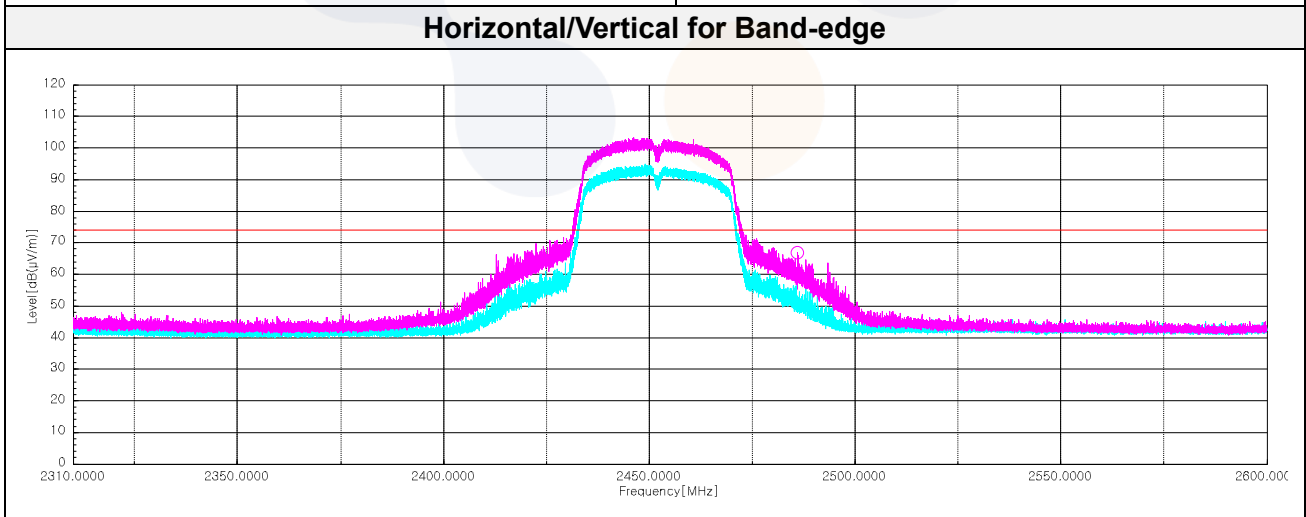
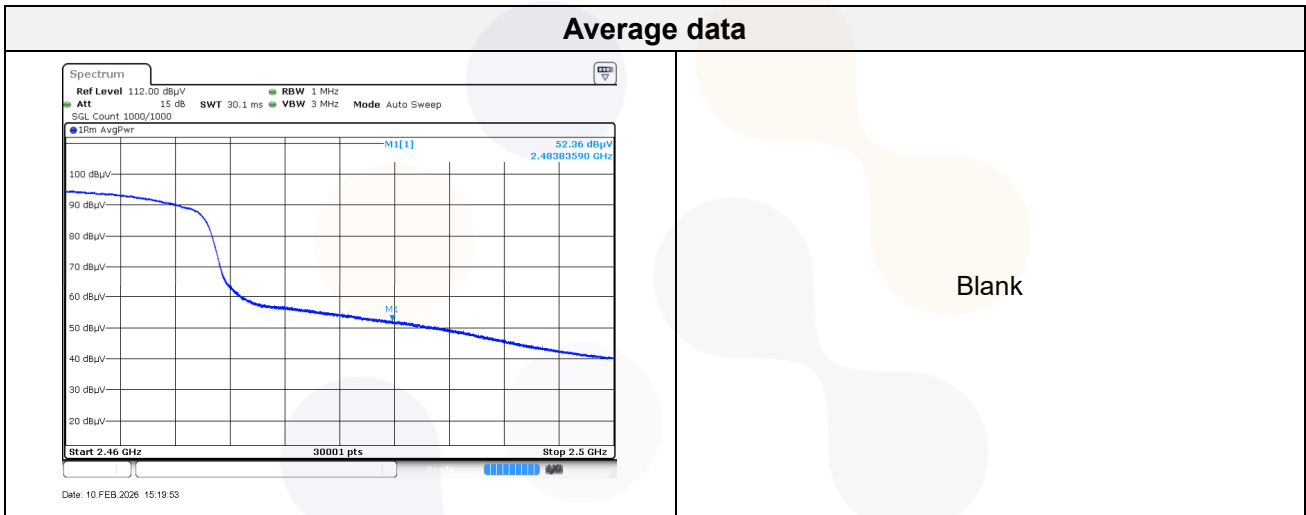
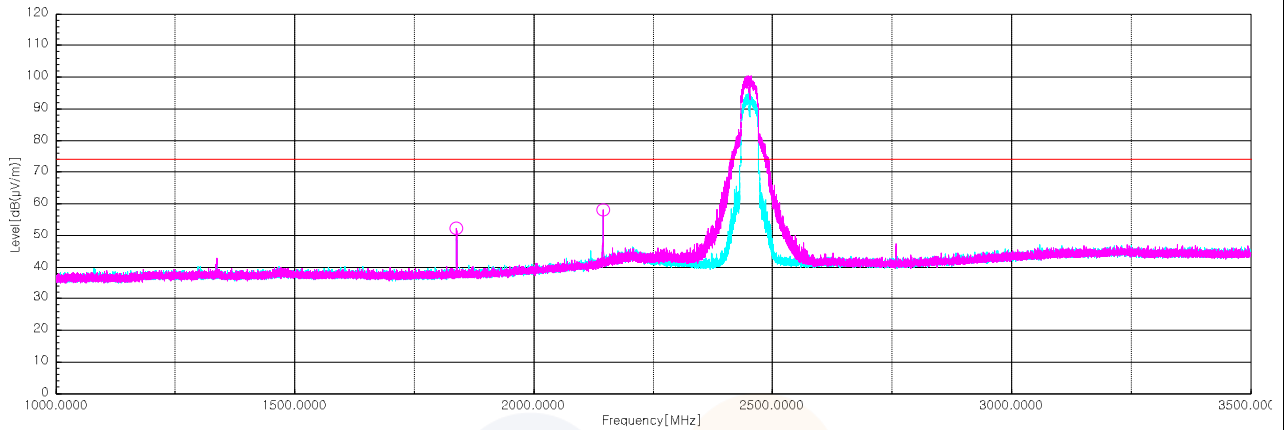


802.11n HT40_2 452 MHz

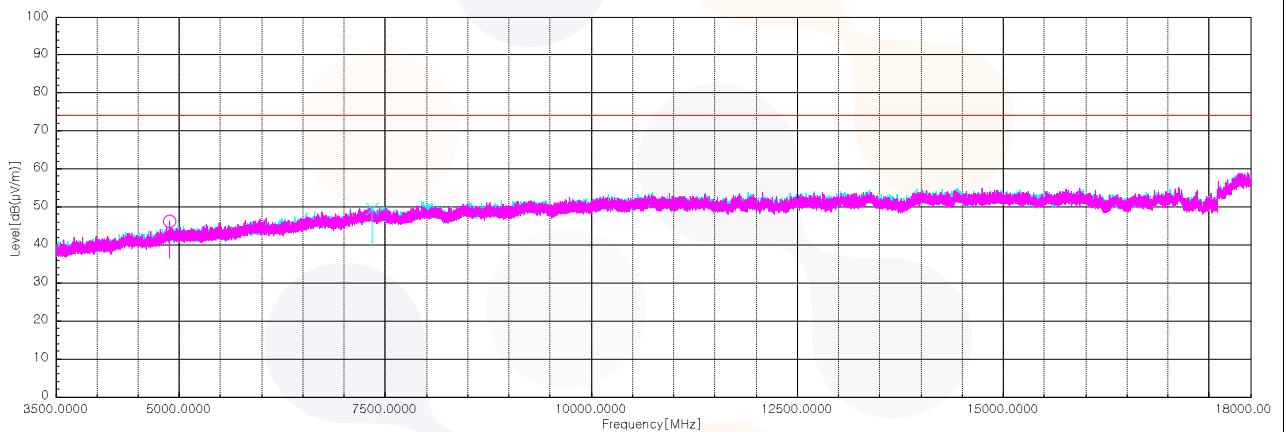
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
2 145.58	H	75.80	27.14	-44.79	-	58.15	74.00	15.85
2 483.84 ¹⁾	H	68.90	27.74	-29.80	-	66.84	74.00	7.16
4 887.65 ¹⁾	H	55.20	32.73	-41.62	-	46.31	74.00	27.69
7 342.02 ¹⁾	V	52.10	36.42	-38.95	-	49.57	74.00	24.43
Average Data								
2 483.84 ¹⁾	H	52.36	27.74	-29.80	0.55	50.85	54.00	3.15



Horizontal/Vertical for 1 GHz ~ 3.5 GHz

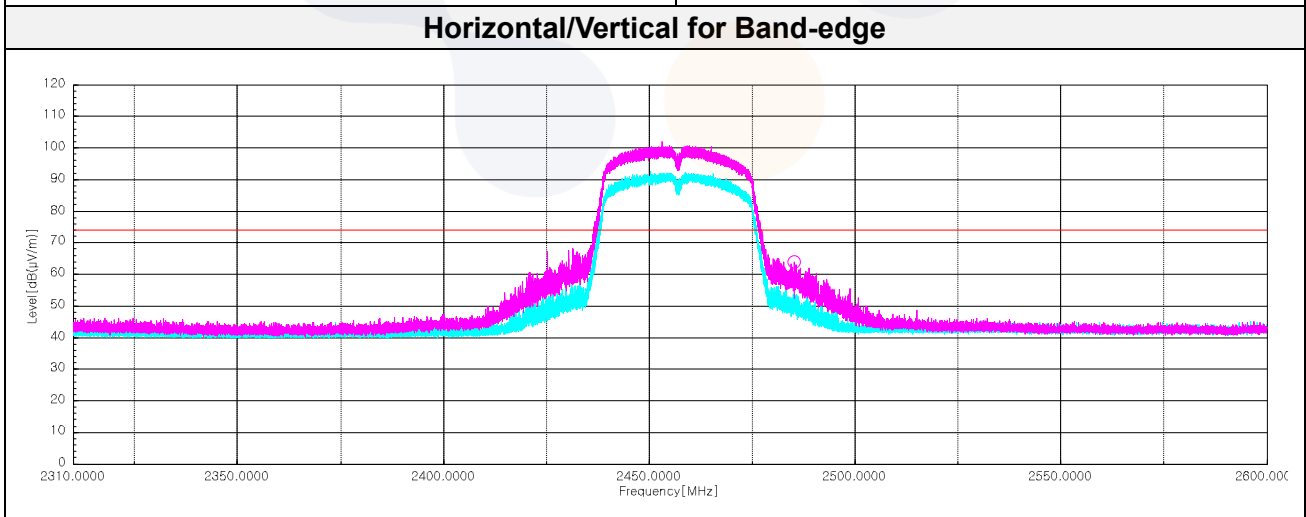
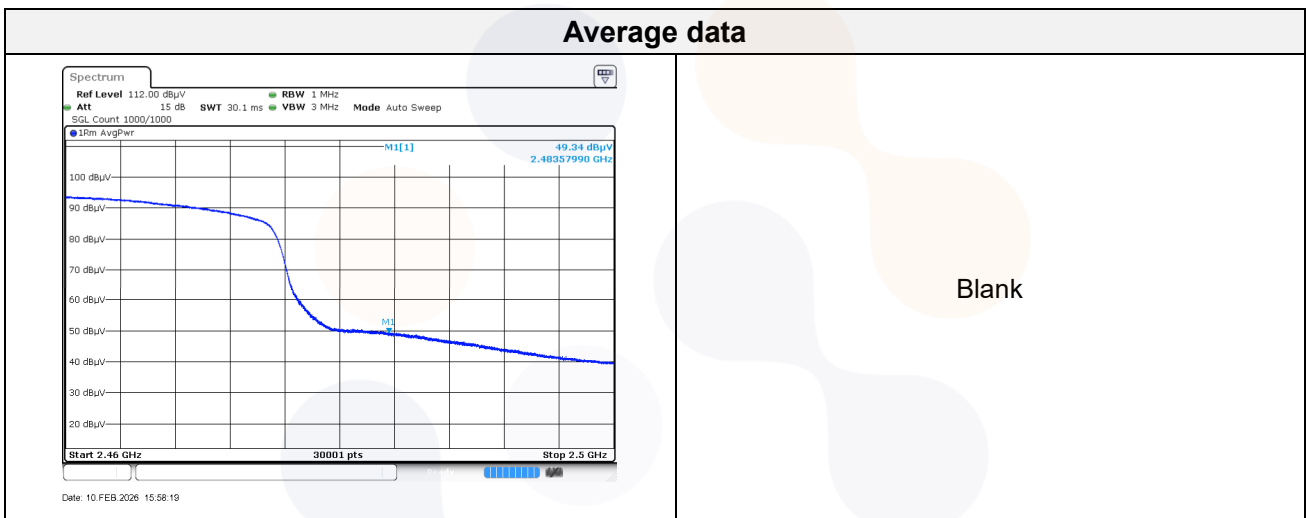


Horizontal/Vertical for 3.5 GHz ~ 18 GHz

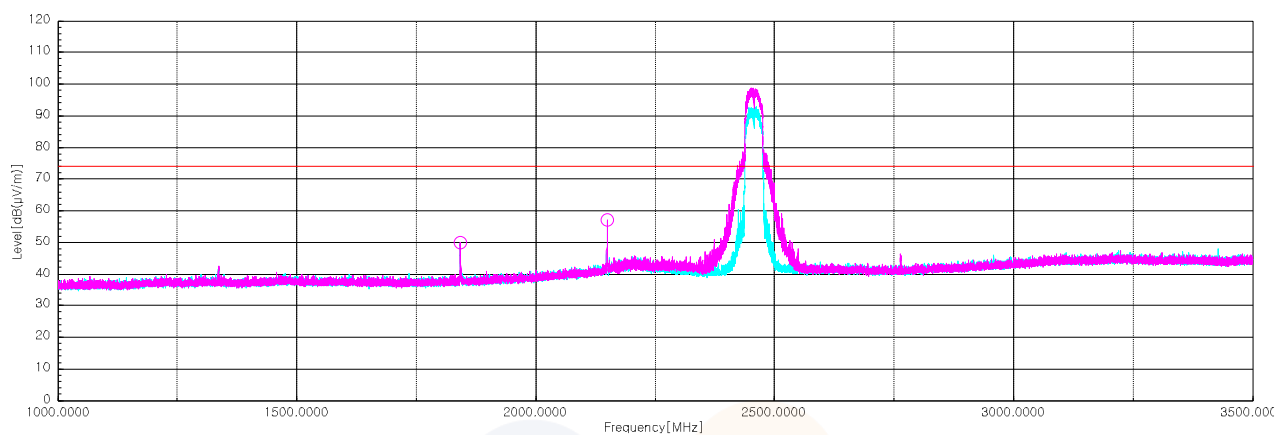


802.11n HT40_2 457 MHz

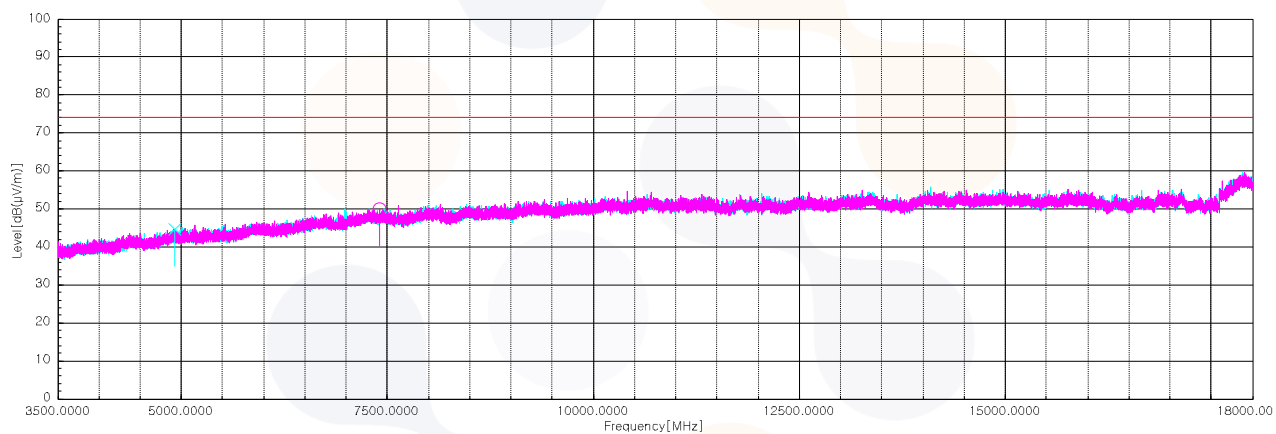
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
2 150.00	H	74.80	27.10	-44.78	-	57.12	74.00	16.88
2 483.58 ¹⁾	H	65.80	27.74	-29.80	-	63.74	74.00	10.26
4 915.68 ¹⁾	V	53.60	32.63	-41.55	-	44.68	74.00	29.32
7 400.02 ¹⁾	H	52.80	36.30	-38.98	-	50.12	74.00	23.88
Average Data								
2 483.58 ¹⁾	H	49.34	27.74	-29.80	0.55	47.83	54.00	6.17



Horizontal/Vertical for 1 GHz ~ 3.5 GHz

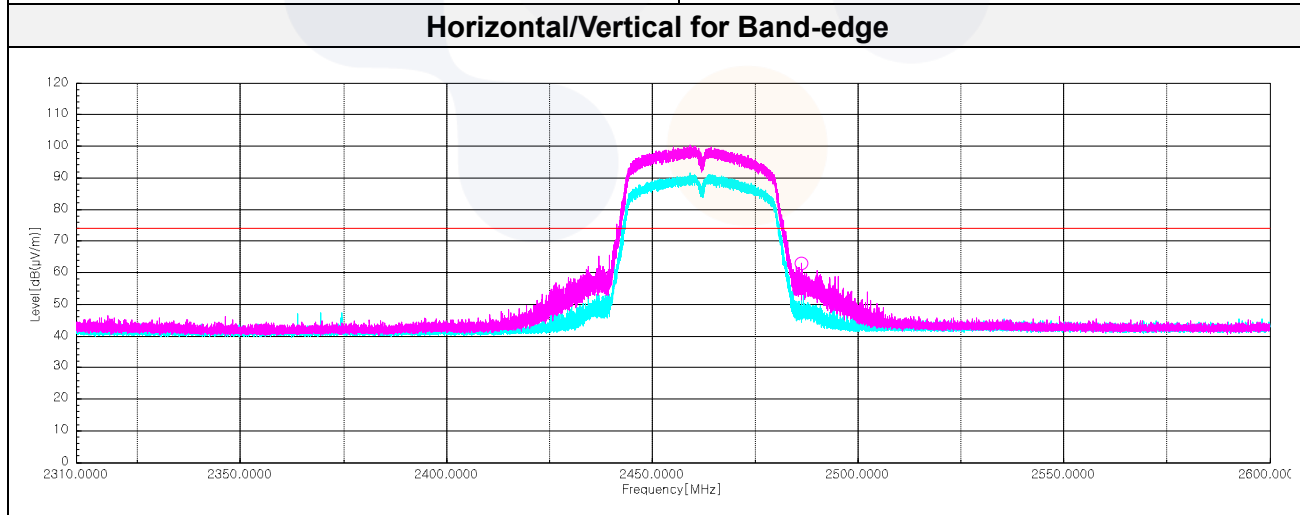
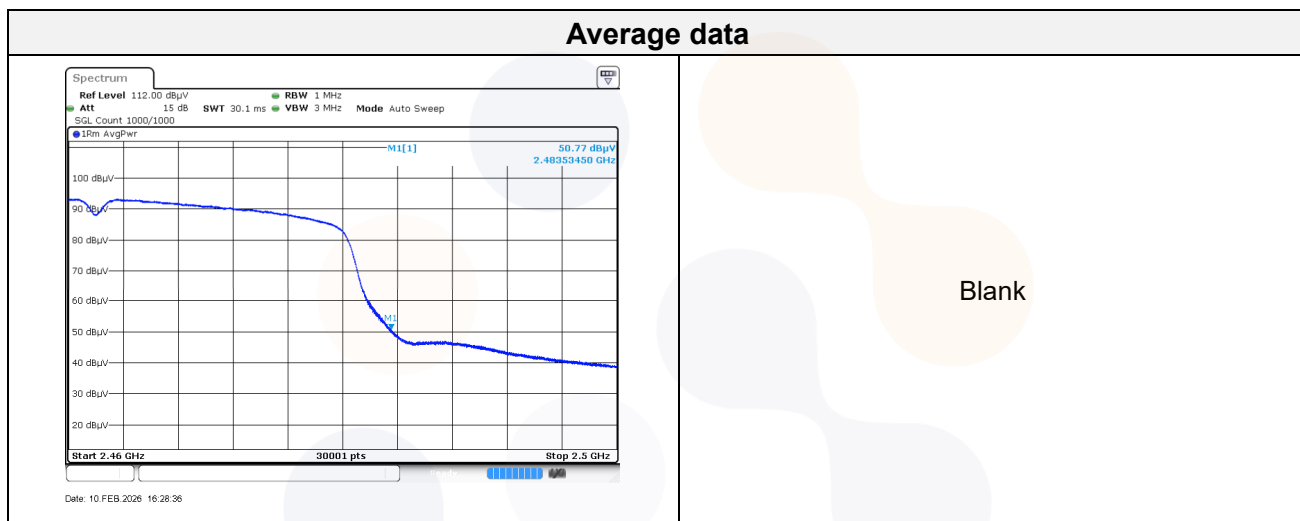


Horizontal/Vertical for 3.5 GHz ~ 18 GHz

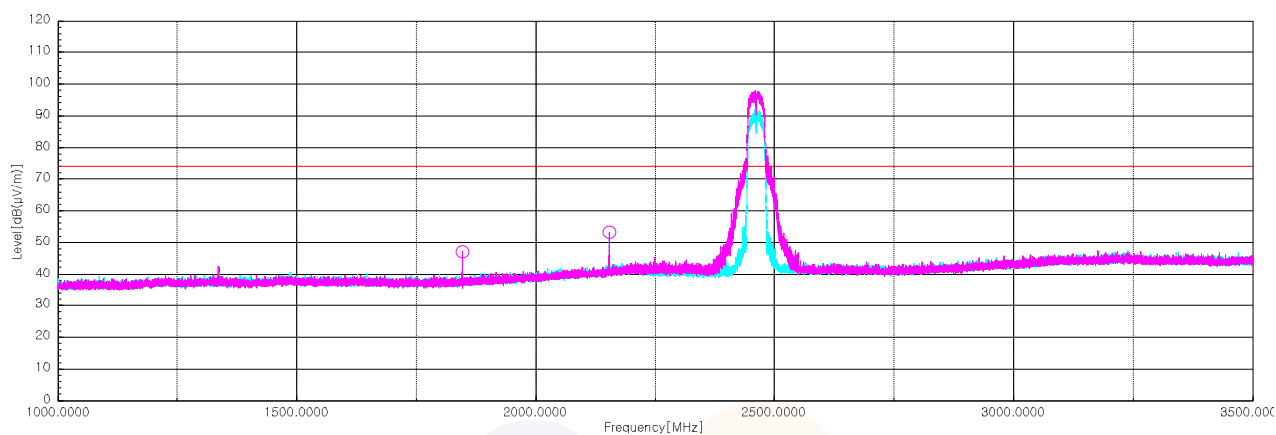


802.11n HT40_2 462 MHz

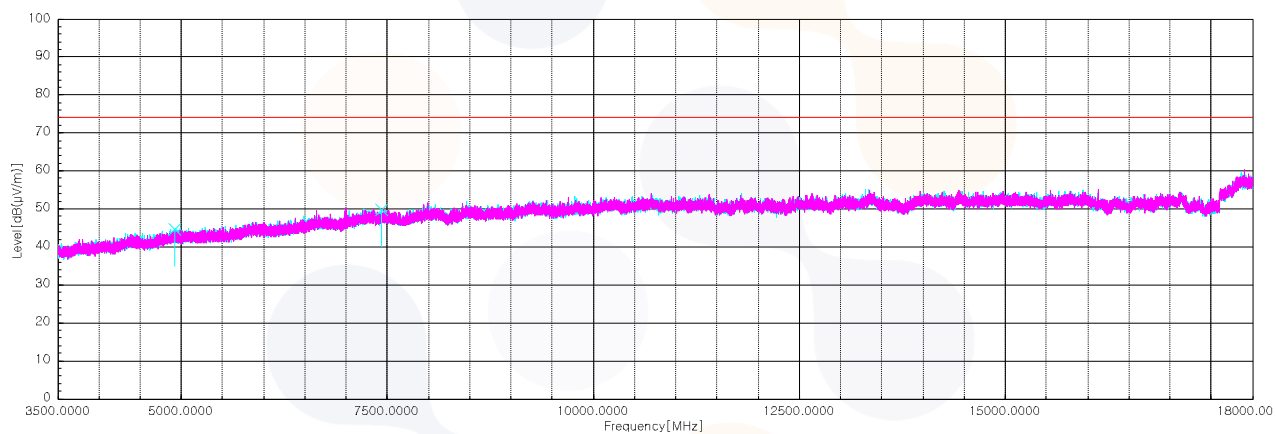
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
2 483.53 ¹⁾	H	64.90	27.74	-29.80	-	62.84	74.00	11.16
4 922.45 ¹⁾	V	53.30	32.64	-41.53	-	44.41	74.00	29.59
7 434.82 ¹⁾	V	52.50	36.23	-39.00	-	49.73	74.00	24.27
Average Data								
2 483.53 ¹⁾	H	50.77	27.74	-29.80	0.55	49.26	54.00	4.74



Horizontal/Vertical for 1 GHz ~ 3.5 GHz



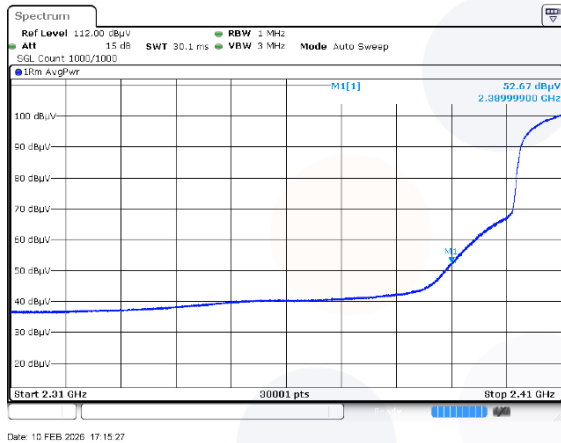
Horizontal/Vertical for 3.5 GHz ~ 18 GHz



802.11ax HE20_2 412 MHz

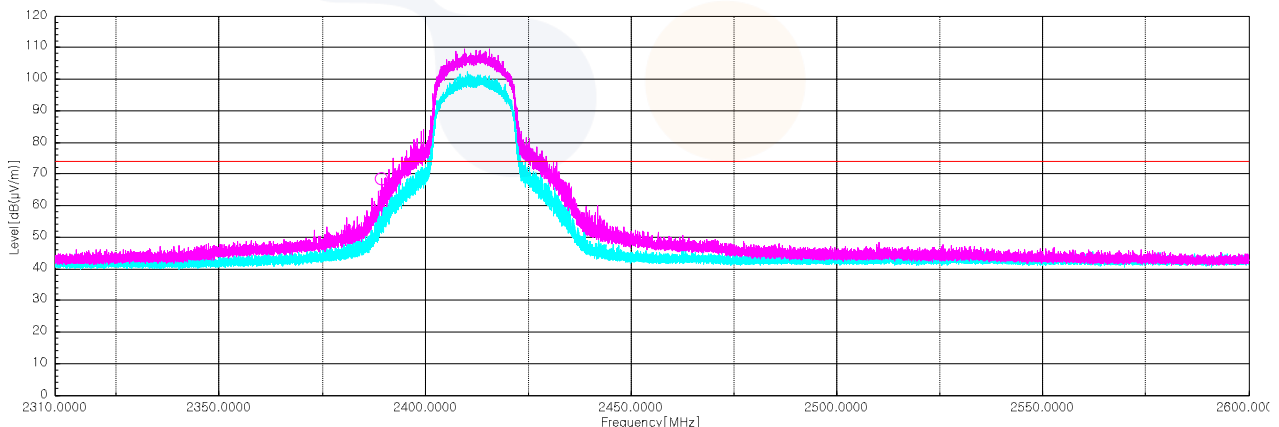
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
2 390.00 ¹⁾	H	71.40	27.00	-29.93	-	68.47	74.00	5.53
4 820.47 ¹⁾	H	59.40	32.28	-41.77	-	49.91	74.00	24.09
7 135.15	V	52.10	36.34	-38.96	-	49.48	74.00	24.52
Average Data								
2 390.00 ¹⁾	H	52.67	27.00	-29.93	0.63	50.37	54.00	3.63

Average data

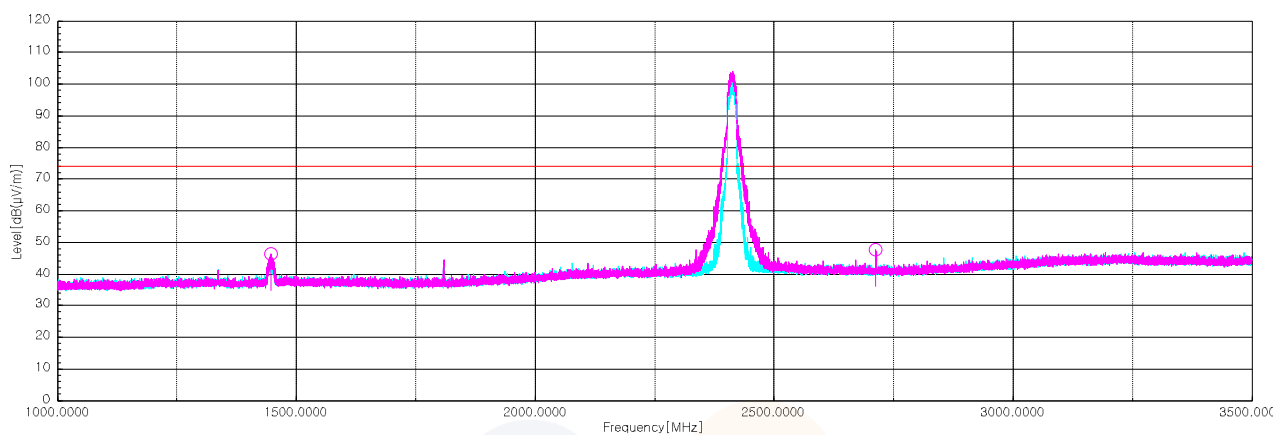


Blank

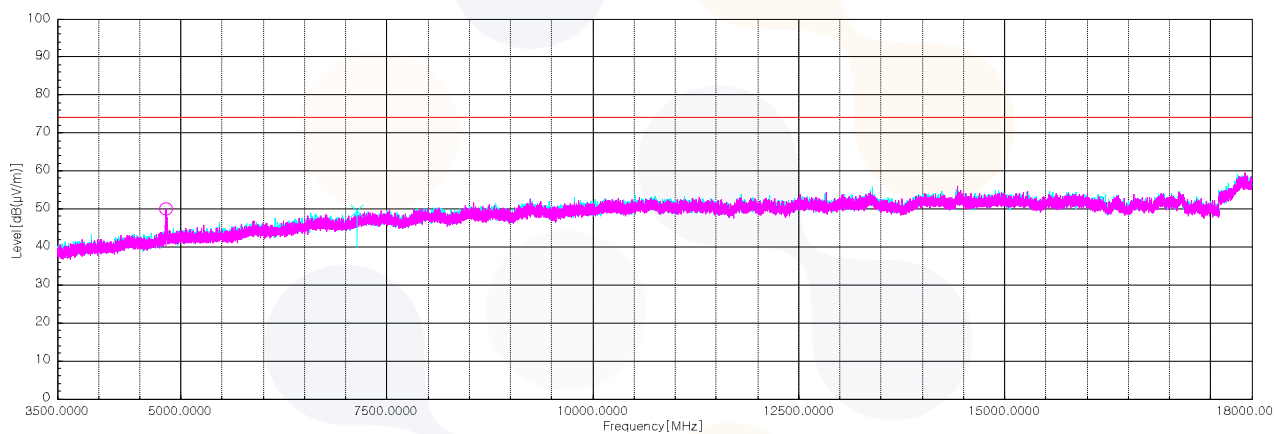
Horizontal/Vertical for Band-edge



Horizontal/Vertical for 1 GHz ~ 3.5 GHz



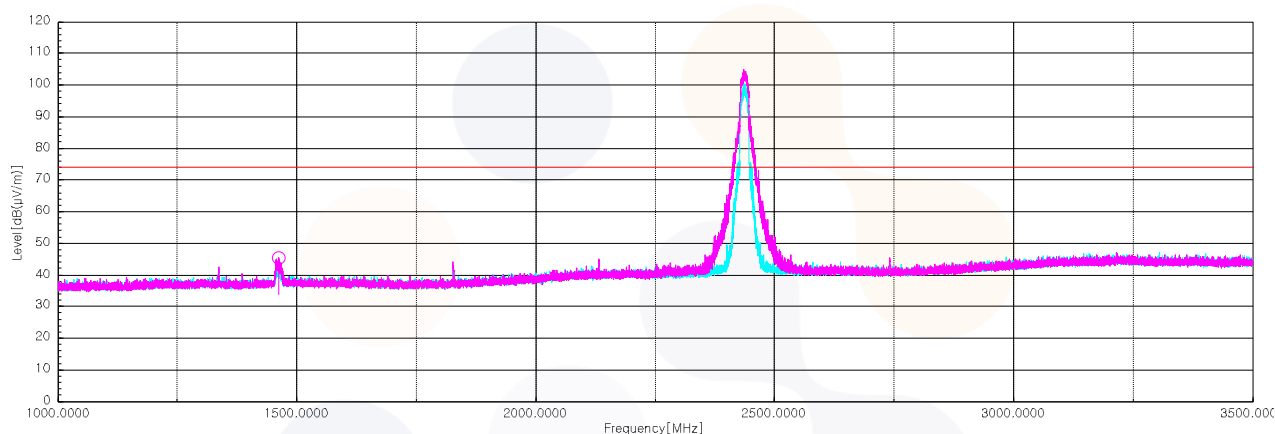
Horizontal/Vertical for 3.5 GHz ~ 18 GHz



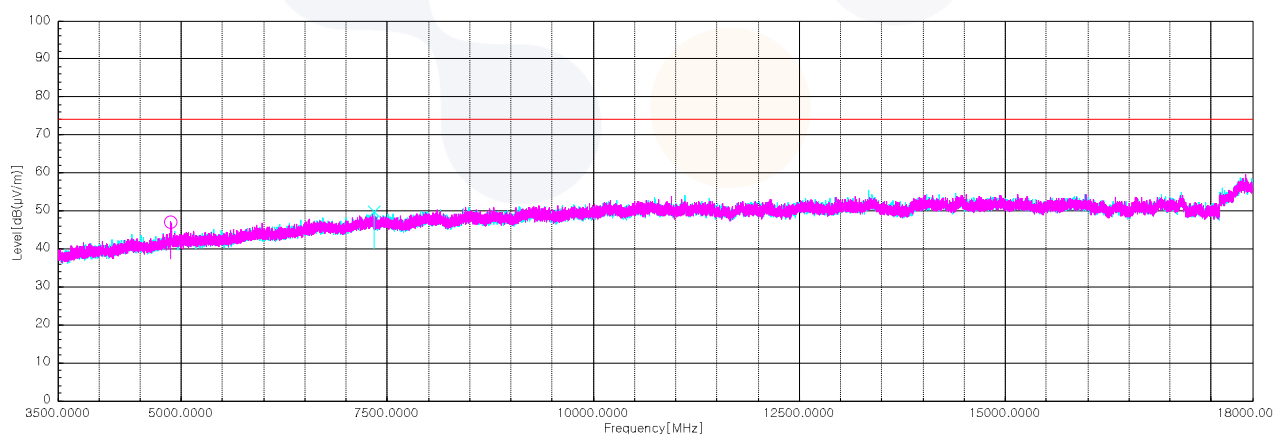
802.11ax HE20_2 437 MHz

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
4 867.83 ¹⁾	H	56.10	32.61	-41.66	-	47.05	74.00	26.95
7 346.37 ¹⁾	V	52.20	36.41	-38.95	-	49.66	74.00	24.34
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Horizontal/Vertical for 1 GHz ~ 3.5 GHz

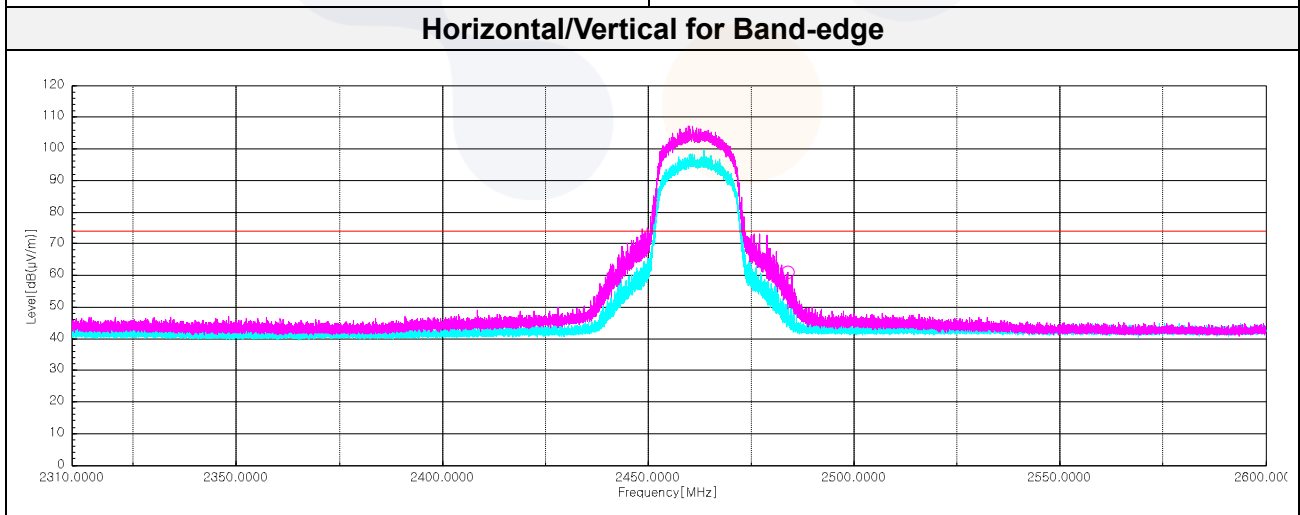
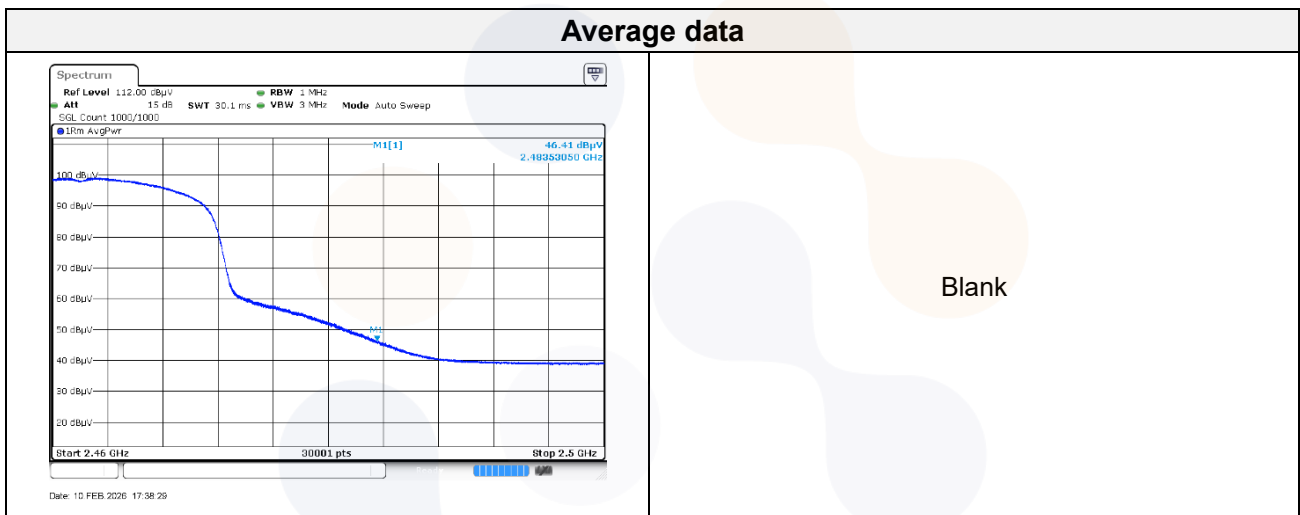


Horizontal/Vertical for 3.5 GHz ~ 18 GHz

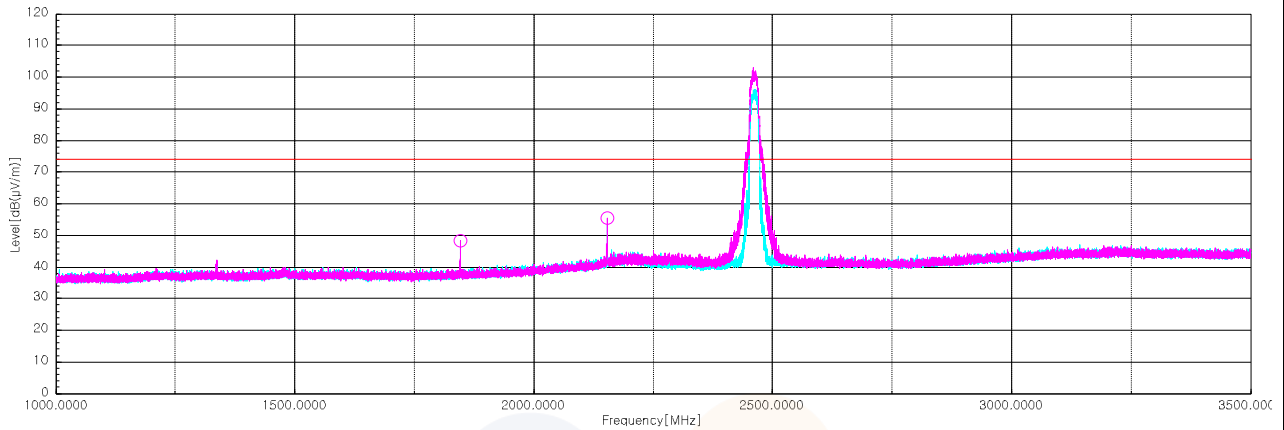


802.11ax HE20_2 462 MHz

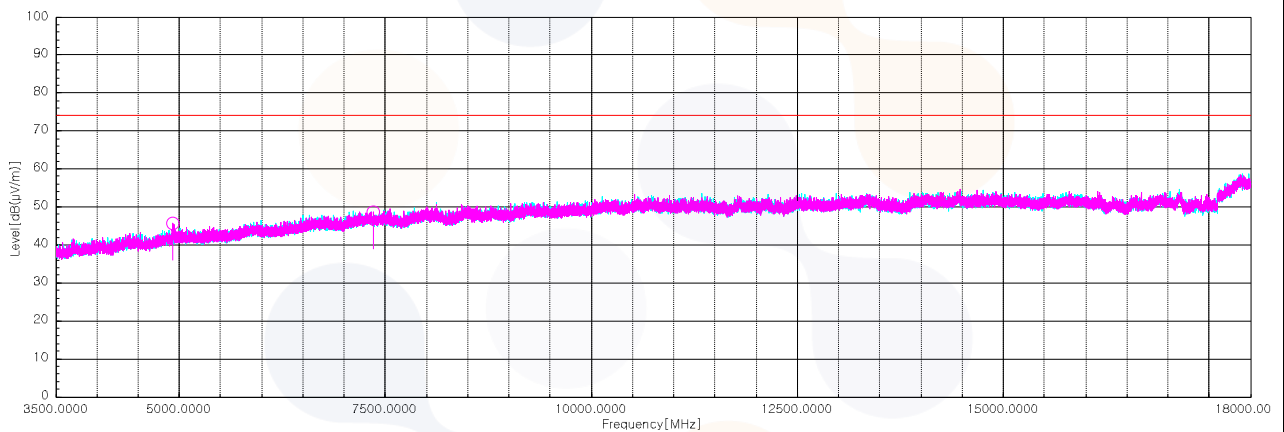
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
2 154.17	H	73.20	27.06	-44.78	-	55.48	74.00	18.52
2 483.53 ¹⁾	H	63.10	27.74	-29.80	-	61.04	74.00	12.96
4 915.20 ¹⁾	H	54.40	32.63	-41.55	-	45.48	74.00	28.52
7 359.90 ¹⁾	H	51.40	36.38	-38.96	-	48.82	74.00	25.18
Average Data								
2 483.53 ¹⁾	H	46.41	27.74	-29.80	0.63	44.98	54.00	9.02



Horizontal/Vertical for 1 GHz ~ 3.5 GHz

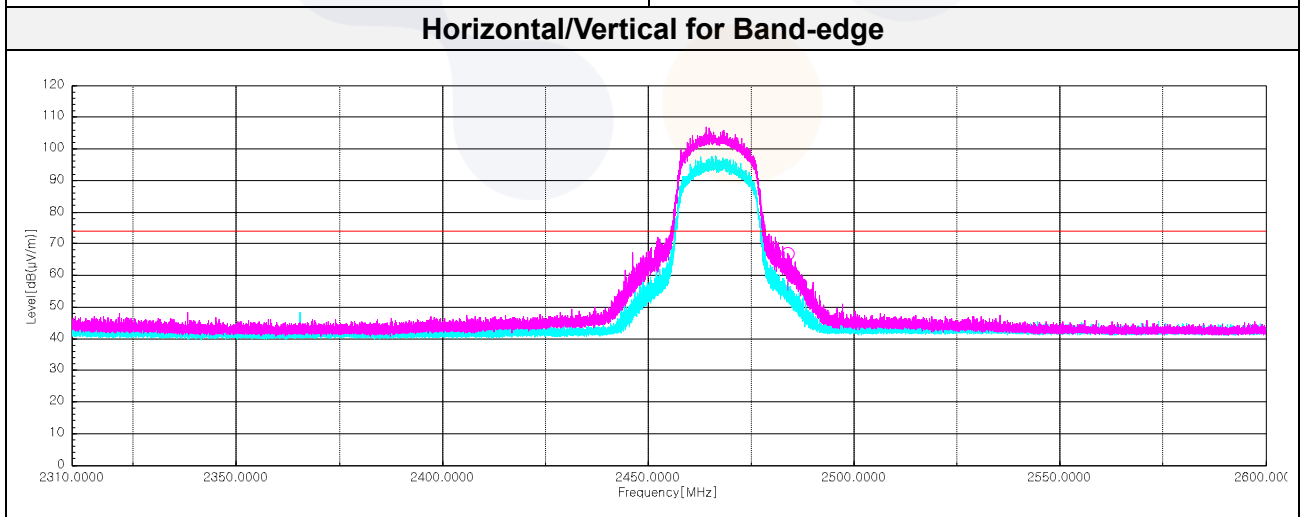
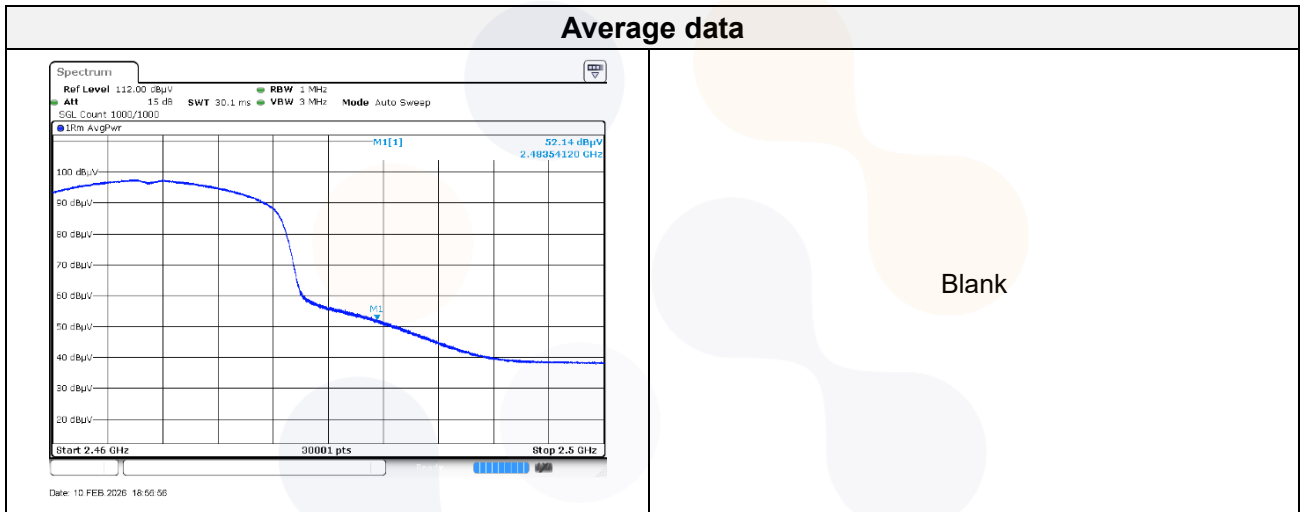


Horizontal/Vertical for 3.5 GHz ~ 18 GHz

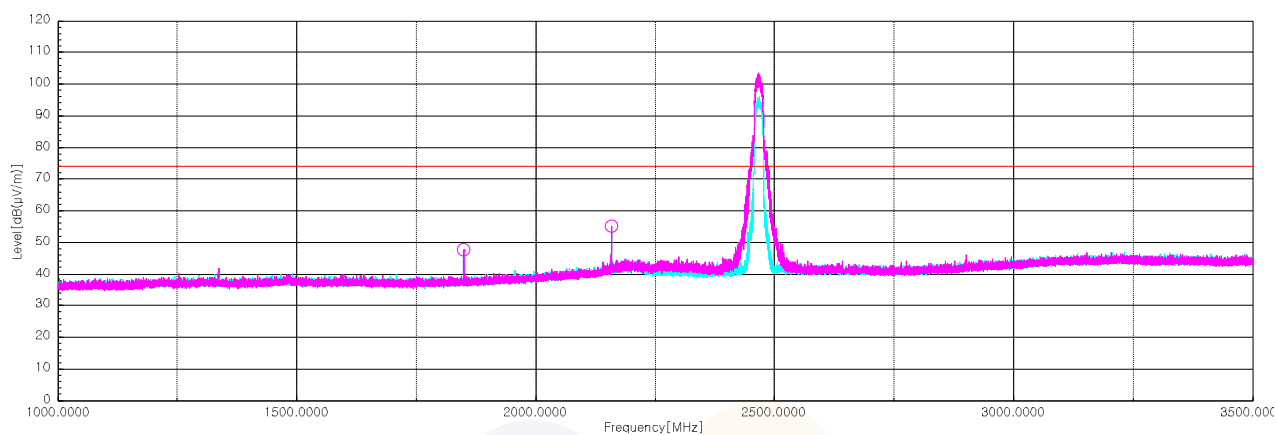


802.11ax HE20_2 467 MHz

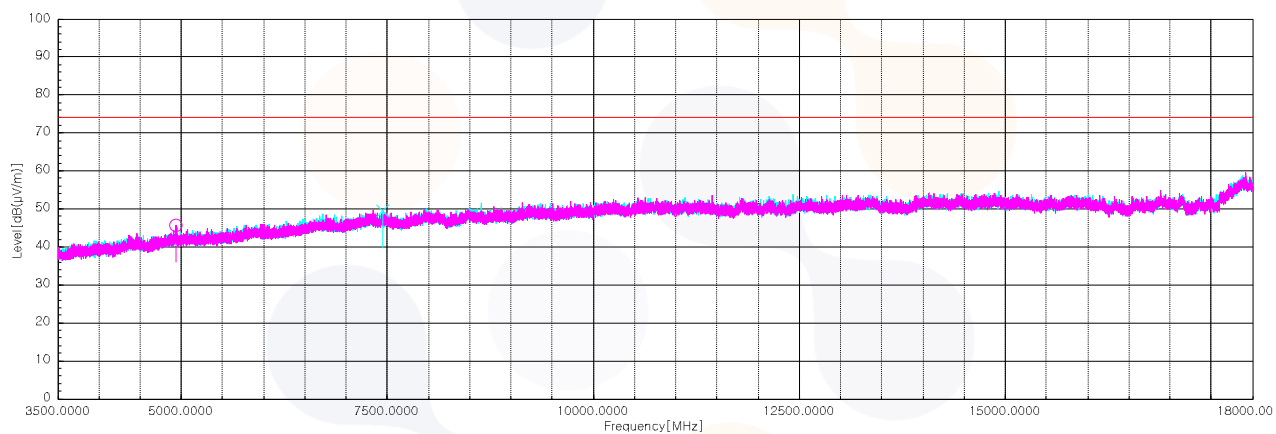
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
2 158.58	H	72.70	27.01	-44.78	-	54.93	74.00	19.07
2 483.54 ¹⁾	H	68.80	27.74	-29.80	-	66.74	74.00	7.26
4 932.12 ¹⁾	H	54.60	32.66	-41.51	-	45.75	74.00	28.25
7 449.80 ¹⁾	V	52.10	36.20	-39.01	-	49.29	74.00	24.71
Average Data								
2 483.54 ¹⁾	H	52.14	27.74	-29.80	0.63	50.71	54.00	3.29



Horizontal/Vertical for 1 GHz ~ 3.5 GHz

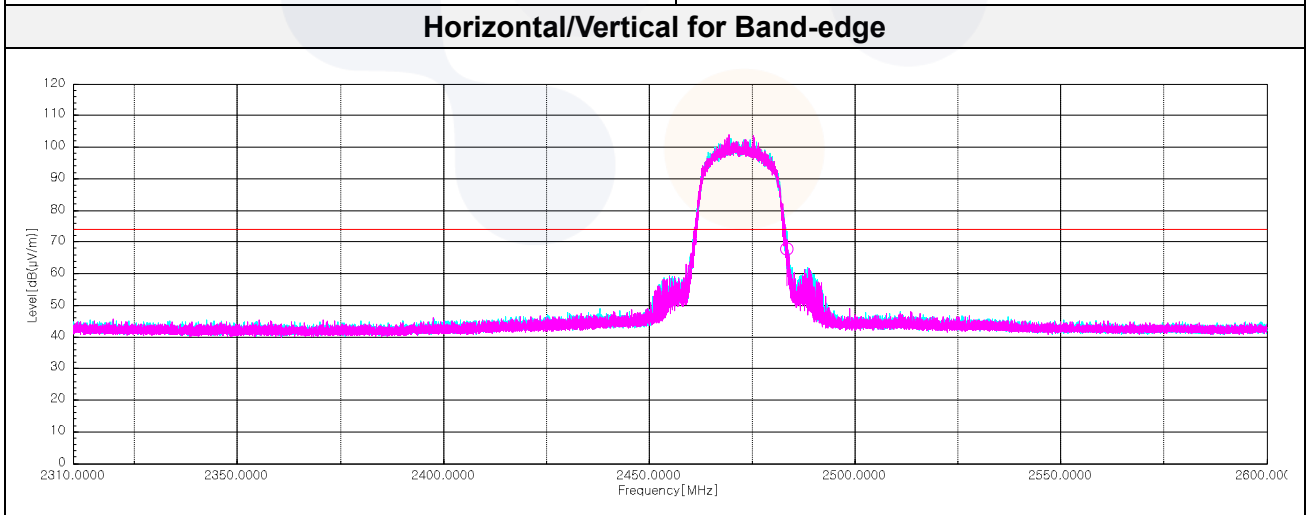
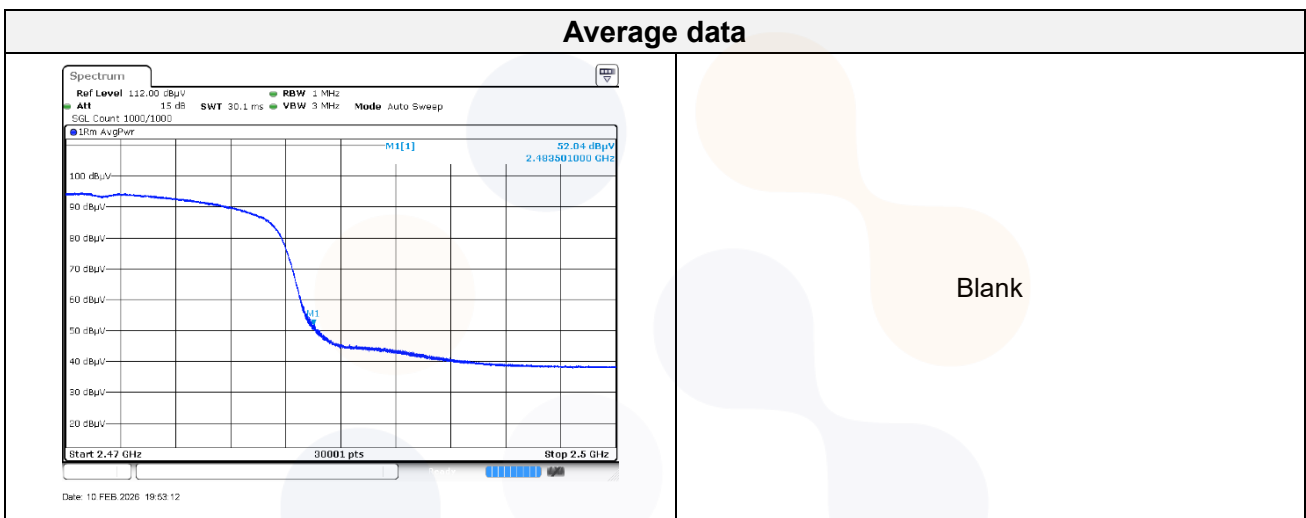


Horizontal/Vertical for 3.5 GHz ~ 18 GHz

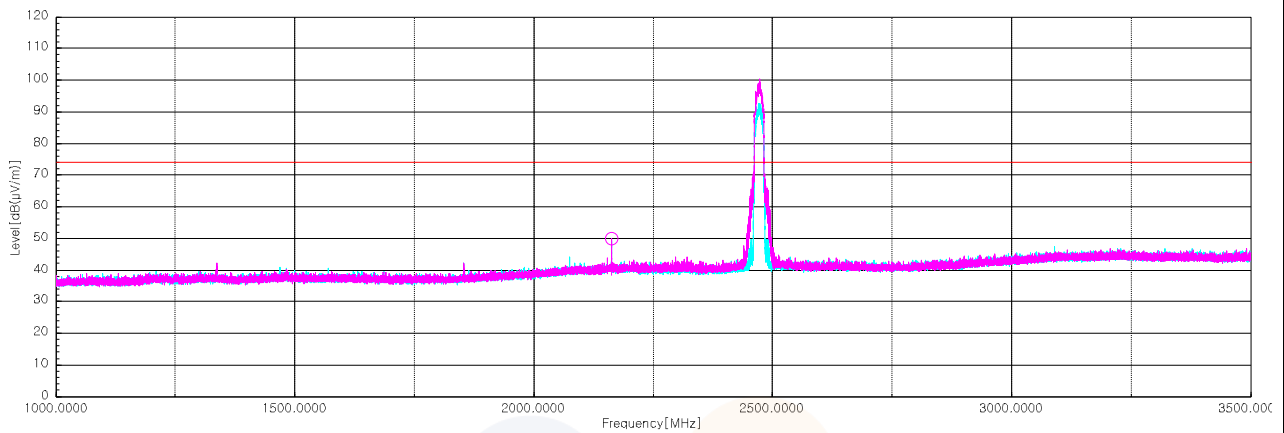


802.11ax HE20_2 472 MHz

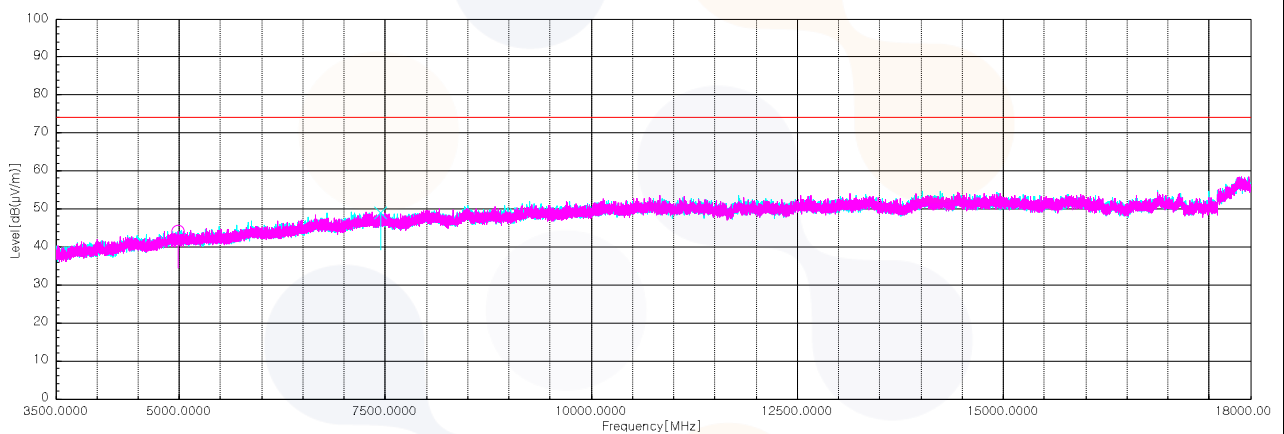
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
2 483.50 ¹⁾	H	69.80	27.74	-29.80	-	67.74	74.00	6.26
4 987.70 ¹⁾	H	52.50	32.95	-41.38	-	44.07	74.00	29.93
7 447.87 ¹⁾	V	51.50	36.20	-39.01	-	48.69	74.00	25.31
Average Data								
2 483.50 ¹⁾	H	52.04	27.74	-29.80	0.63	50.61	54.00	3.39



Horizontal/Vertical for 1 GHz ~ 3.5 GHz

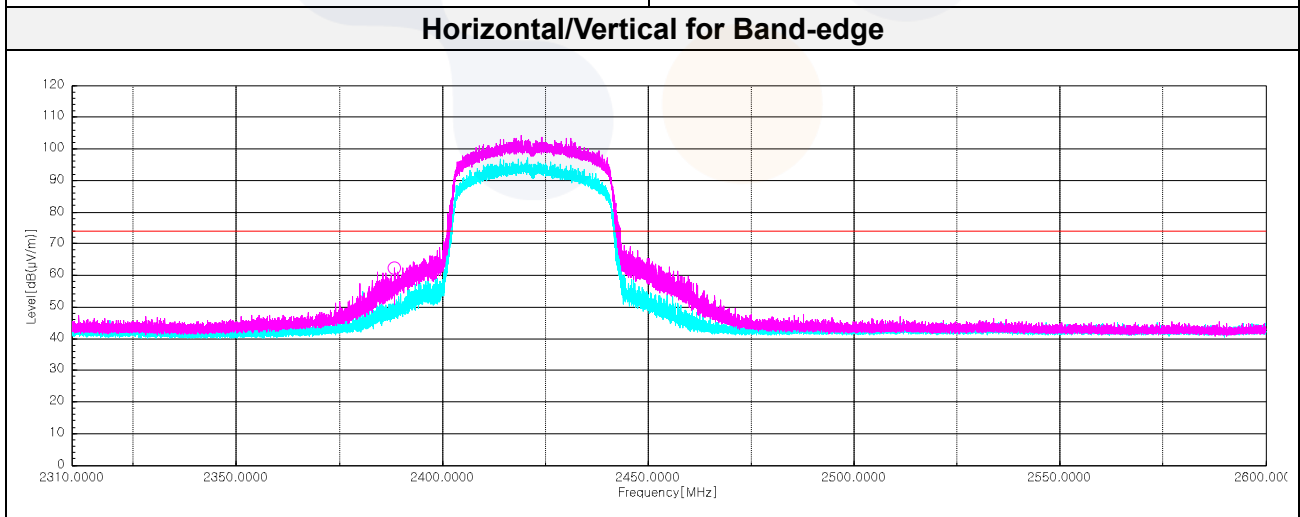
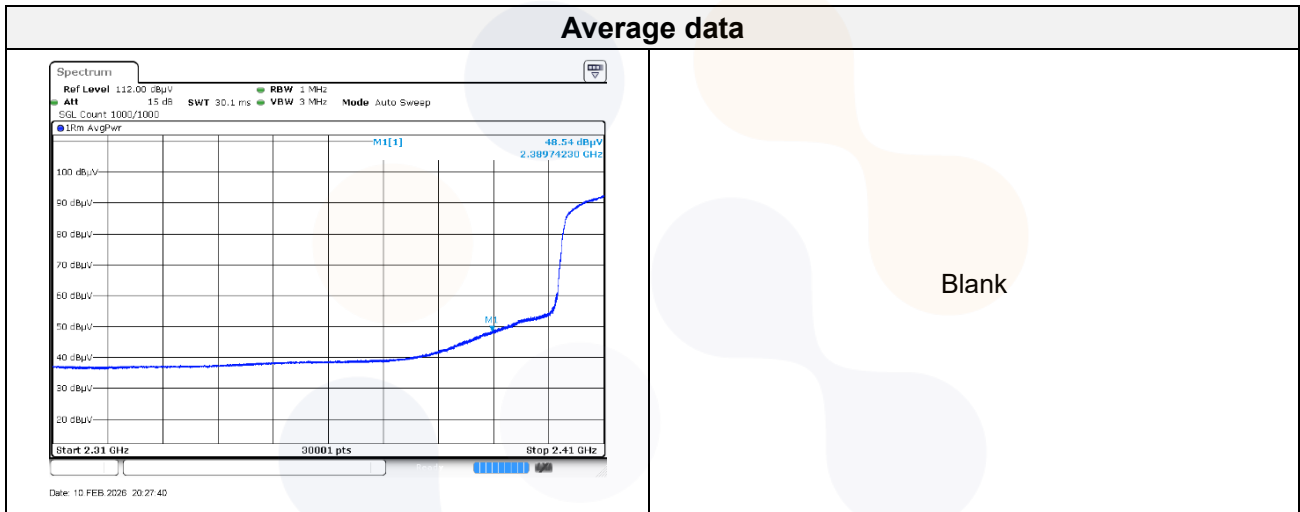


Horizontal/Vertical for 3.5 GHz ~ 18 GHz

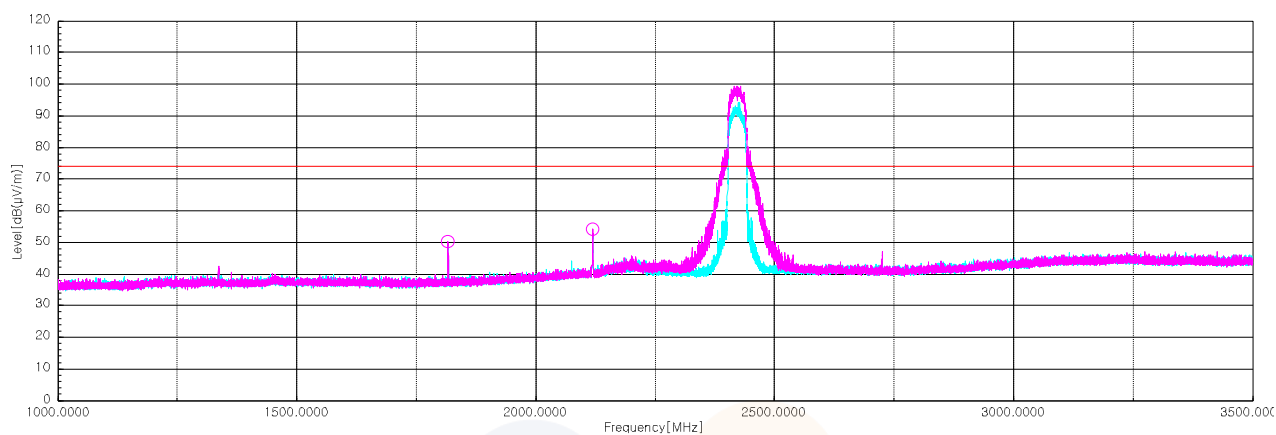


802.11ax HE40_2 422 MHz

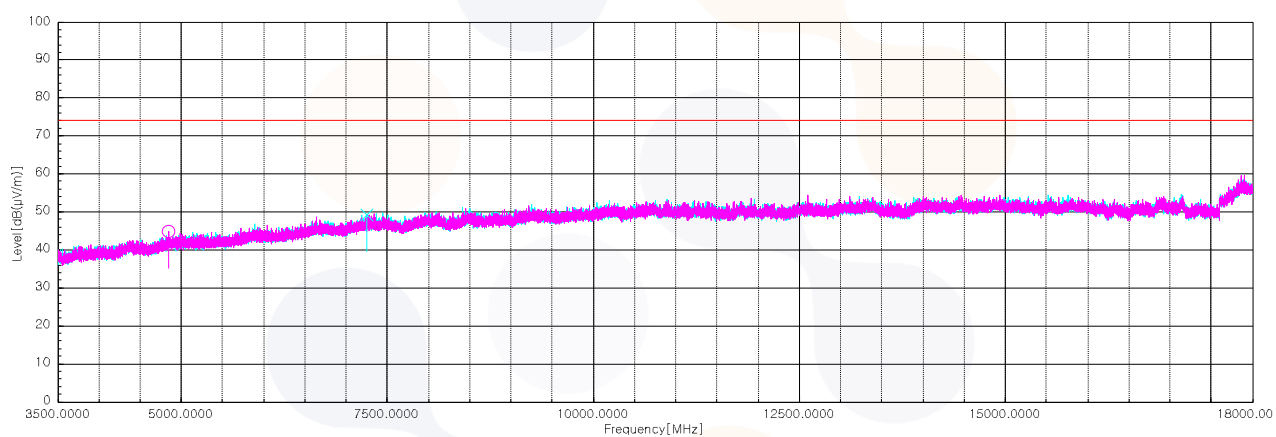
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
2 119.33	H	71.80	27.31	-44.81	-	54.30	74.00	19.70
2 389.74 ¹⁾	H	65.20	27.00	-29.93	-	62.27	74.00	11.73
4 839.80 ¹⁾	H	54.10	32.36	-41.73	-	44.73	74.00	29.27
7 253.57 ¹⁾	V	51.40	36.61	-38.90	-	49.11	74.00	24.89
Average Data								
2 389.74 ¹⁾	H	48.54	27.00	-29.93	0.79	46.40	54.00	7.60



Horizontal/Vertical for 1 GHz ~ 3.5 GHz



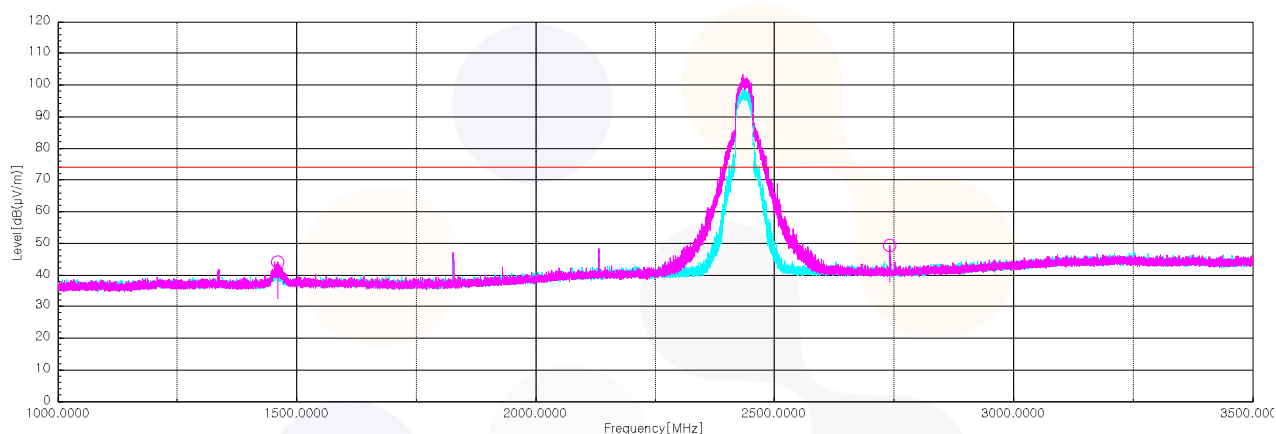
Horizontal/Vertical for 3.5 GHz ~ 18 GHz



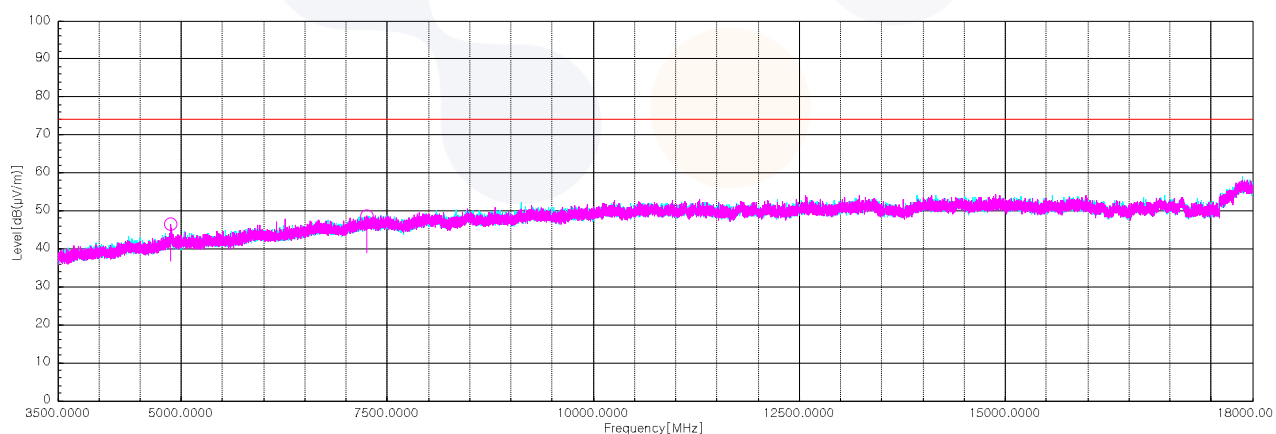
802.11ax HE40_2 437 MHz

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
4 873.63 ¹⁾	H	55.50	32.64	-41.65	-	46.49	74.00	27.51
7 250.18 ¹⁾	H	51.00	36.60	-38.90	-	48.70	74.00	25.30
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Horizontal/Vertical for 1 GHz ~ 3.5 GHz

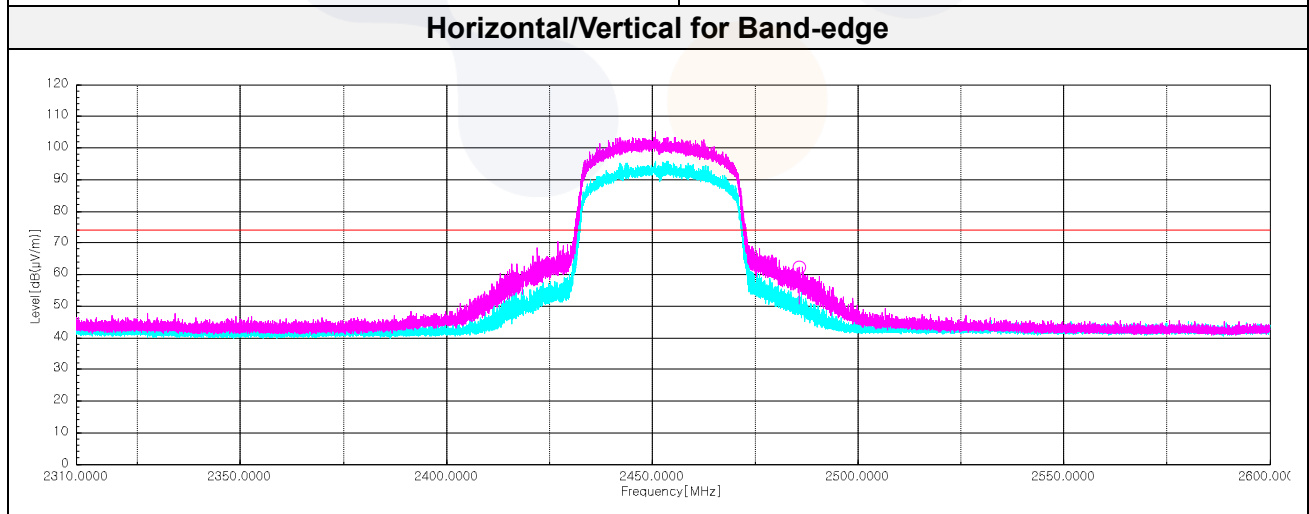
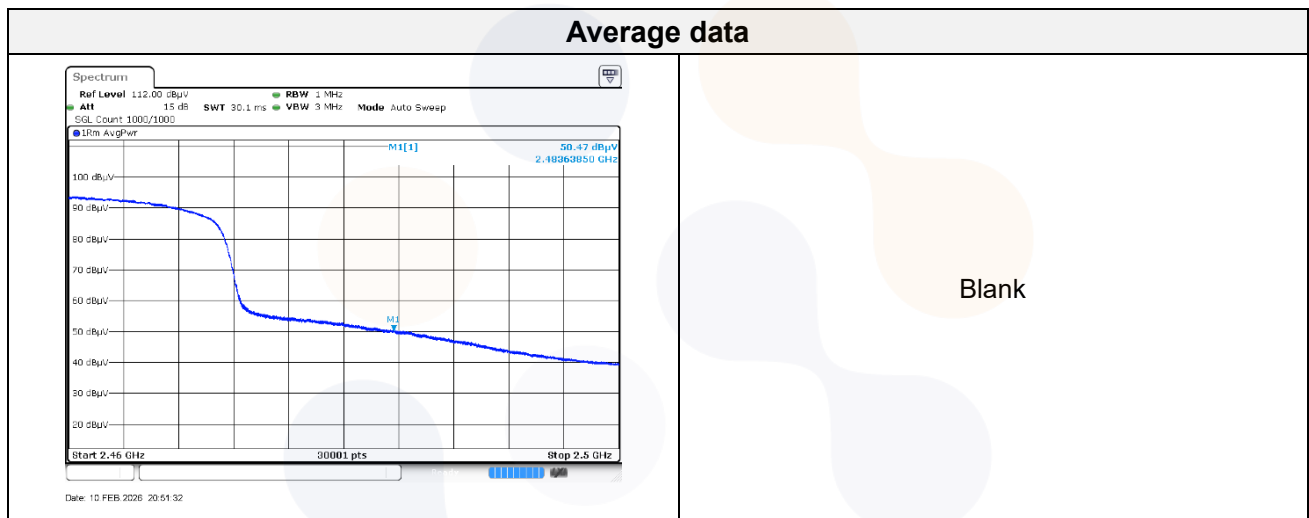


Horizontal/Vertical for 3.5 GHz ~ 18 GHz

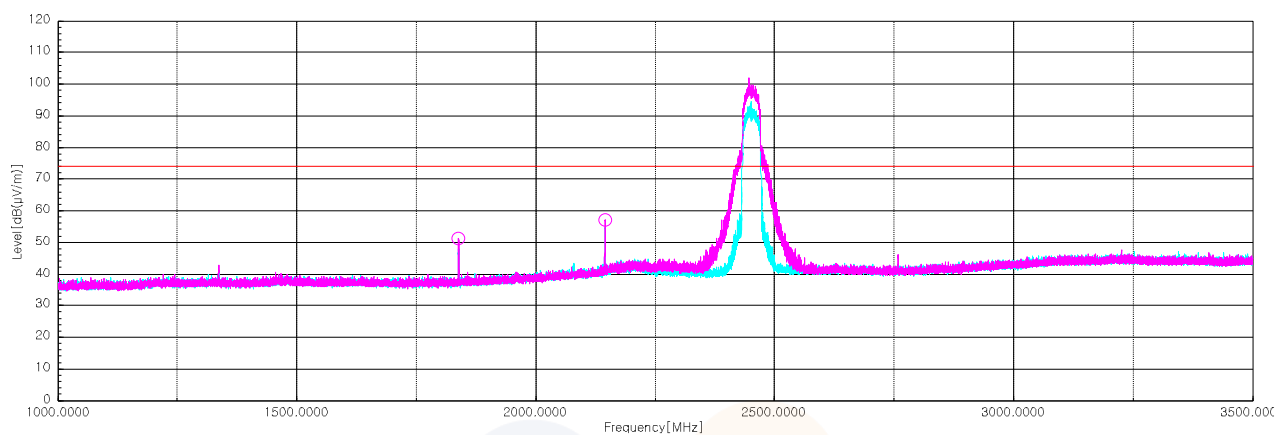


802.11ax HE40_2 452 MHz

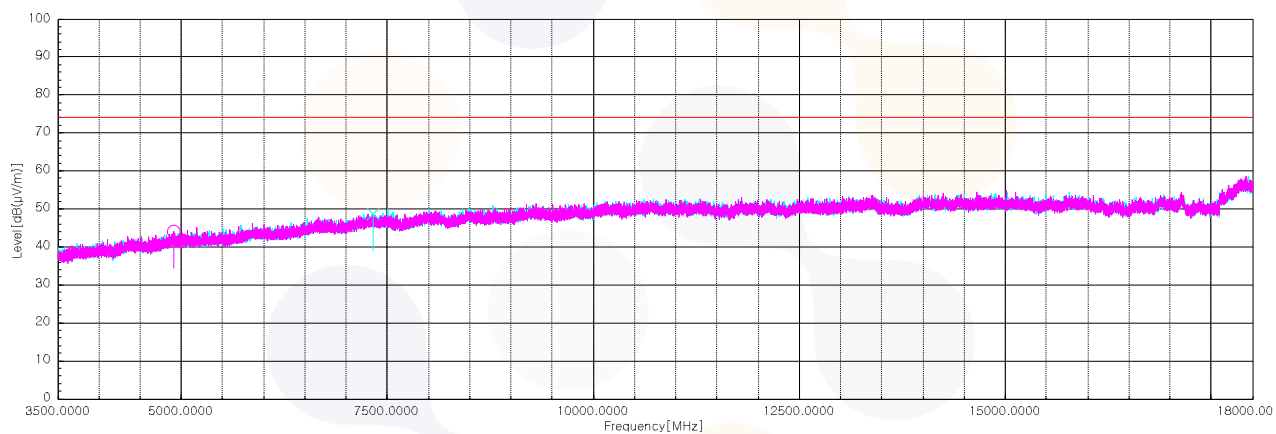
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
2 145.58	H	74.60	27.14	-44.79	-	56.95	74.00	17.05
2 483.64 ¹⁾	H	64.40	27.74	-29.80	-	62.34	74.00	11.66
4 913.27 ¹⁾	H	52.80	32.63	-41.55	-	43.88	74.00	30.12
7 330.42 ¹⁾	V	51.10	36.44	-38.95	-	48.59	74.00	25.41
Average Data								
2 483.64 ¹⁾	H	50.47	27.74	-29.80	0.79	49.20	54.00	4.80



Horizontal/Vertical for 1 GHz ~ 3.5 GHz

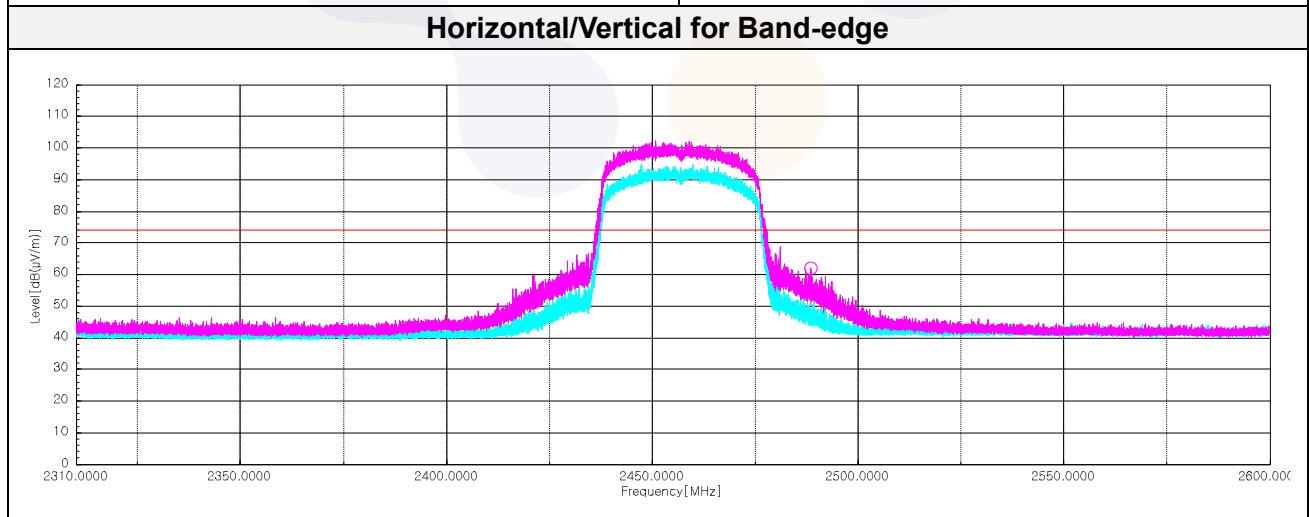
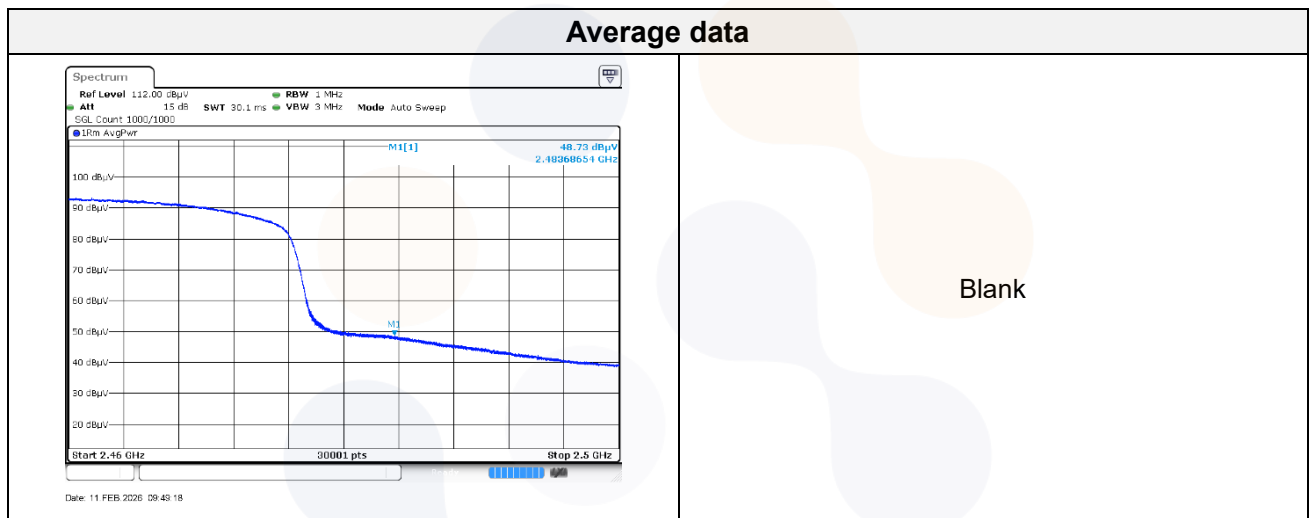


Horizontal/Vertical for 3.5 GHz ~ 18 GHz

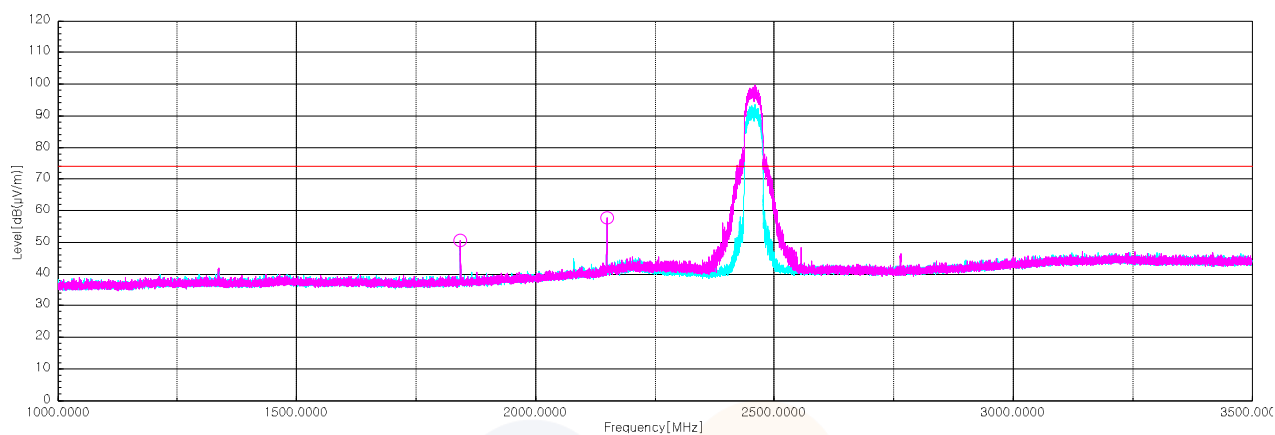


802.11ax HE40_2 457 MHz

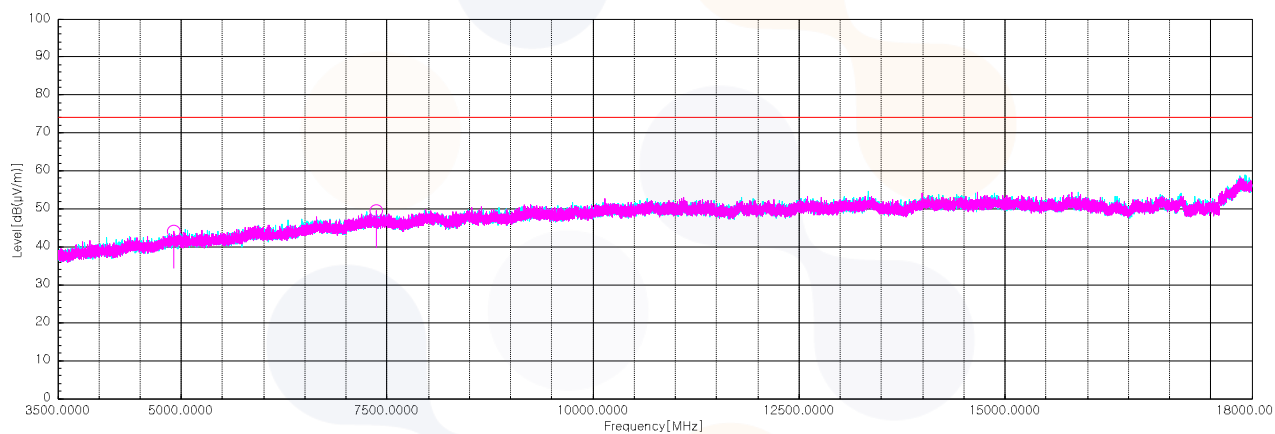
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
2 149.83	H	75.40	27.10	-44.78	-	57.72	74.00	16.28
2 483.69 ¹⁾	H	63.80	27.74	-29.80	-	61.74	74.00	12.26
4 910.37 ¹⁾	H	53.00	32.62	-41.56	-	44.06	74.00	29.94
7 371.02 ¹⁾	H	52.00	36.36	-38.97	-	49.39	74.00	24.61
Average Data								
2 483.69 ¹⁾	H	48.73	27.74	-29.80	0.79	47.46	54.00	6.54



Horizontal/Vertical for 1 GHz ~ 3.5 GHz

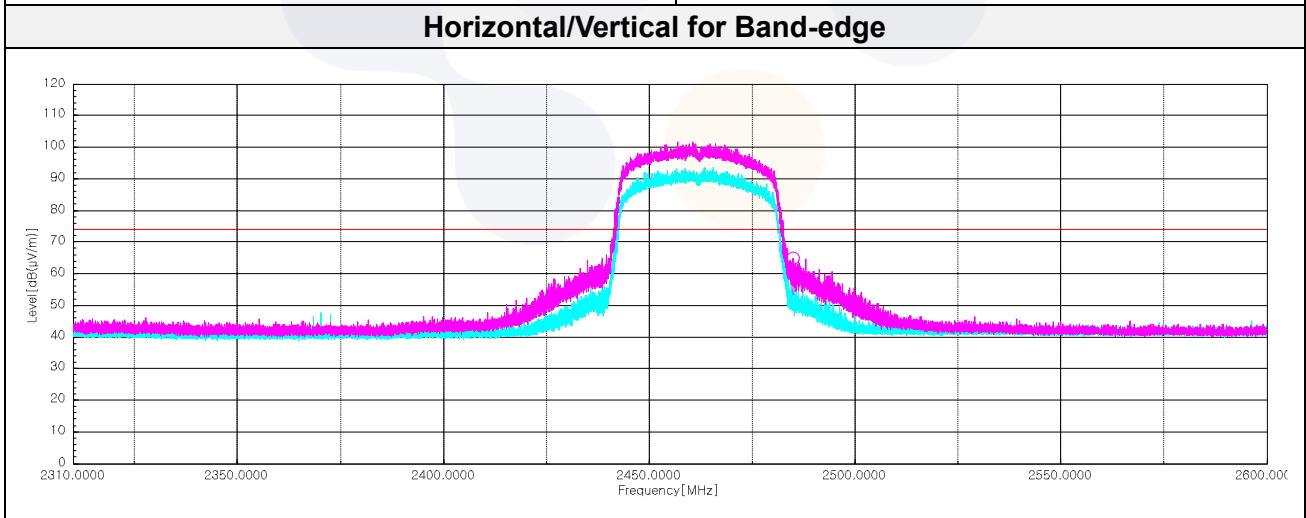
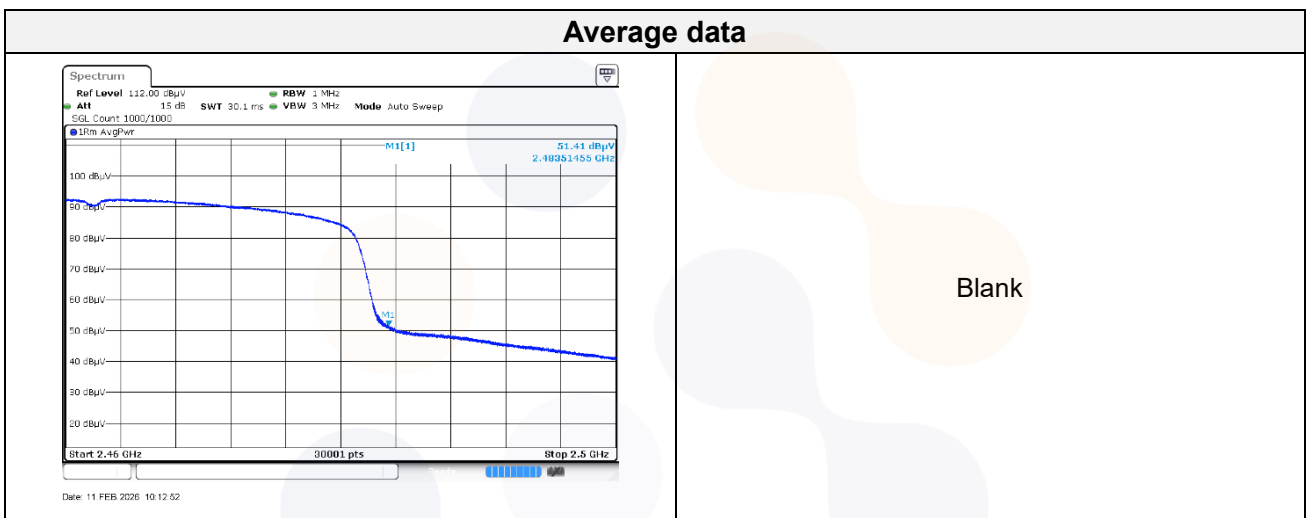


Horizontal/Vertical for 3.5 GHz ~ 18 GHz

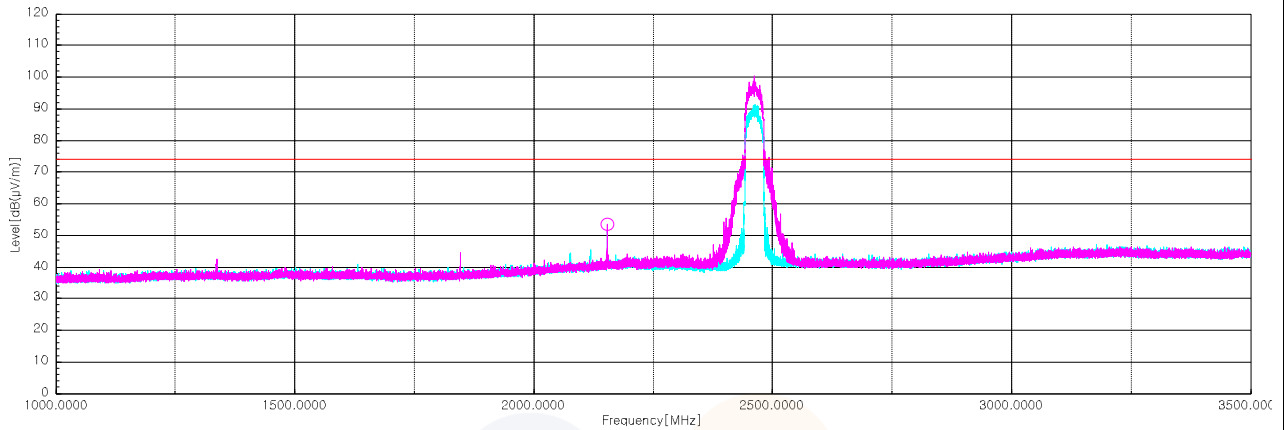


802.11ax HE40_2 462 MHz

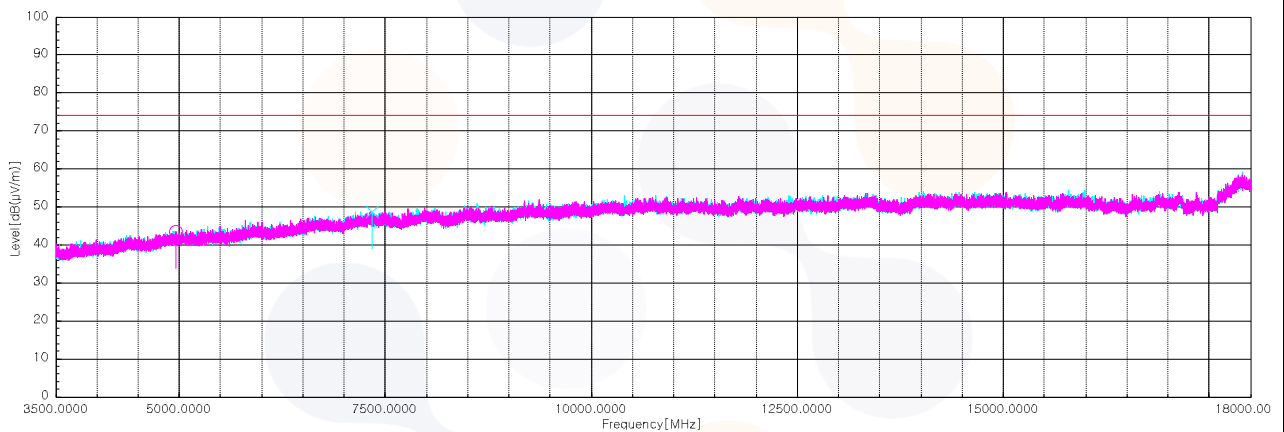
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
2 483.51 ¹⁾	H	66.90	27.74	-29.80	-	64.84	74.00	9.16
4 958.70 ¹⁾	H	52.20	32.83	-41.45	-	43.58	74.00	30.42
7 342.02 ¹⁾	V	51.20	36.42	-38.95	-	48.67	74.00	25.33
Average Data								
2 483.51 ¹⁾	H	51.41	27.74	-29.80	0.79	50.14	54.00	3.86



Horizontal/Vertical for 1 GHz ~ 3.5 GHz

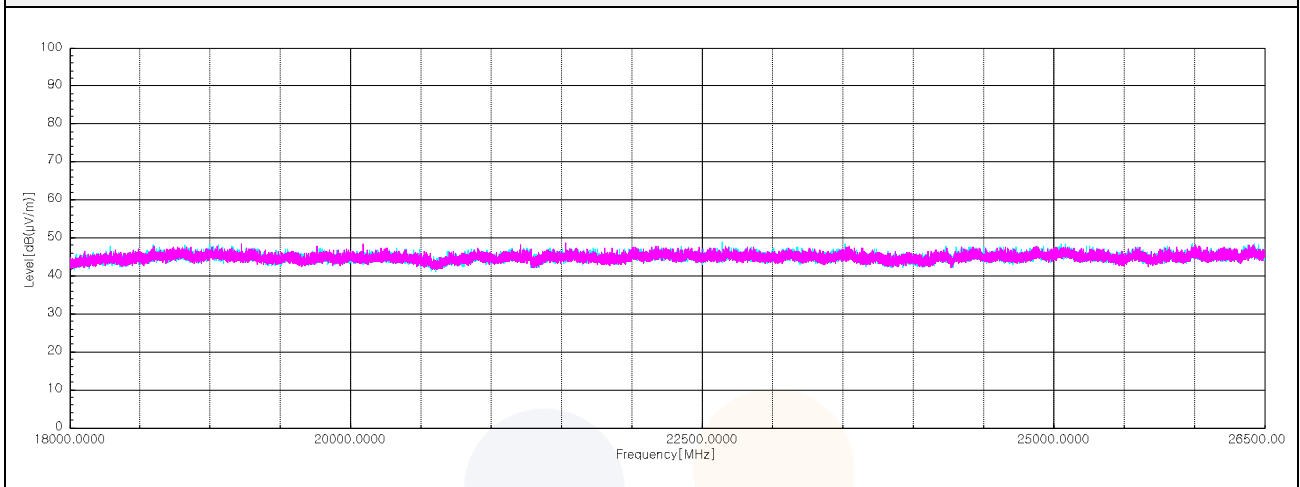


Horizontal/Vertical for 3.5 GHz ~ 18 GHz



Test results (Above 18 GHz) – Worst case: 802.11b / 2 472 MHz

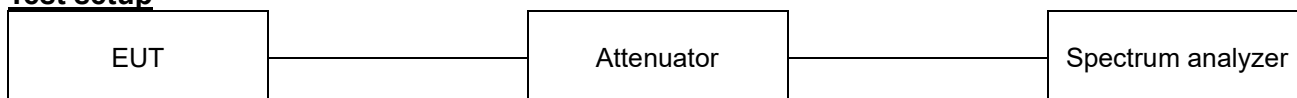
Horizontal/Vertical for 18 GHz ~ 26.5 GHz



Note: The Worst case was based on the lowest margin condition considering Harmonic and Spurious Emission

7.5. Conducted Spurious Emission

Test setup



Limit

According to §15.247(d),

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

Limit : 20 dBc

According to RSS-247(6.6),

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum device, digitally modulated device, or hybrid system is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power based on either an RF conducted or a radiated measurement – provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 6.3.2, the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

Limit : 20 dBc

Test procedure

ANSI C63.10 - Section 11.11.3

KDB 558074 D01 v05 - Section 8.5

Test settings

Establish an emission level by using the following procedure:

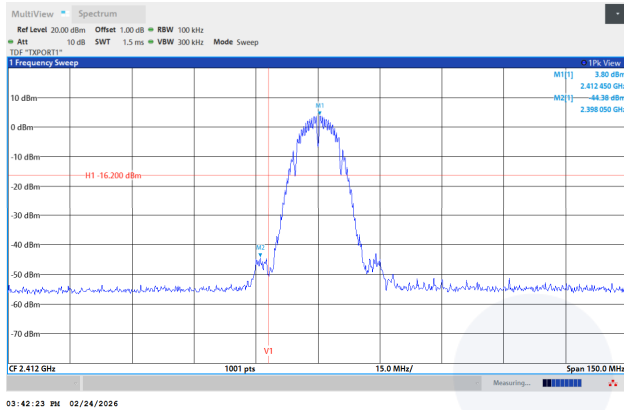
- 1) Set the center frequency and span to encompass frequency range to be measured.
- 2) Set the RBW = 100 kHz
- 3) Set the VBW $\geq [3 \times \text{RBW}]$
- 4) Detector = peak
- 5) Sweep time = No faster than coupled (auto) time
- 6) Trace mode = max hold
- 7) Allow trace to fully stabilize.
- 8) Use 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.

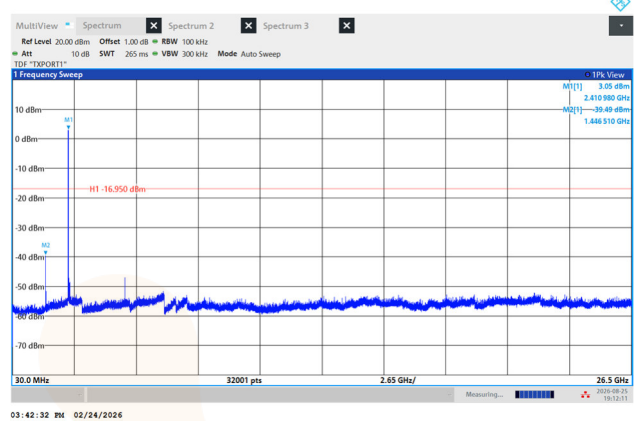
Test results

802.11b

Conducted band-edge / 2 412 MHz



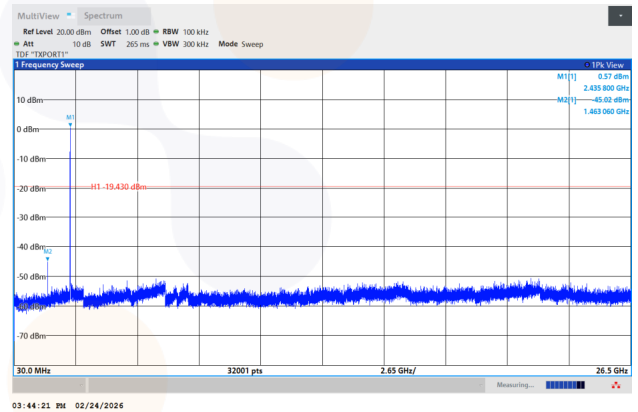
Conducted spurious / 2 412 MHz



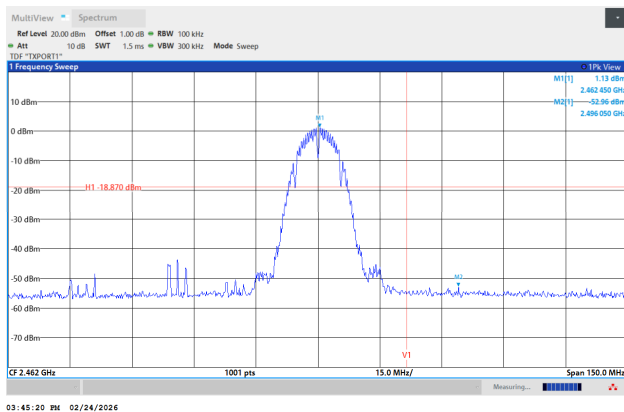
Conducted band-edge / 2 437 MHz

Blank

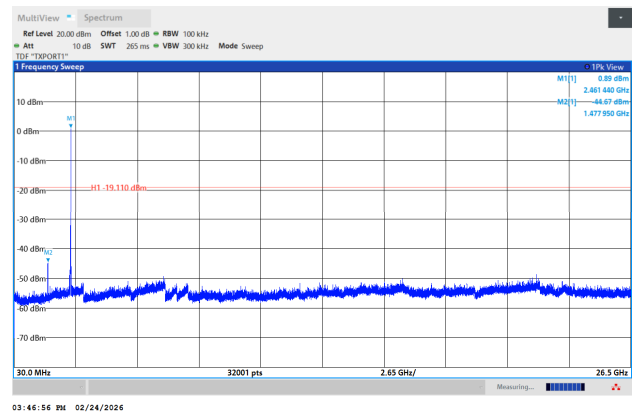
Conducted spurious / 2 437 MHz



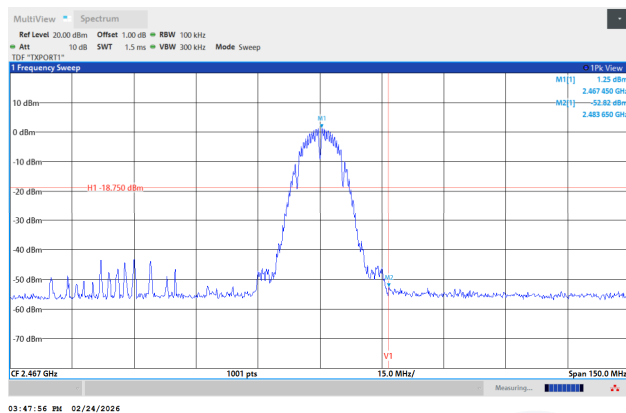
Conducted band-edge / 2 462 MHz



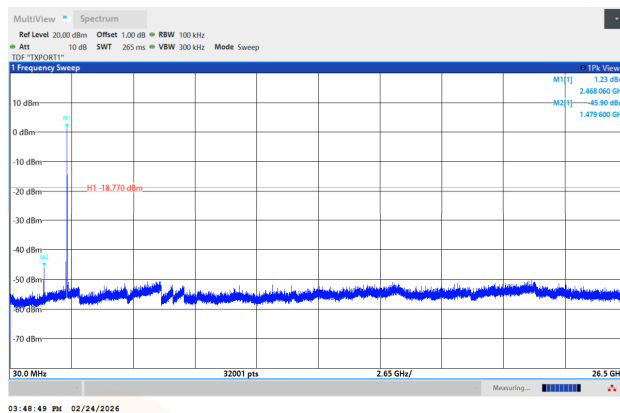
Conducted spurious / 2 462 MHz



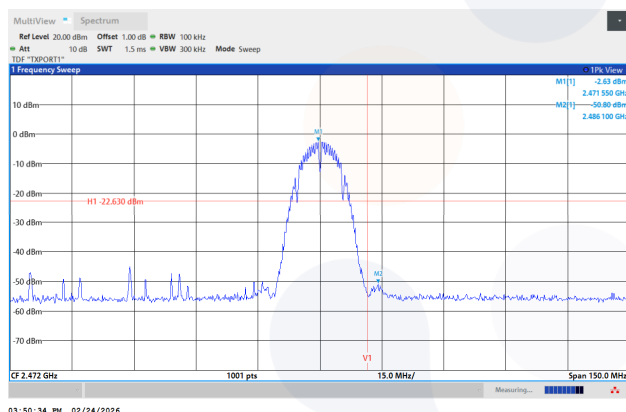
Conducted band-edge / 2 467 MHz



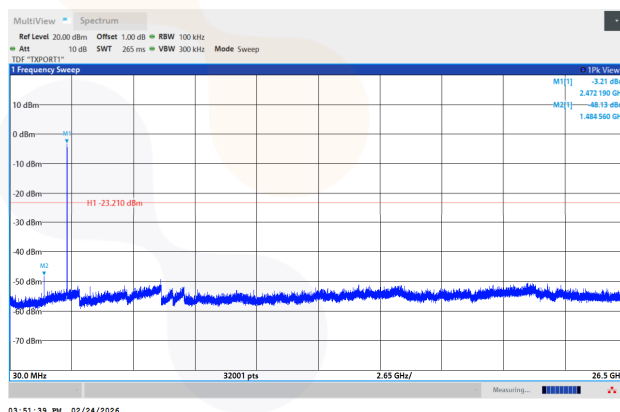
Conducted spurious / 2 467 MHz



Conducted band-edge / 2 472 MHz

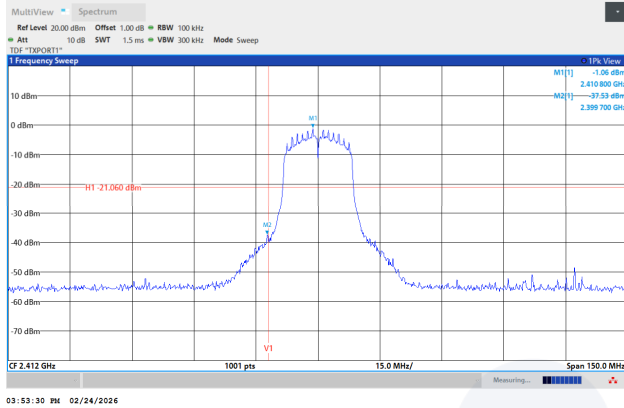


Conducted spurious / 2 472 MHz

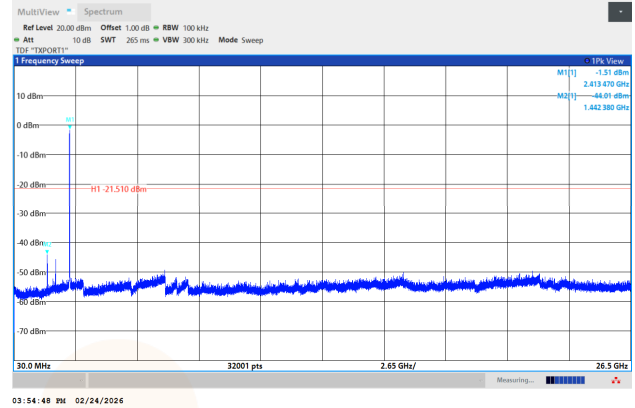


802.11g

Conducted band-edge / 2 412 MHz



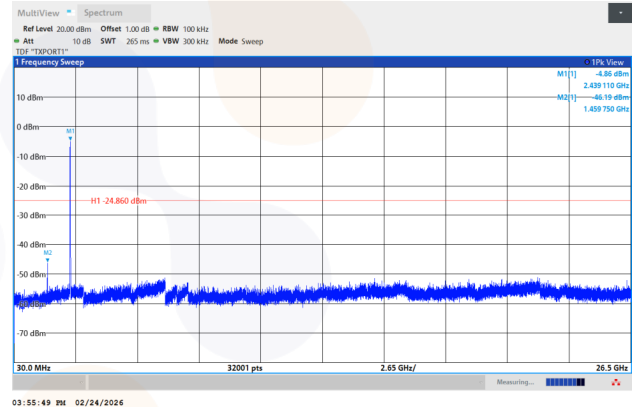
Conducted spurious / 2 412 MHz



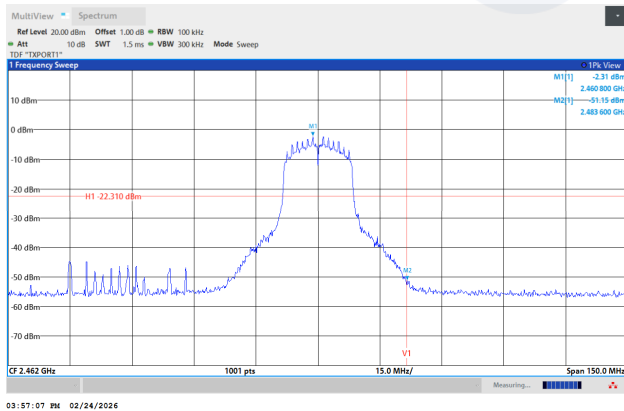
Conducted band-edge / 2 437 MHz

Blank

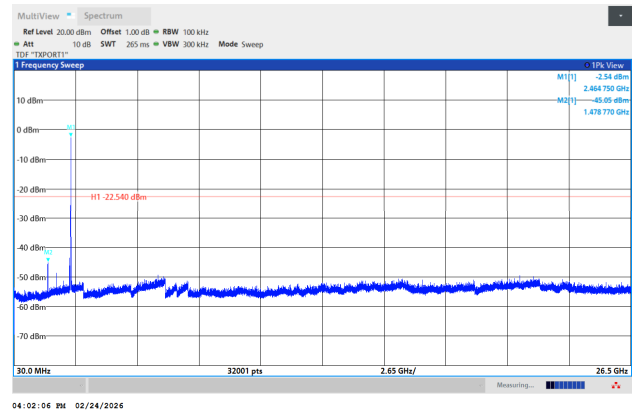
Conducted spurious / 2 437 MHz



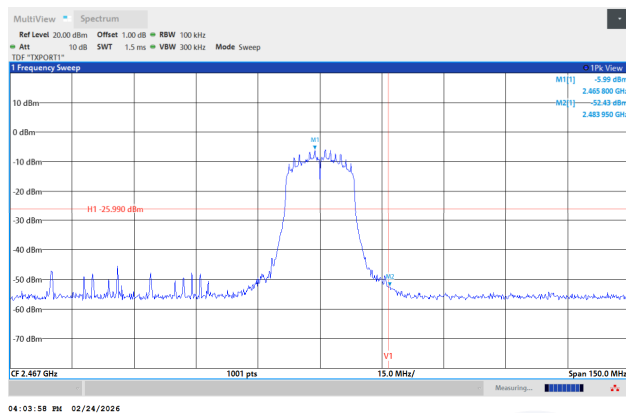
Conducted band-edge / 2 462 MHz



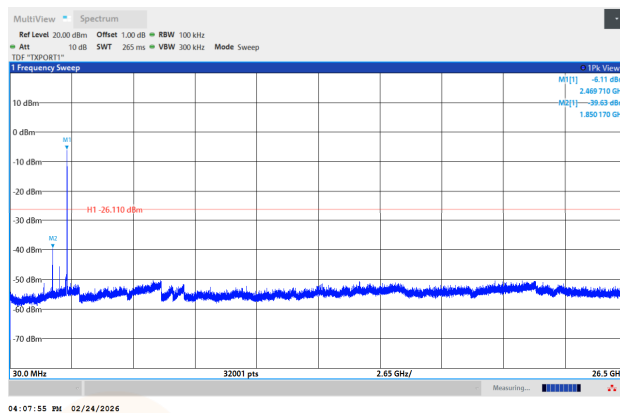
Conducted spurious / 2 462 MHz



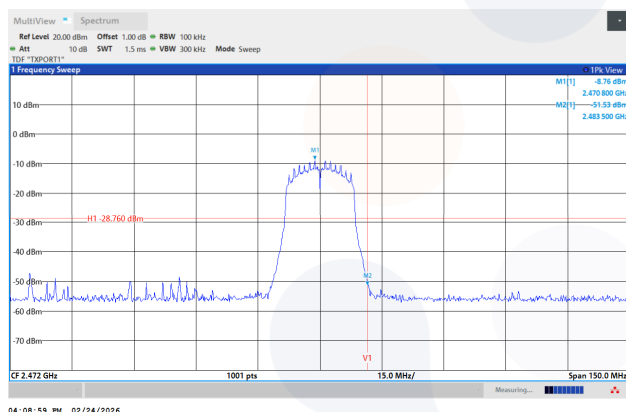
Conducted band-edge / 2 467 MHz



Conducted spurious / 2 467 MHz



Conducted band-edge / 2 472 MHz



Conducted spurious / 2 472 MHz

