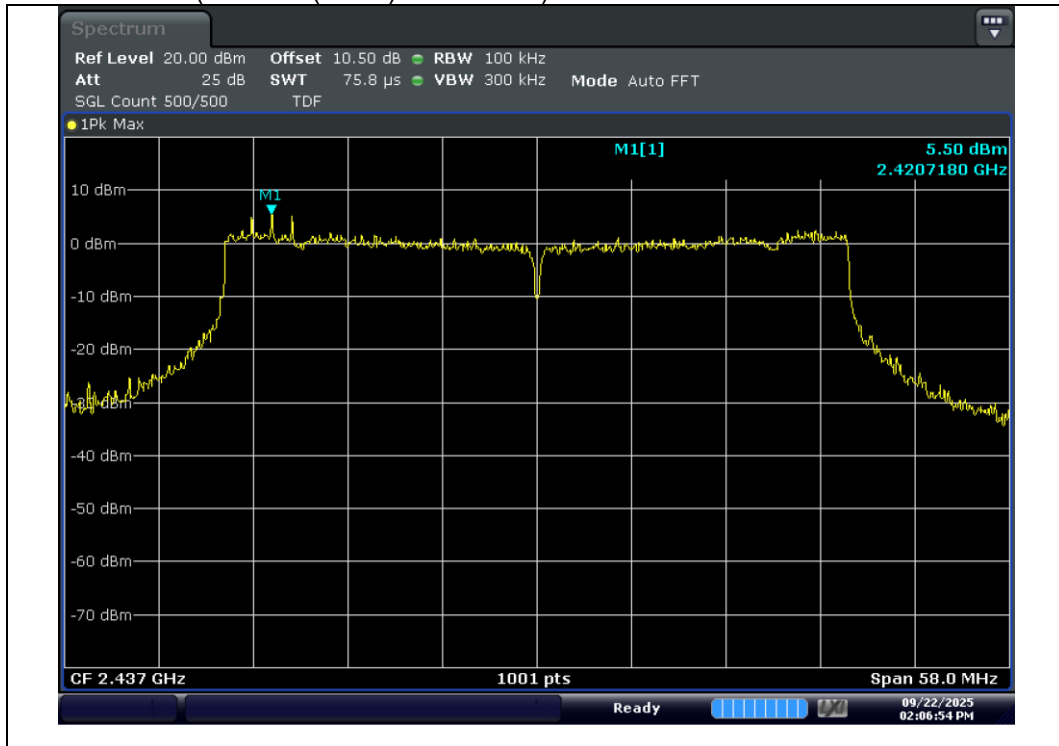
Test mode : Bandedge(802.11ax(HE40) / 2422 MHz)



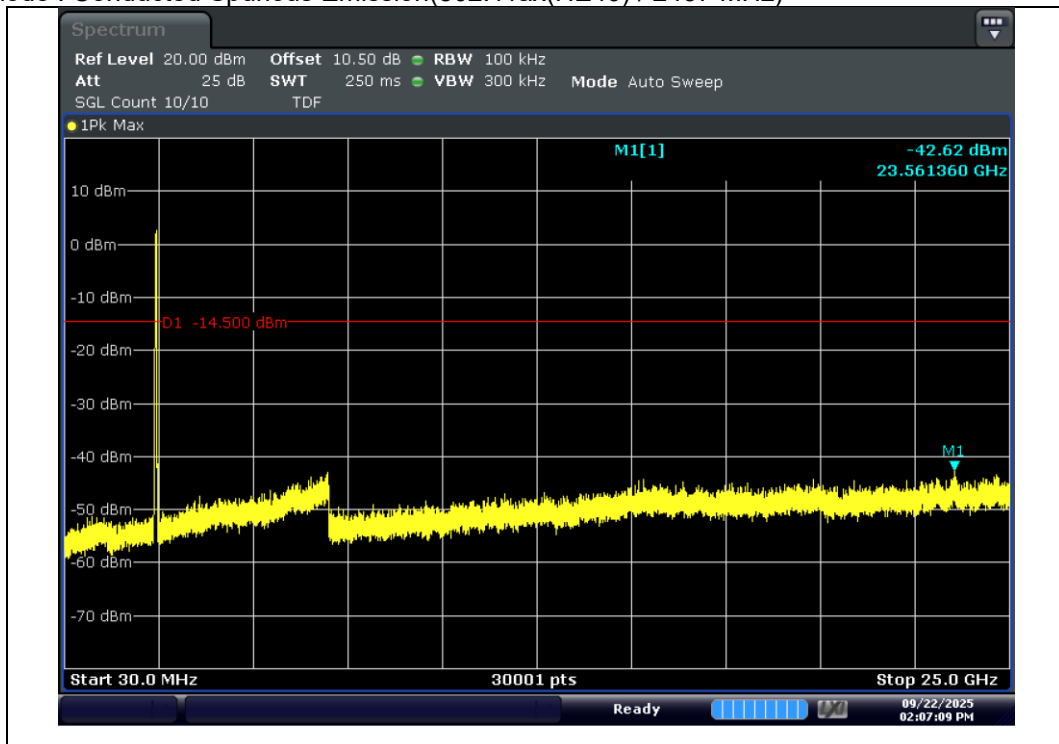
Test mode : Conducted Spurious Emission(802.11ax(HE40) / 2422 MHz)



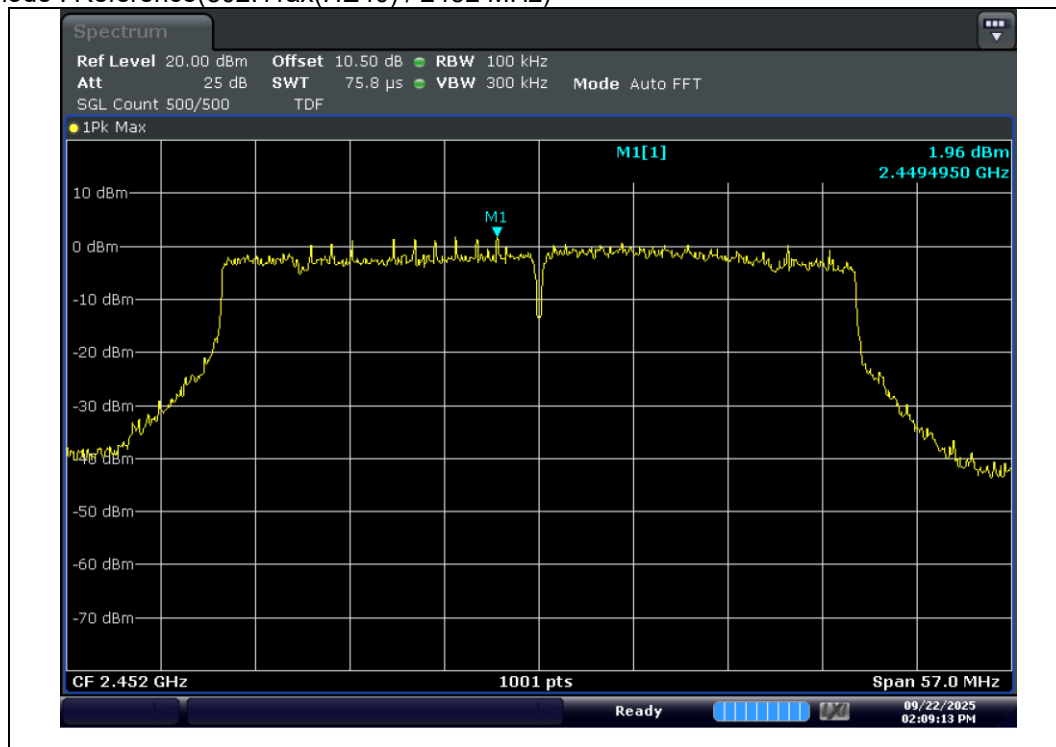
Test mode : Reference(802.11ax(HE40) / 2437 MHz)



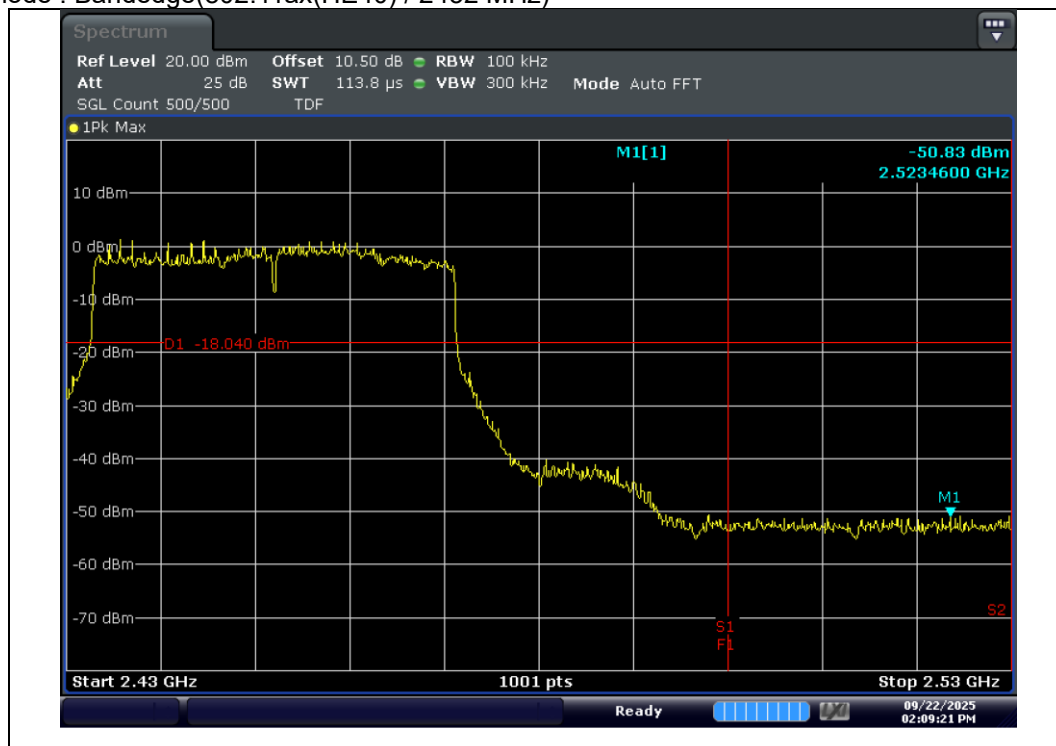
Test mode : Conducted Spurious Emission(802.11ax(HE40) / 2437 MHz)



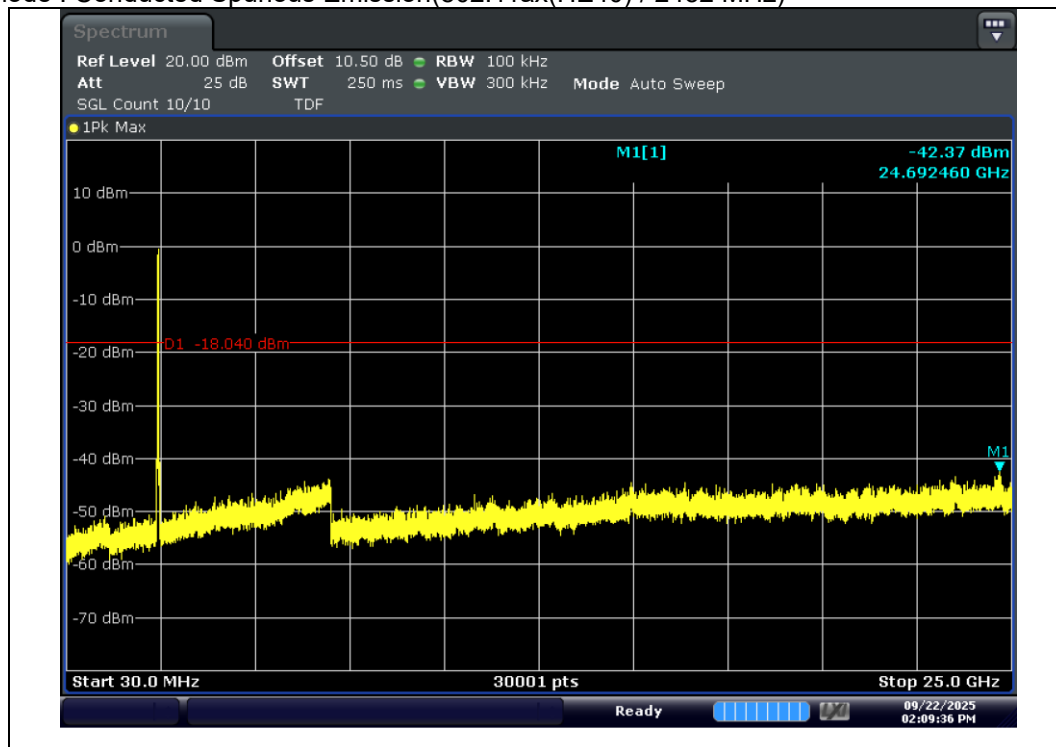
Test mode : Reference(802.11ax(HE40) / 2452 MHz)



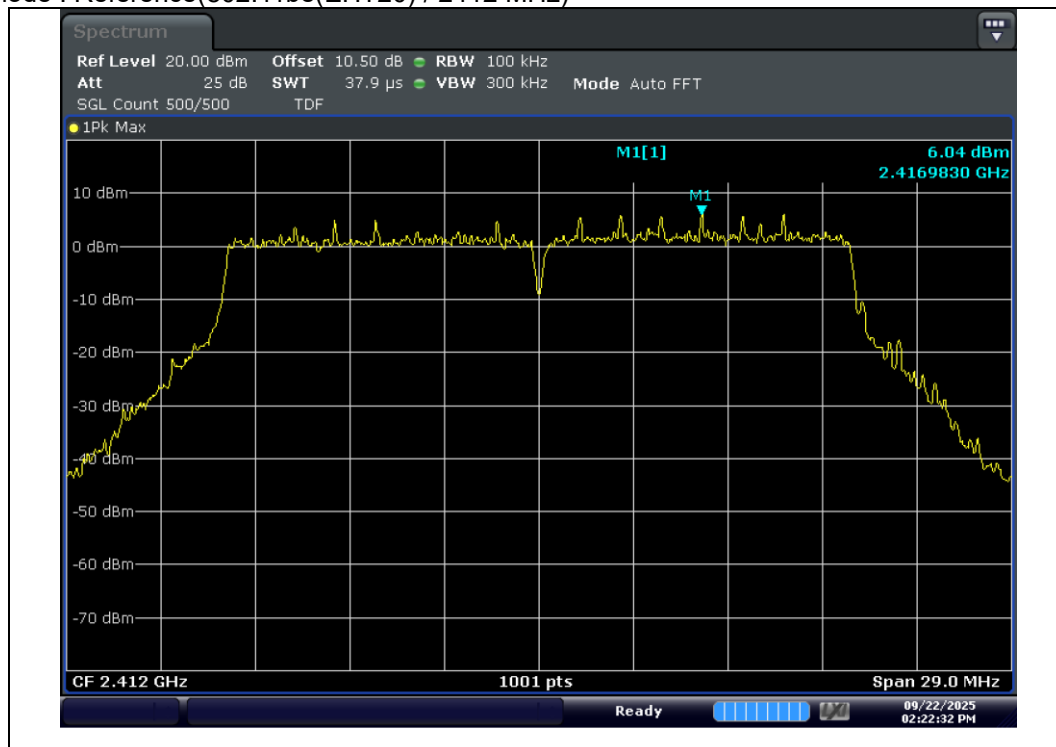
Test mode : Bandedge(802.11ax(HE40) / 2452 MHz)



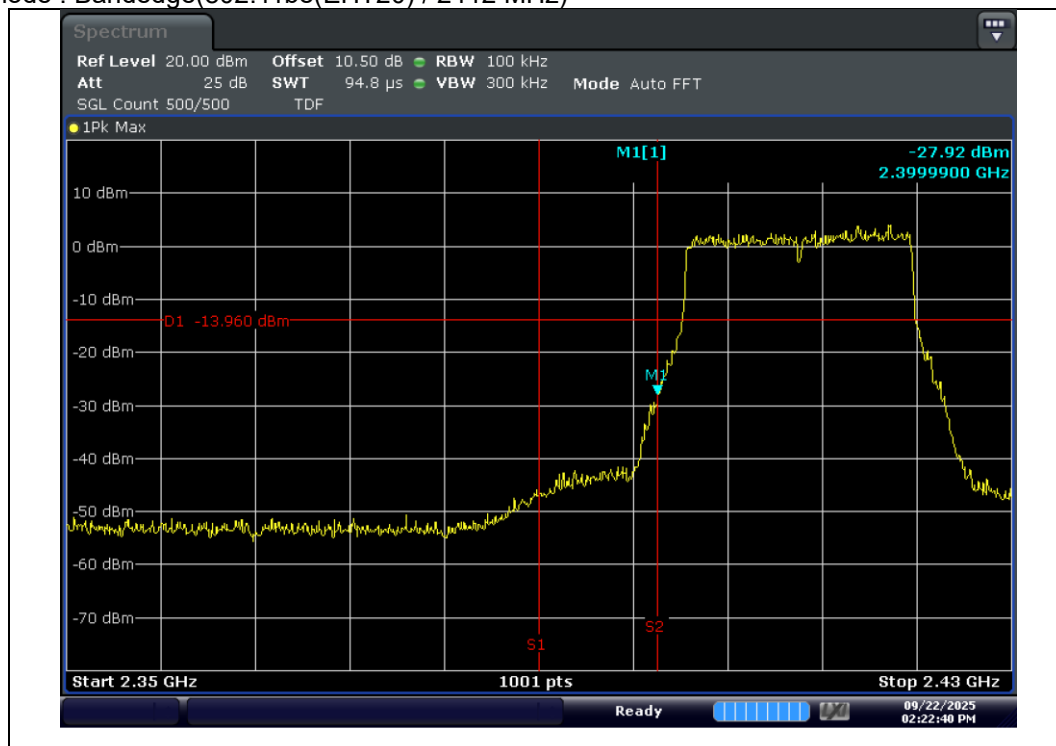
Test mode : Conducted Spurious Emission(802.11ax(HE40) / 2452 MHz)



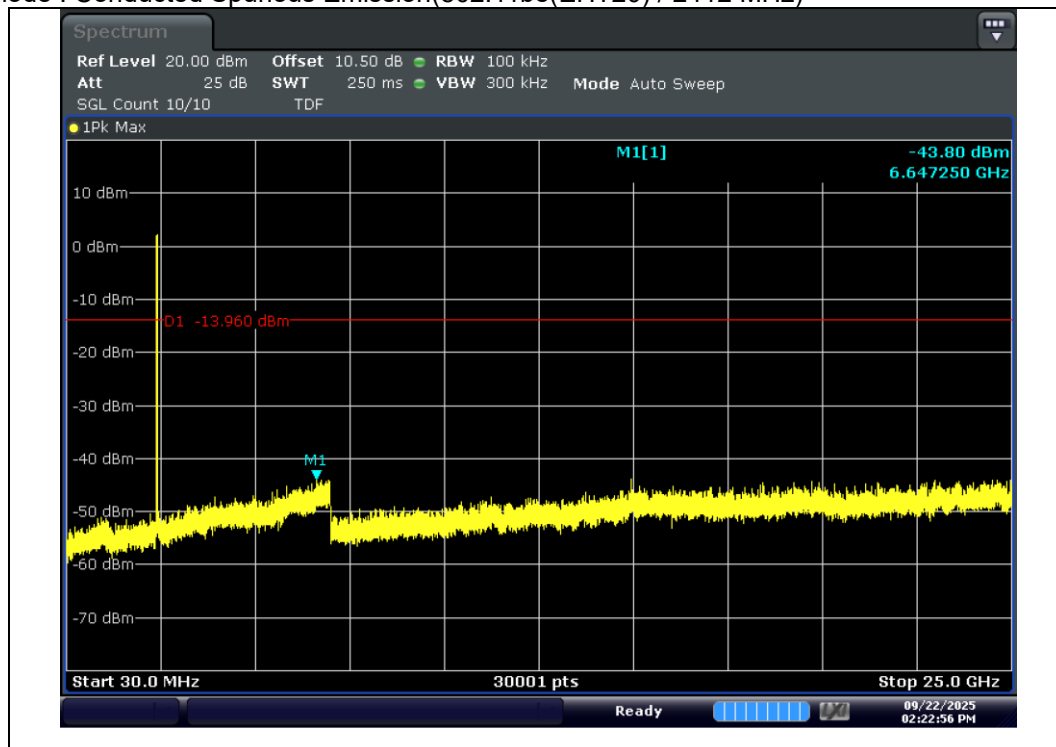
Test mode : Reference(802.11be(EHT20) / 2412 MHz)



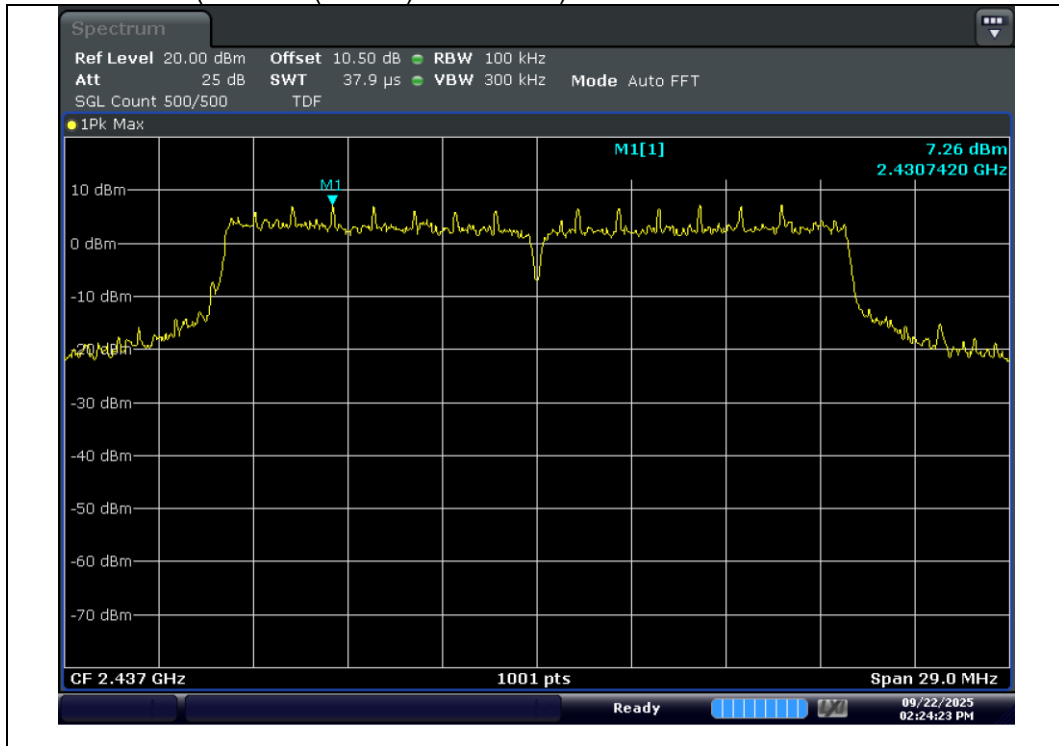
Test mode : Bandedge(802.11be(EHT20) / 2412 MHz)



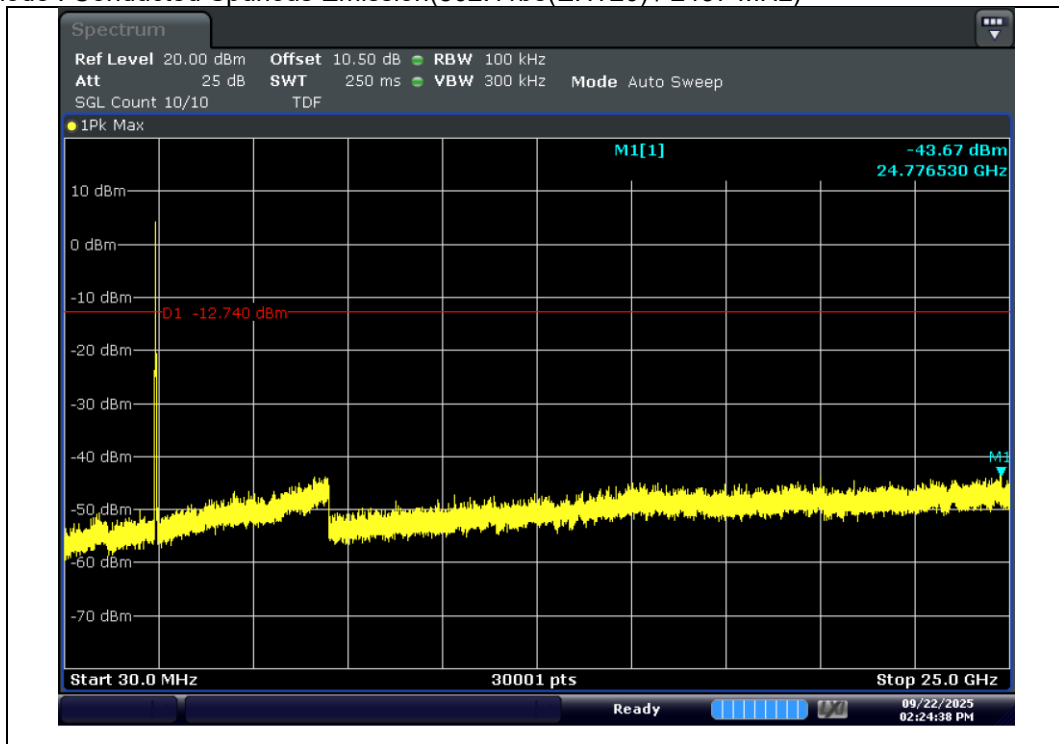
Test mode : Conducted Spurious Emission(802.11be(EHT20) / 2412 MHz)



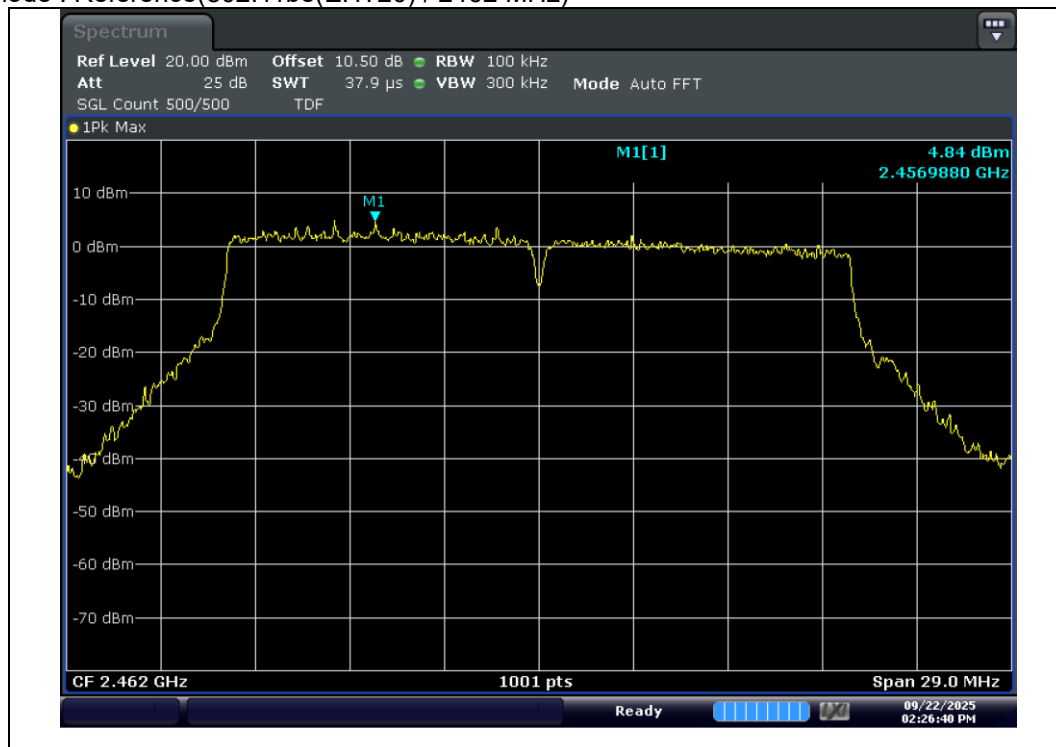
Test mode : Reference(802.11be(EHT20) / 2437 MHz)



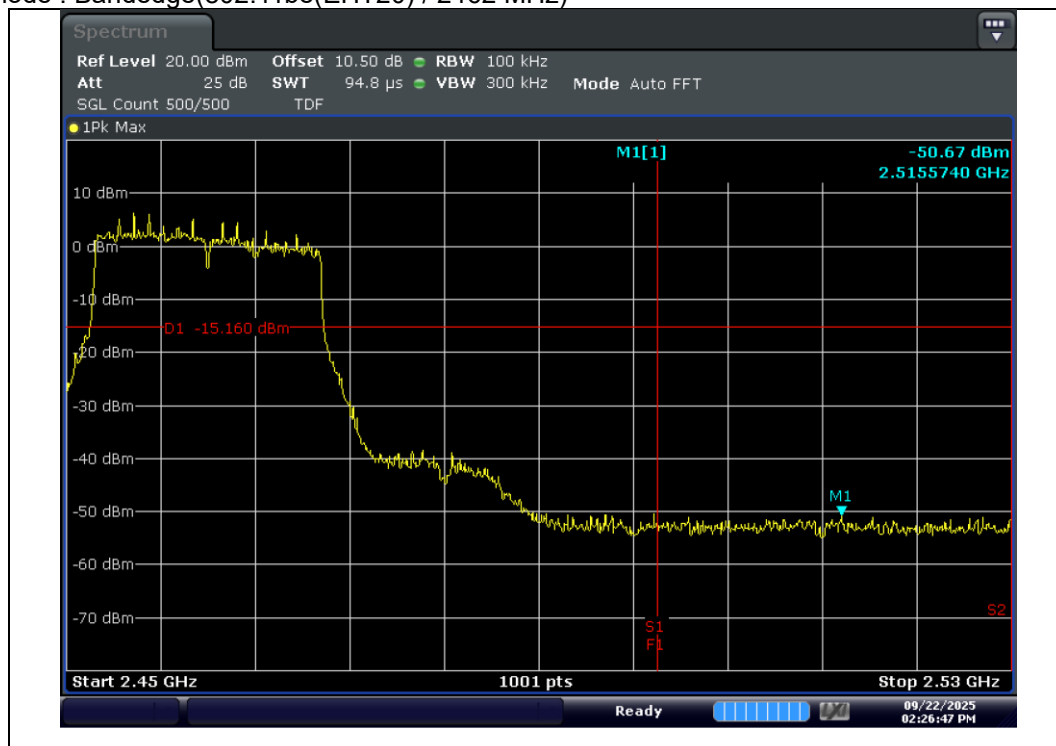
Test mode : Conducted Spurious Emission(802.11be(EHT20) / 2437 MHz)



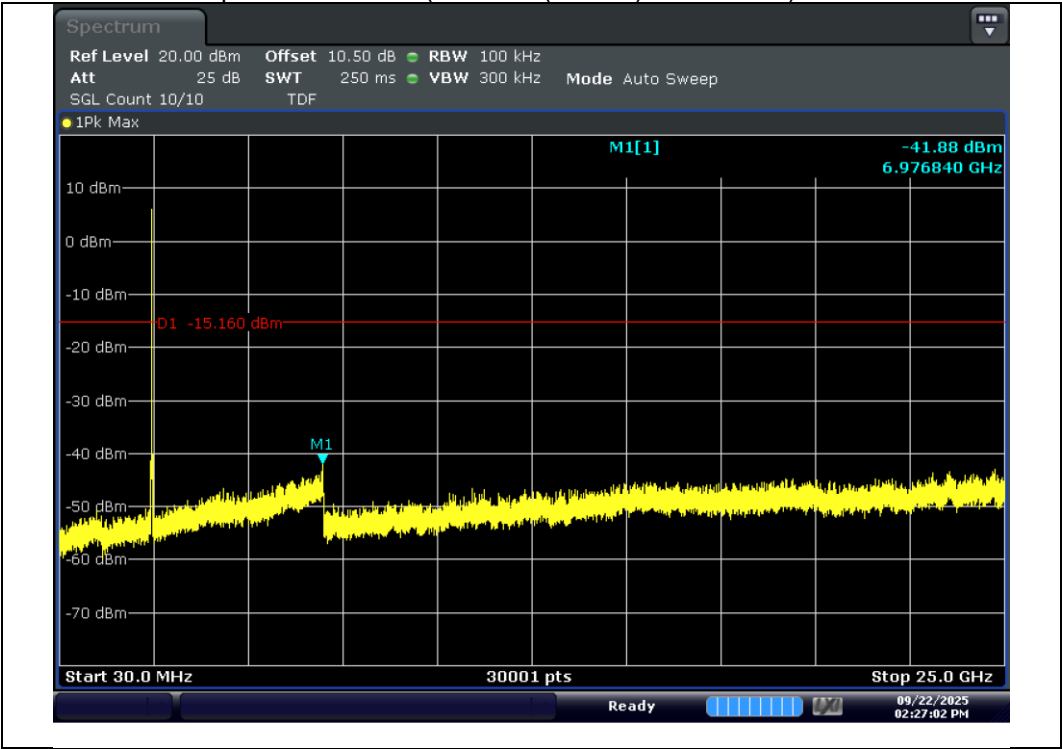
Test mode : Reference(802.11be(EHT20) / 2462 MHz)



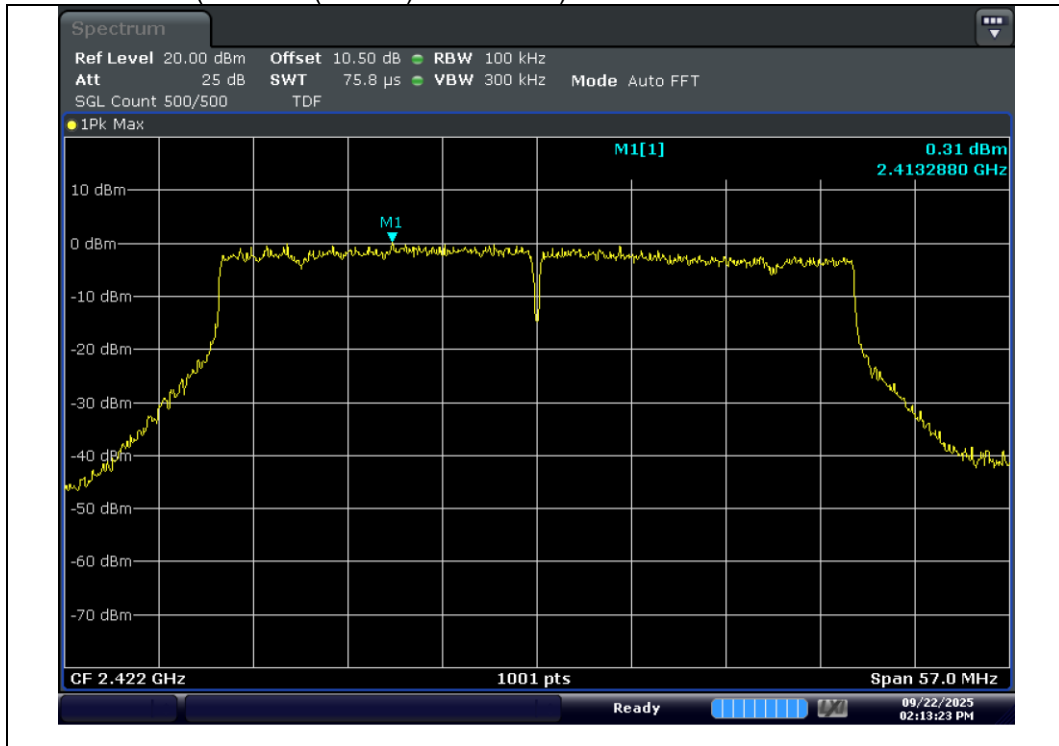
Test mode : Bandedge(802.11be(EHT20) / 2462 MHz)



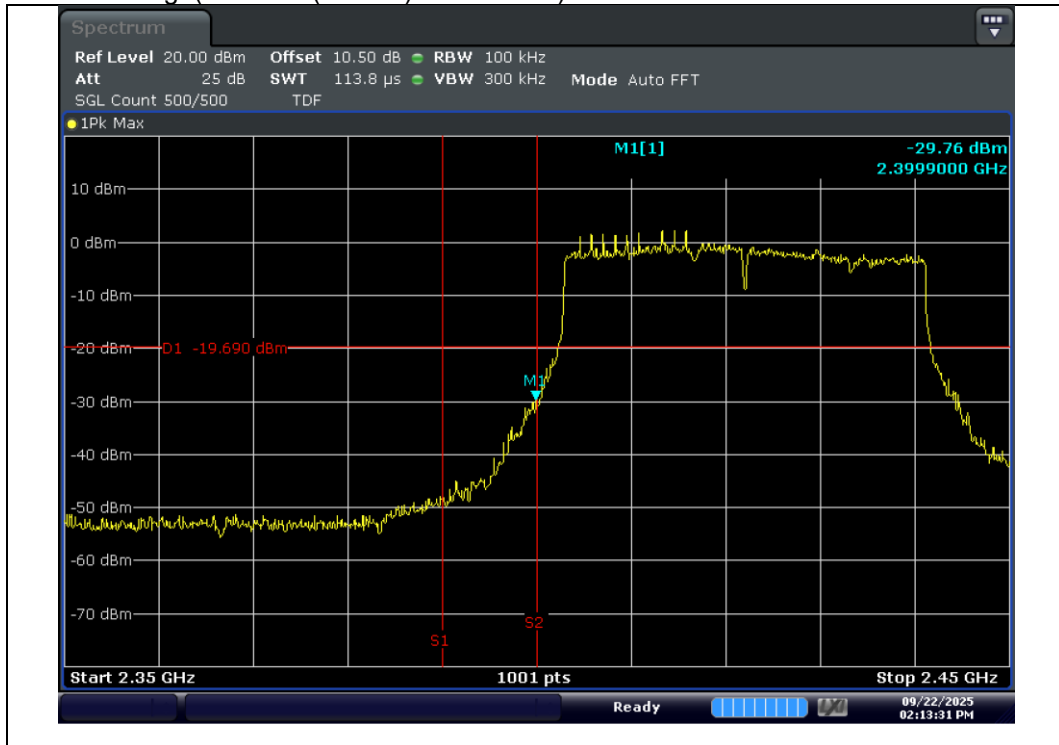
Test mode : Conducted Spurious Emission(802.11be(EHT20) / 2462 MHz)



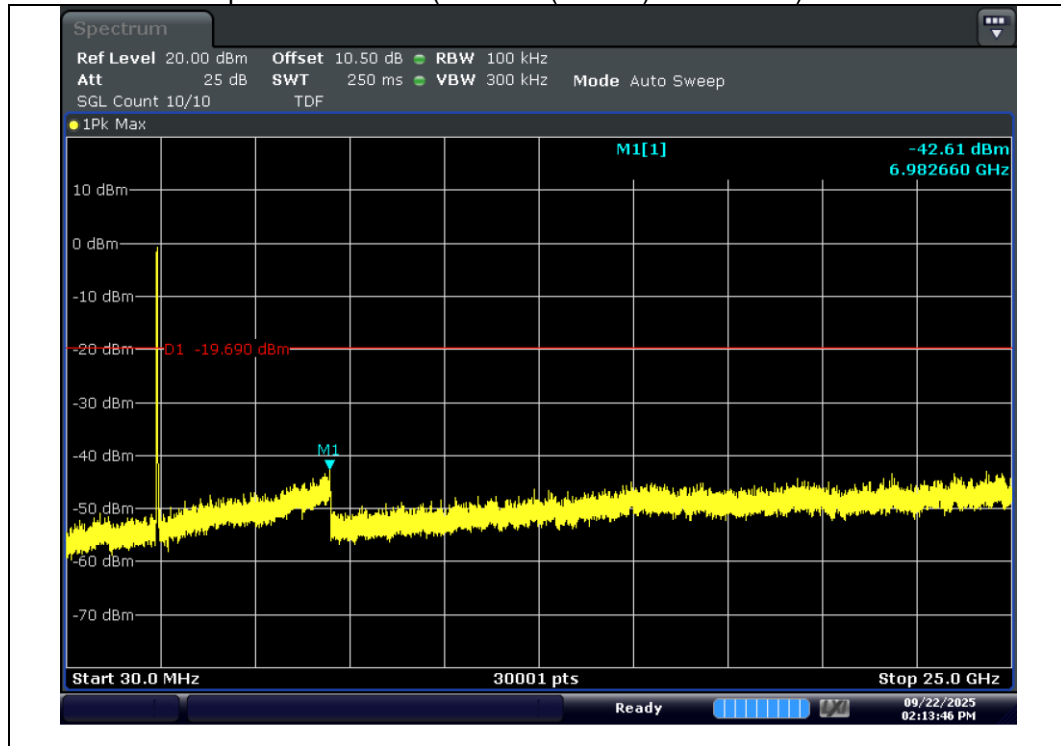
Test mode : Reference(802.11be(EHT40) / 2422 MHz)



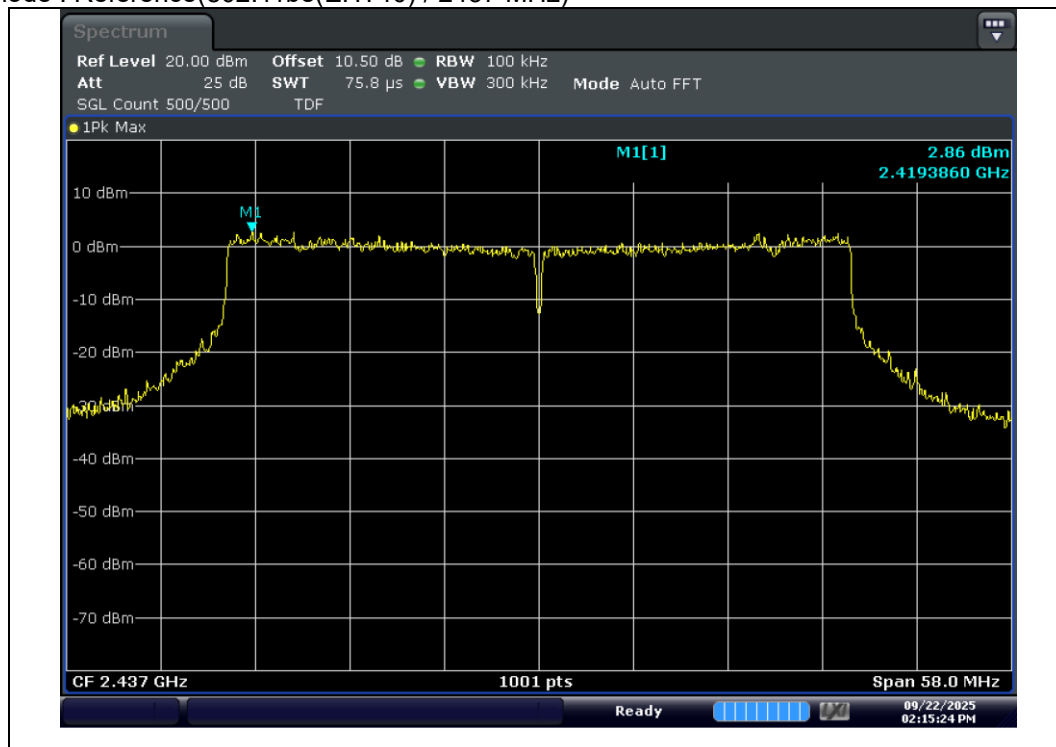
Test mode : Bandedge(802.11be(EHT40) / 2422 MHz)



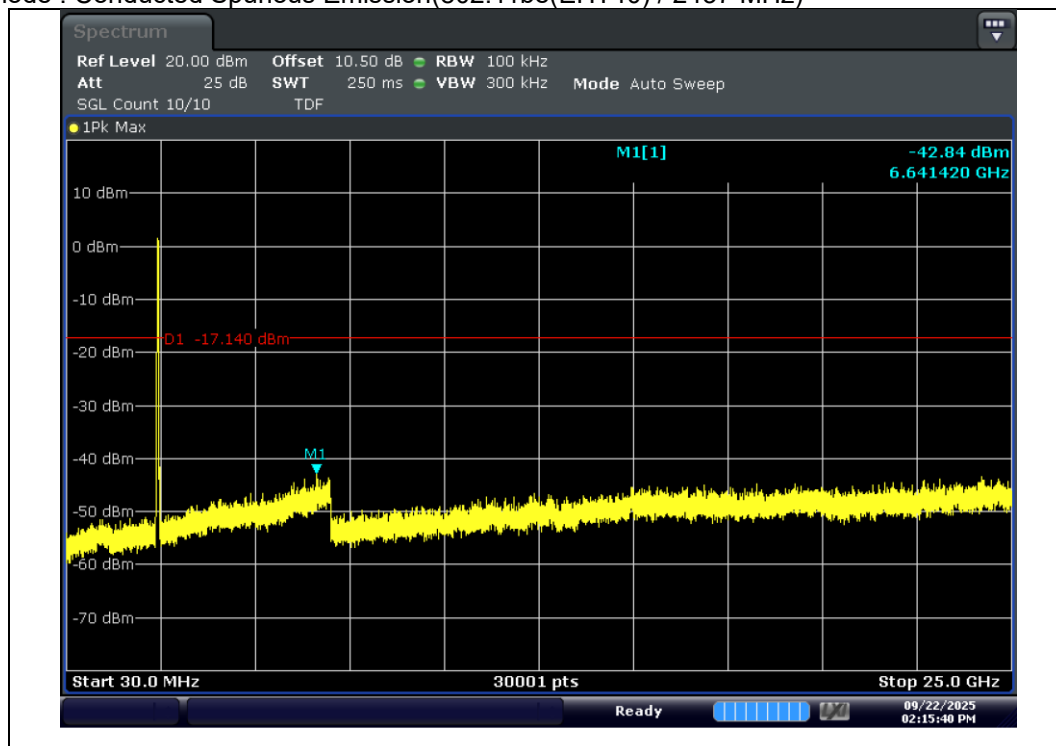
Test mode : Conducted Spurious Emission(802.11be(EHT40) / 2422 MHz)



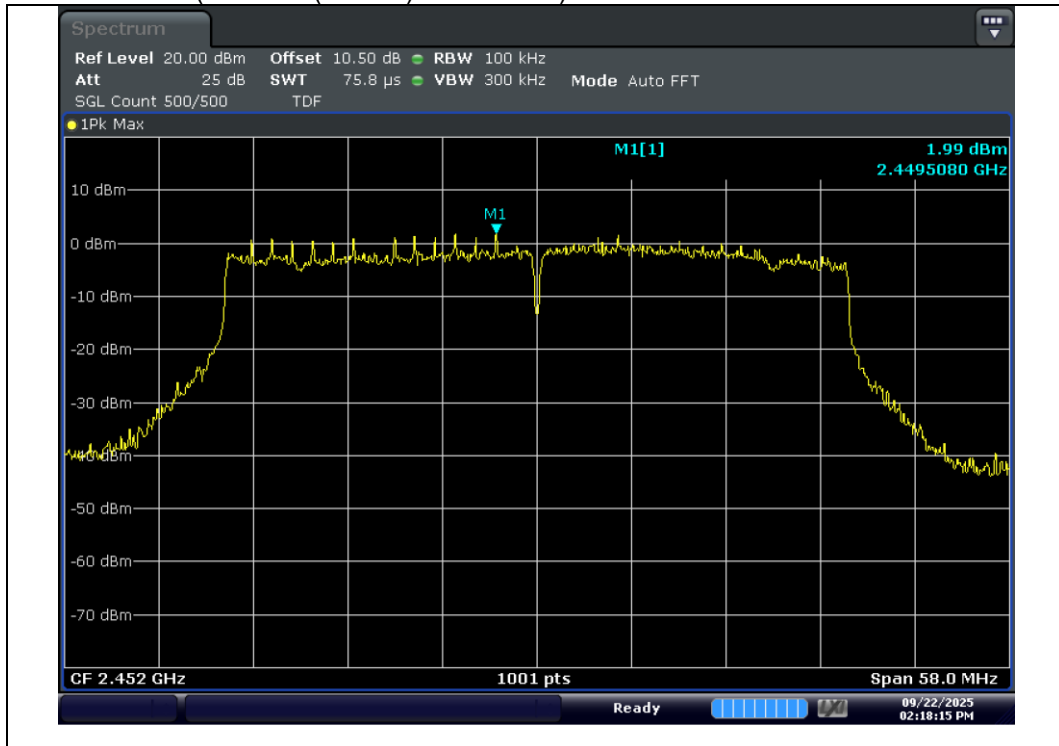
Test mode : Reference(802.11be(EHT40) / 2437 MHz)



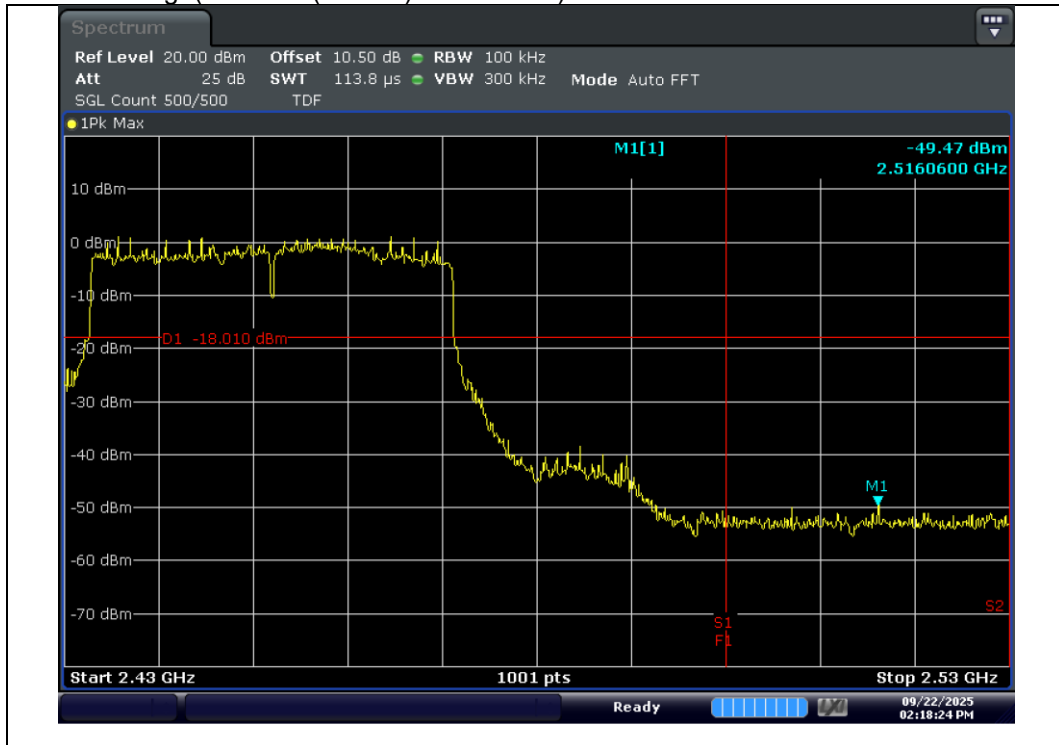
Test mode : Conducted Spurious Emission(802.11be(EHT40) / 2437 MHz)



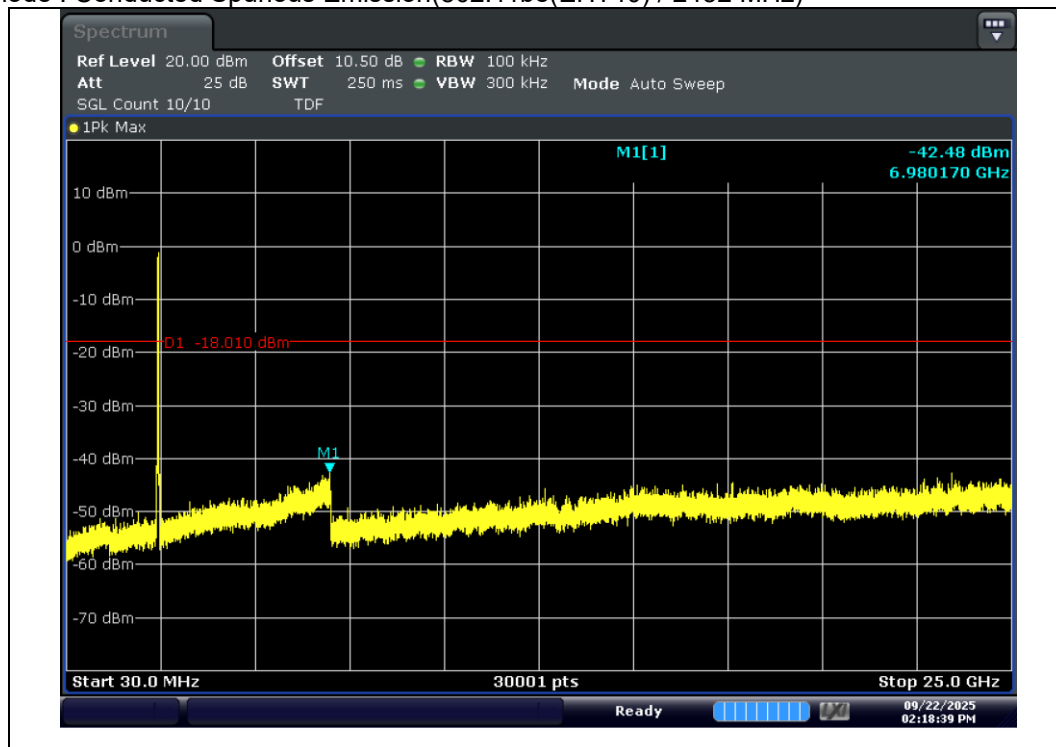
Test mode : Reference(802.11be(EHT40) / 2452 MHz)



Test mode : Bandedge(802.11be(EHT40) / 2452 MHz)

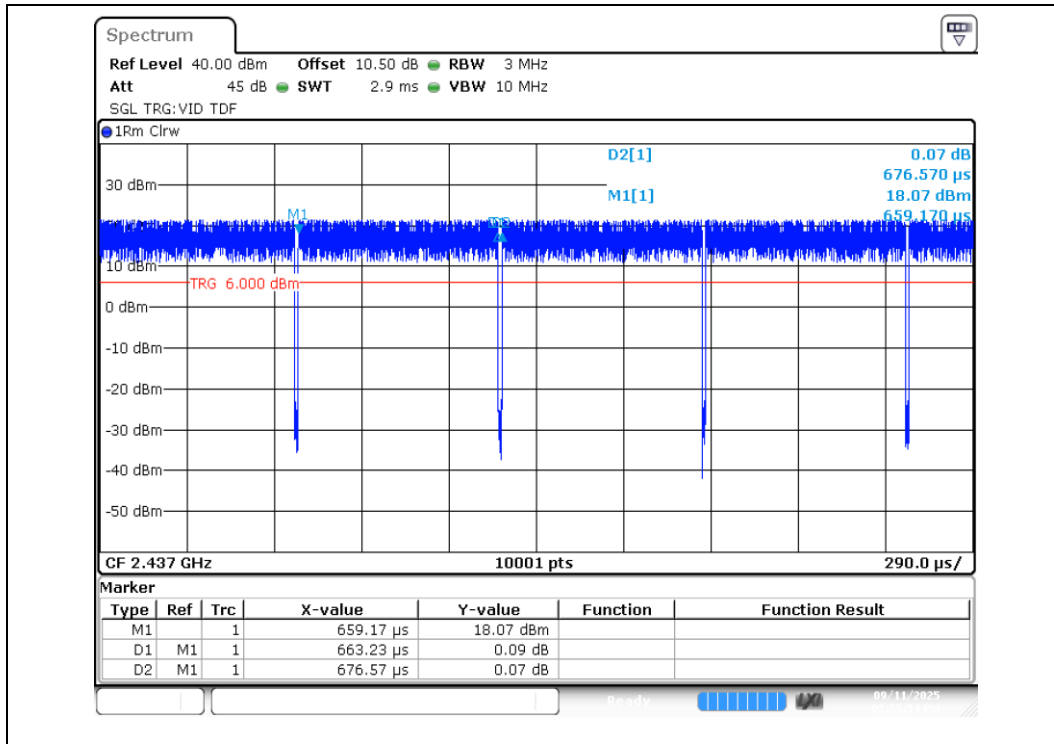


Test mode : Conducted Spurious Emission(802.11be(EHT40) / 2452 MHz)



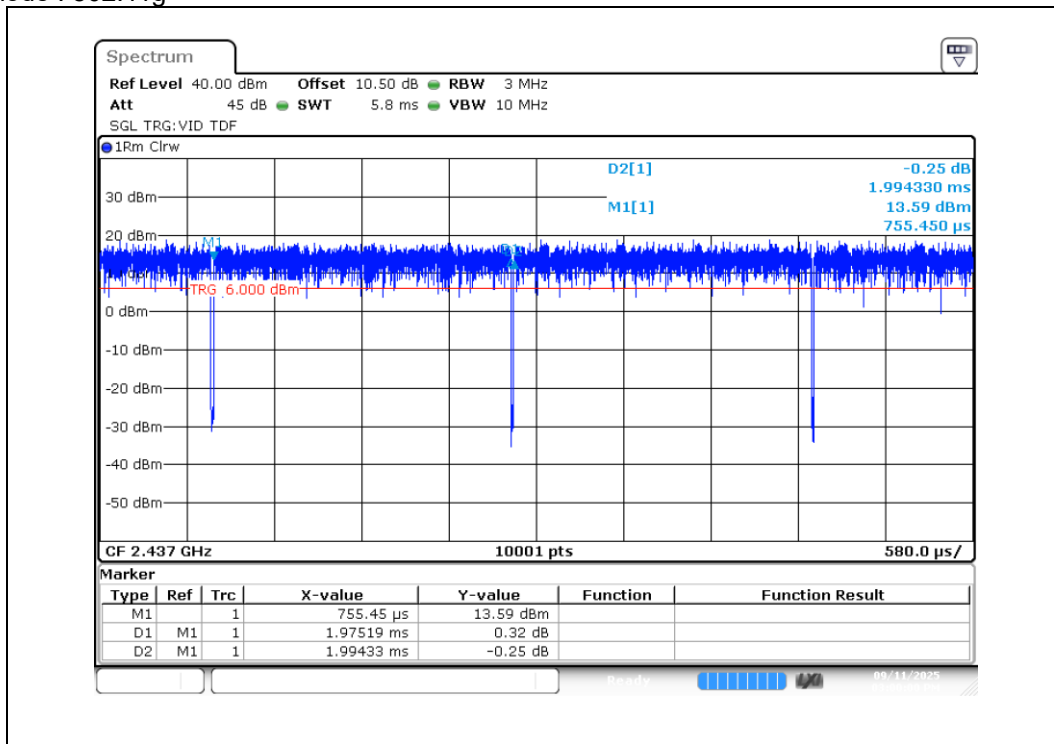
4.3.5.8 Duty Cycle Measurement data

Test mode : 802.11b



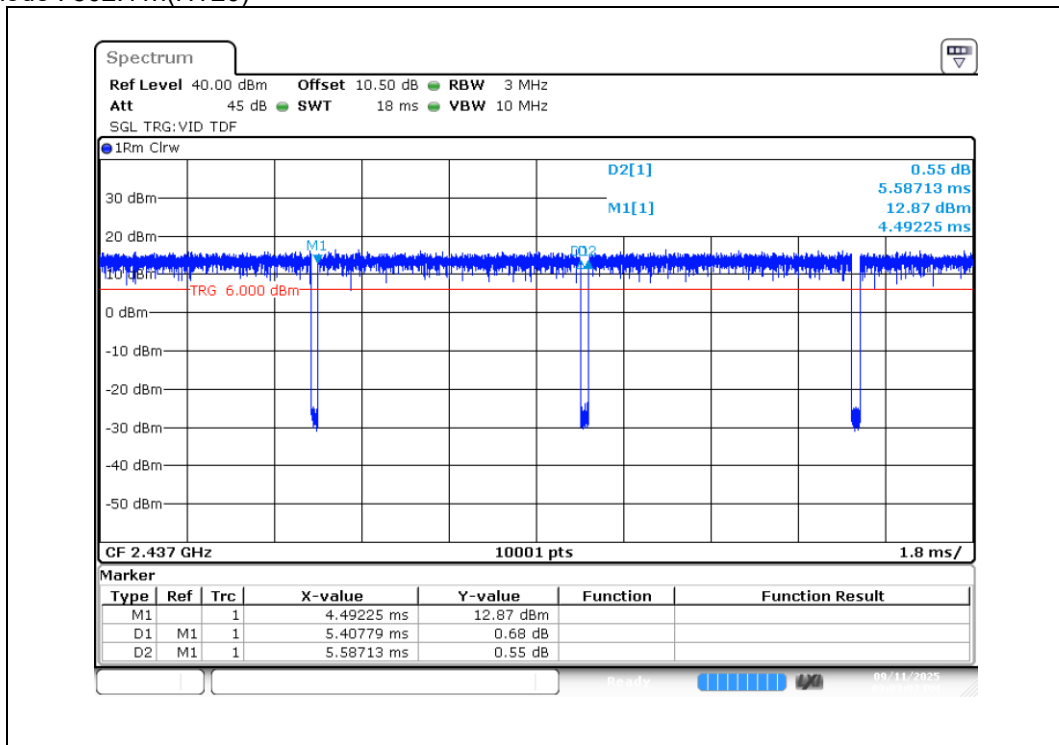
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 0.08$ dB

Test mode : 802.11g



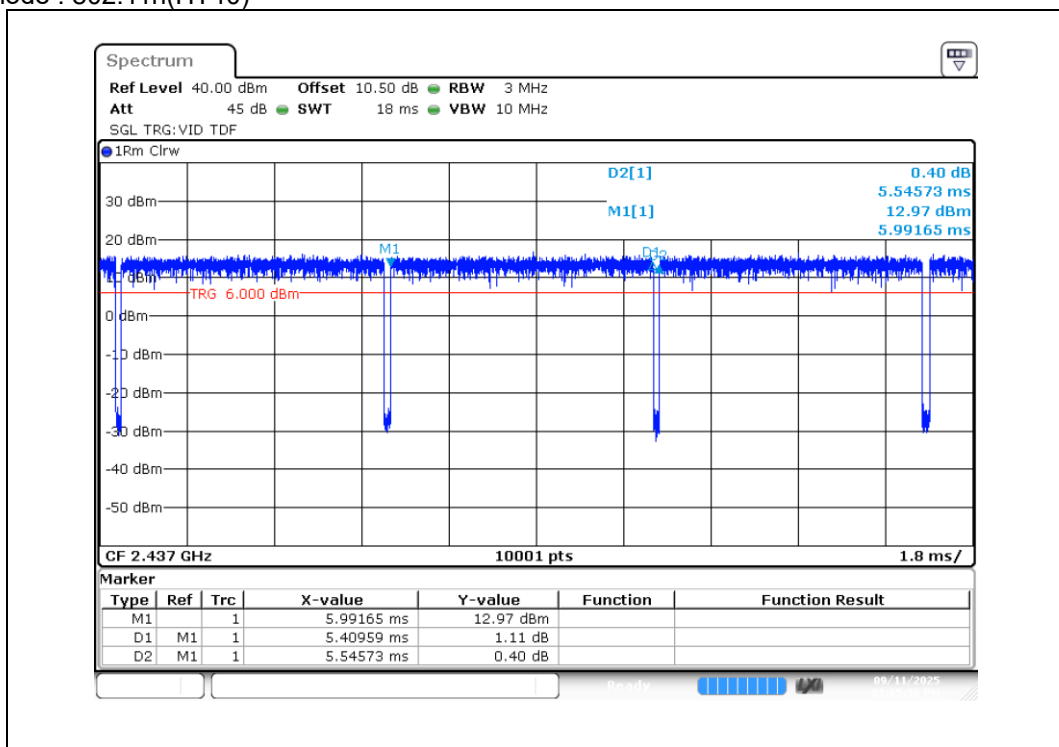
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 0.04$ dB

Test mode : 802.11n(HT20)



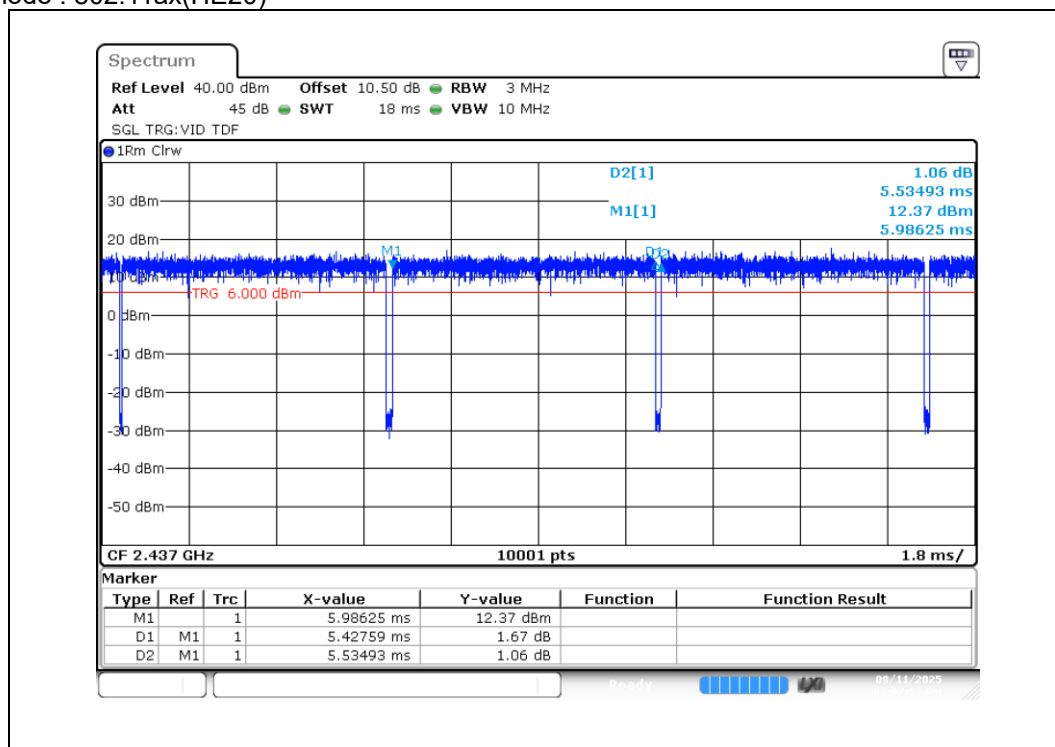
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 0.14 \text{ dB}$

Test mode : 802.11n(HT40)



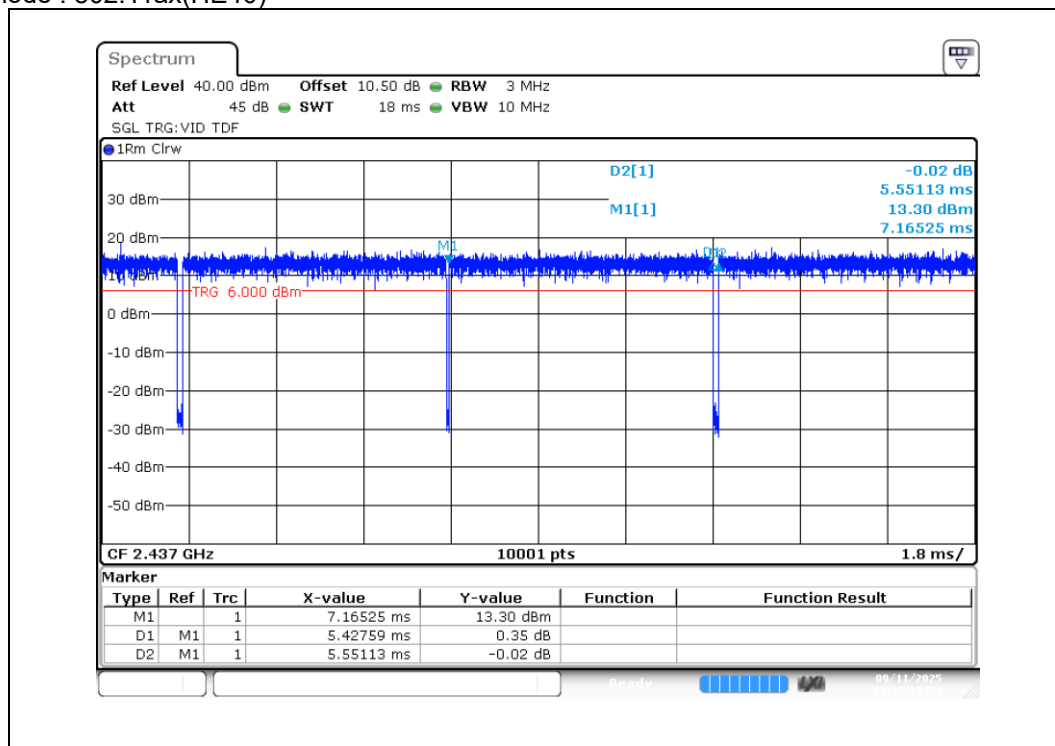
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 0.11 \text{ dB}$

Test mode : 802.11ax(HE20)



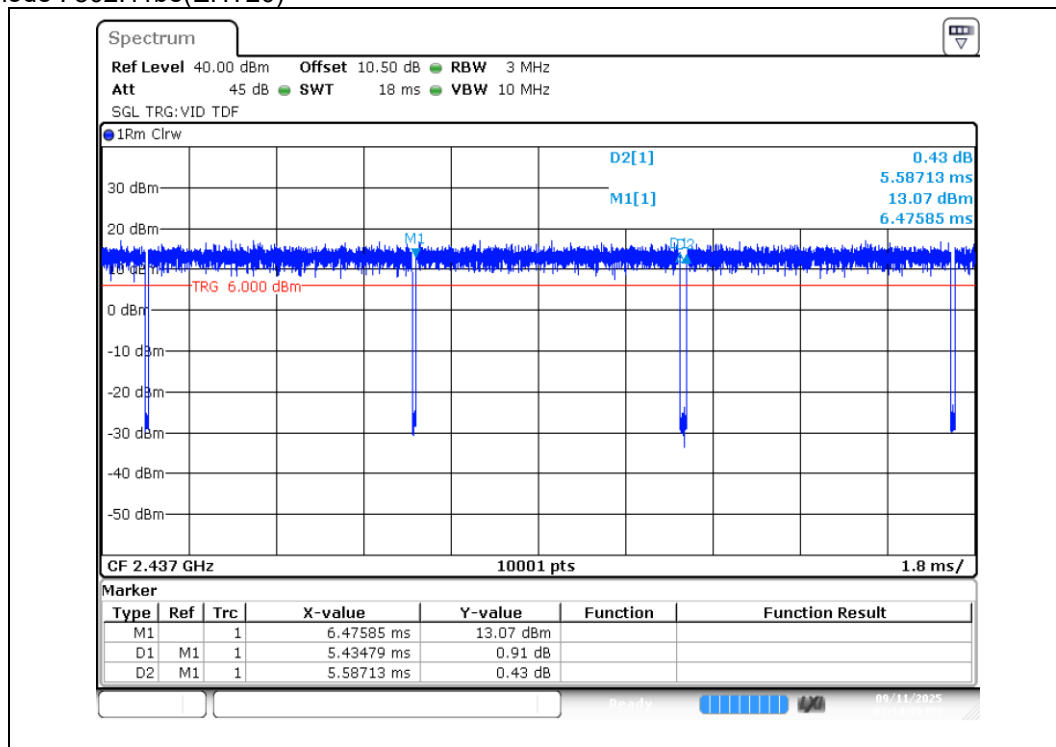
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 0.08 \text{ dB}$

Test mode : 802.11ax(HE40)



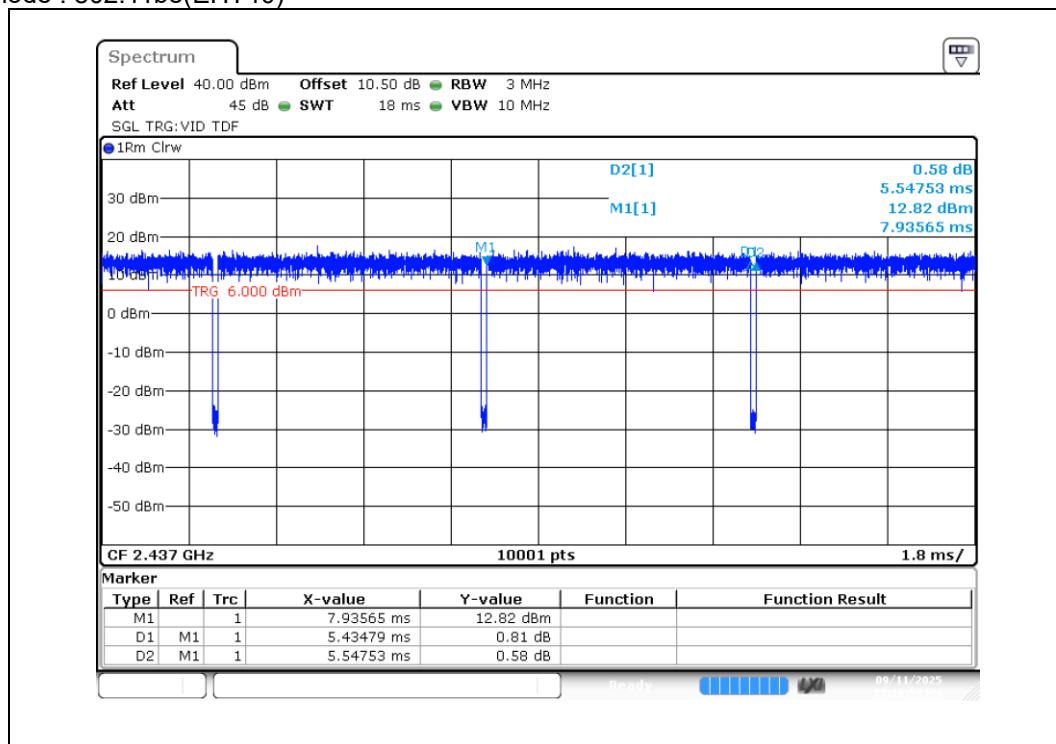
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 0.10 \text{ dB}$

Test mode : 802.11be(EHT20)



Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 0.12 \text{ dB}$

Test mode : 802.11be(EHT40)



Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 0.09 \text{ dB}$

4.3.6 Conducted Emission

4.3.6.1 Regulation

According to §15.207(a), and RSS-GEN 8.8 for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 - 30	60	50

* Decreases with the logarithm of the frequency.

According to §15.107(a), for unintentional device, except for Class A digital devices, line conducted emission limits are the same as the above table.

4.4.6.2 Measurement Procedure

1) The EUT was placed on a wooden table of size, 1 m by 1.5 m, raised 80 cm in which is located 40 cm away from the vertical wall and 1.5 m away from the side wall of the shielded room.

2) Each current-carrying conductor of the EUT power cord was individually connected through a 50 Ω /50 μ H LISN, which is an input transducer to a Spectrum Analyzer or an EMI/Field Intensity Meter, to the input power source.

3) Exploratory measurements were made to identify the frequency of the emission that had the highest amplitude relative to the limit by operating the EUT in a range of typical modes of operation, cable position, and with a typical system equipment configuration and arrangement. Based on the exploratory tests of the EUT, the one EUT cable configuration and arrangement and mode of operation that had produced the emission with the highest amplitude relative to the limit was selected for the final measurement.

4) The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment is the system) was then performed over the frequency range of 0.15 MHz to 30 MHz.

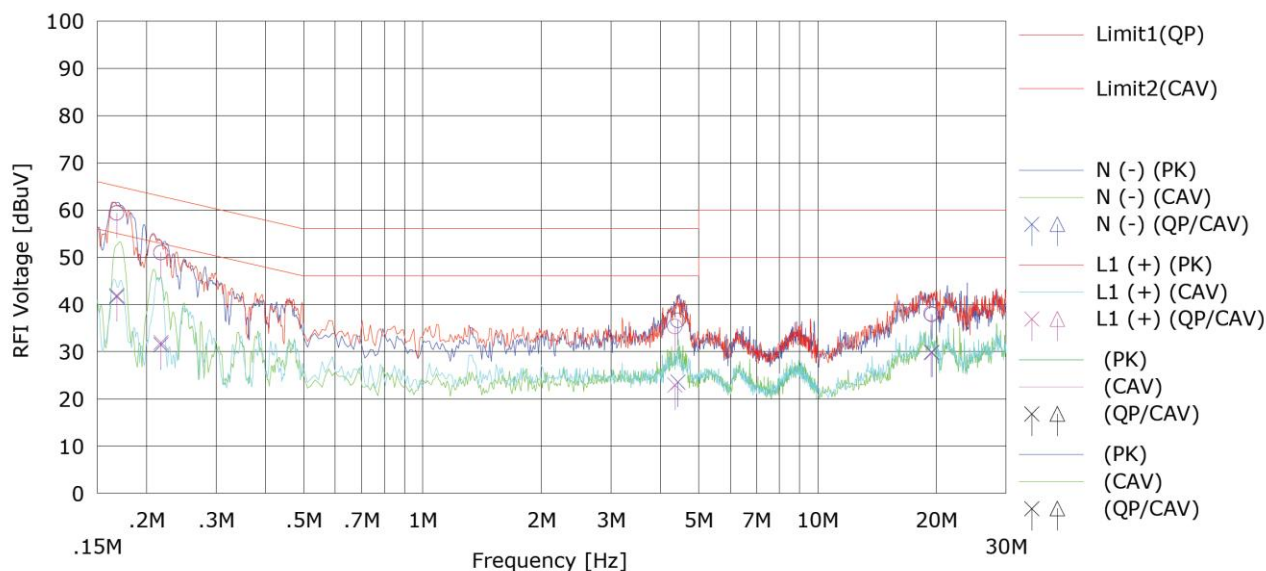
5) The measurements were made with the detector set to PEAK amplitude within a bandwidth of 10 kHz or to QUASIPeak and AVERAGE within a bandwidth of 9 kHz. The EUT was in transmitting mode during the measurements.

4.3.6.3 Result

Comply (measurement data : refer to the next page)

4.3.6.4 Measurement data

Test mode : 802.11n(HT40)_2 437 MHz



NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	CAV [dBuV]		QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	
1	0.16808	39.1	21.5	20.2	59.3	41.6	65.1	55.1	5.8	13.5	N (-)
2	0.21736	31.0	11.5	19.9	50.9	31.5	62.9	52.9	12.0	21.4	N (-)
3	4.42908	16.6	3.5	20.0	36.6	23.5	56.0	46.0	19.4	22.5	N (-)
4	19.46484	17.3	9.3	20.6	37.8	29.8	60.0	50.0	22.2	20.2	N (-)
5	0.16809	39.1	21.7	20.2	59.3	41.9	65.1	55.1	5.8	13.2	L1 (+)
6	0.21750	30.9	12.0	20.0	50.9	31.9	62.9	52.9	12.0	21.0	L1 (+)
7	4.35216	15.3	2.9	20.0	35.3	22.9	56.0	46.0	20.7	23.1	L1 (+)
8	19.37544	17.5	9.3	20.5	38.0	29.9	60.0	50.0	22.0	20.1	L1 (+)

APPENDIX I

TEST EQUIPMENT USED FOR TESTS

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment.

Equipment	Manufacturer	Model	Serial No.	Cal. Date (yy.mm.dd)	Next Cal.Date (yy.mm.dd)
FSV Signal Analyzer	ROHDE&SCHWARZ	FSV30	103370	2025-10-01	2026-10-01
FSV Signal Analyzer	ROHDE&SCHWARZ	FSV40	101010	2025-04-01	2026-04-01
ATTENUATOR	WEINSCHTEL	54A-10	69672	2025-09-30	2026-09-30
Digital MultiMeter	HP	34401A	US36025428	2025-01-02	2026-01-02
Power Sensor	KEYSIGHT	U2022XA	MY55320008	2025-08-07	2026-08-07
DC POWER SUPPLY	AGILENT	E3632A	MY51160055	2025-04-01	2026-04-01
Signal Generator	ROHDE&SCHWARZ	SMB100A	178384	2025-10-01	2026-10-01
High pass filter	Wainwright Instruments GmbH	WHKX10-2580-3000-18000-60SS	14	2025-01-03	2026-01-03
RF Cable	Radiall	1800920922000KE	CON-R006	2025-07-21	2026-01-21
EMI Test Receiver	ROHDE&SCHWARZ	ESU40	100445	2025-09-01	2026-09-01
BiLog Antenna	Schwarzbeck	VULB9168	00821	2025-03-05	2027-03-05
ATTENUATOR	JFW	50F-006	6 dB-3	2025-03-04	2026-03-04
Antenna Mast	Innco	MA4640-XPET-0800	578	-	-
Antenna Mast	TOKIN	5977	-	-	-
Controller	TOKIN	5909L	141909L-1	-	-
Controller	Innco	CO3000	40040217	-	-
Turn Table	TOKIN	5983-1.5	-	-	-
Active Loop H-Field	ETS	6502	150598	2025-06-05	2027-06-05
Double Ridge Horn Antenna	ETS	3117	00168719	2025-07-03	2026-07-03
Double Ridge Horn Antenna	A.H Systems, Inc	SAS-574	465	2025-04-02	2027-04-02
PREAMPLIFIER	Agilent	8449B	3008A02110	2025-01-03	2026-01-03
Preamplifier	TSJ	MLA-10k01-b01-27	1870367	2025-03-27	2026-03-27
PREAMPLIFIER	A.H Systems, Inc	PAM-1840VH	166	2025-01-03	2026-01-03
EMI Test Receiver	ROHDE&SCHWARZ	ESR7	101440	2025-09-01	2026-09-01
LISN	ROHDE&SCHWARZ	ENV216	101883	2025-03-26	2026-03-26
Pulse Limiter	Schwarzbeck	VTSD 9561-F	00189	2025-03-26	2026-03-26
LISN	ROHDE&SCHWARZ	NSLK8127	877	2025-03-26	2026-03-26

-End-