

Appendix B_Radiated Spurious Emission Data for 2.4GHz WIFI:

1.Radiated Spurious Emission and Restricted Band

Test Result

Radiated Spurious Emission:

For 9 kHz ~ 30 MHz

Note:

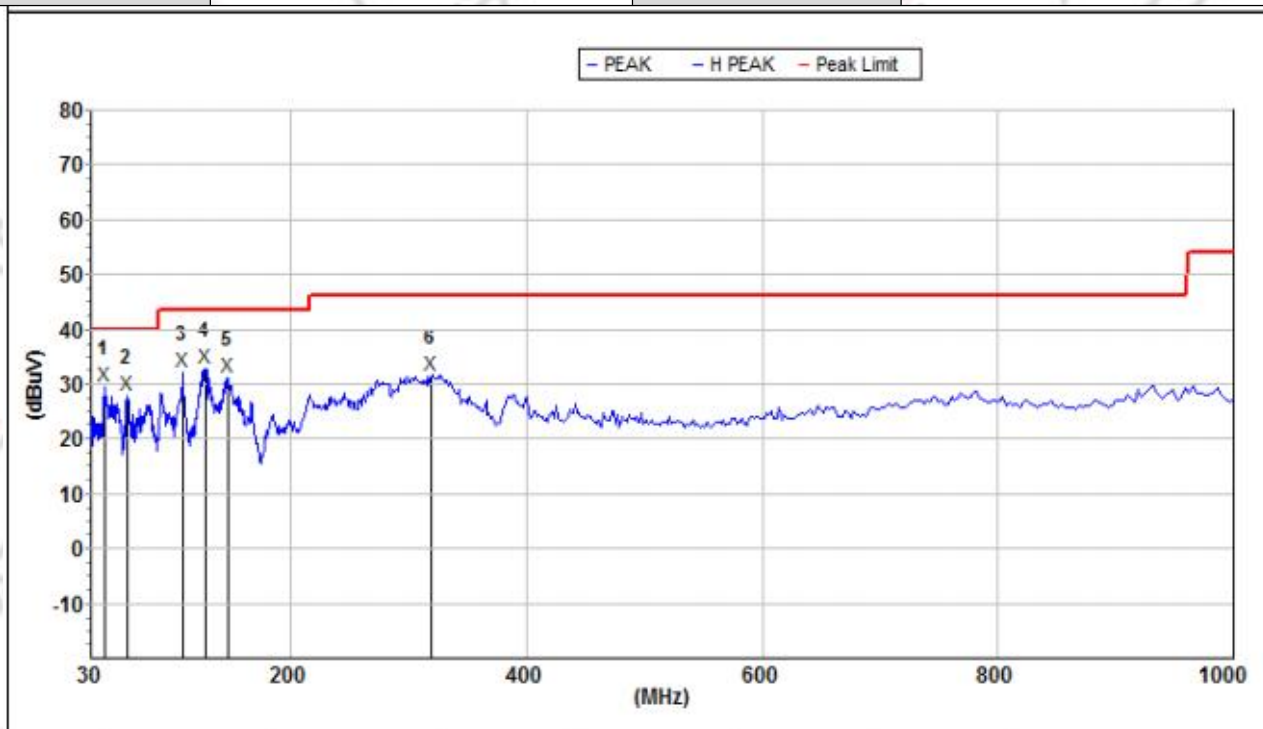
- 1.The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported data.
- 2.The all data rate modes had been test, but only worse test data was recorded in the test report.

Below 1GHz:

Note:

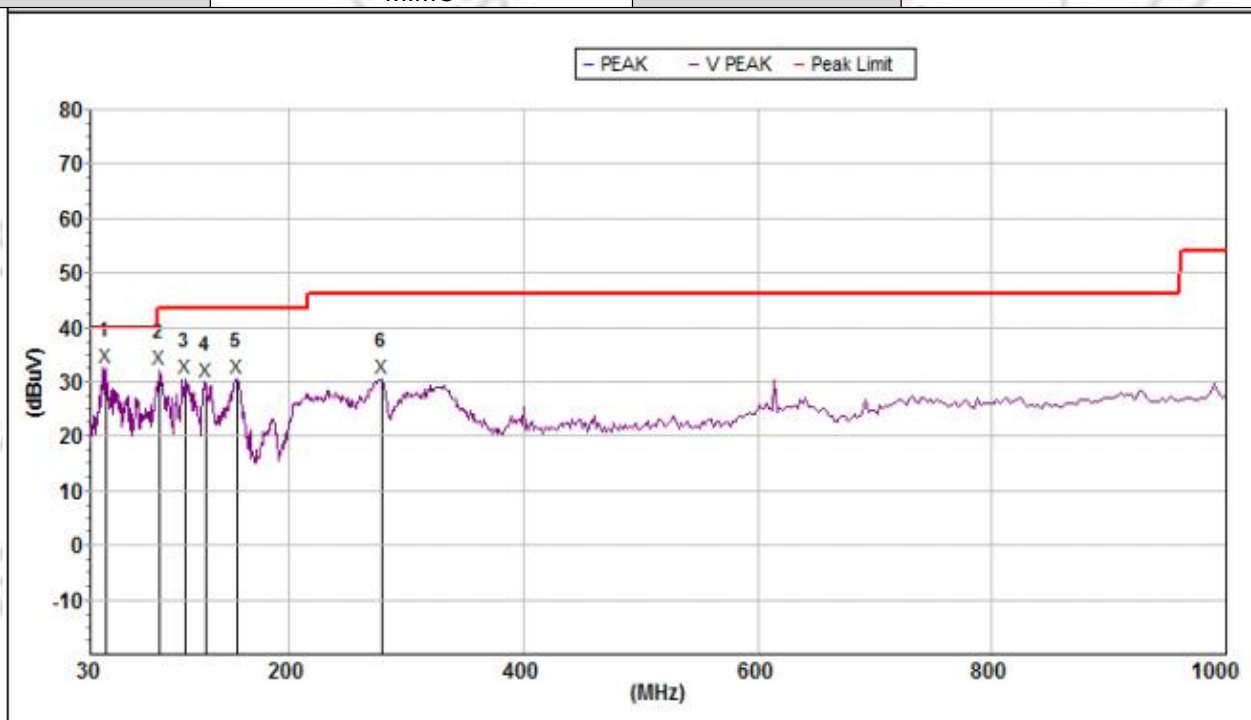
- 1.All modes have been tested, only worst (MIMO 802.11ax20-TX Channel 6)mode was recorded in the test report.
- 2.Emission Level (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
- 3.Correction Factor (dB/m) = Antenna Pol. Factor (dB/m) + Cable Factor (dB)-Amplifier Gain.
- 4.The emission levels of other frequencies were less than 20dB margin against the limit.
- 5.Margin value = Emission level-Limit value.

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax20-TX Channel 6 MIMO	Antenna Pol. Pol.	Horizontal



Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	41.422	71.6	-41.9	29.7	40.0	10.3	H
2	60.704	72.4	-44.5	27.9	40.0	12.1	H
3	107.888	70.3	-38.1	32.2	43.5	11.3	H
4	126.772	66.9	-34.1	32.8	43.5	10.7	H
5	145.861	65.2	-34.0	31.2	43.5	12.3	H
6	318.817	58.2	-26.5	31.7	46.0	14.3	H

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax20-TX Channel 6 MIMO	Antenna Pol.	Vertical



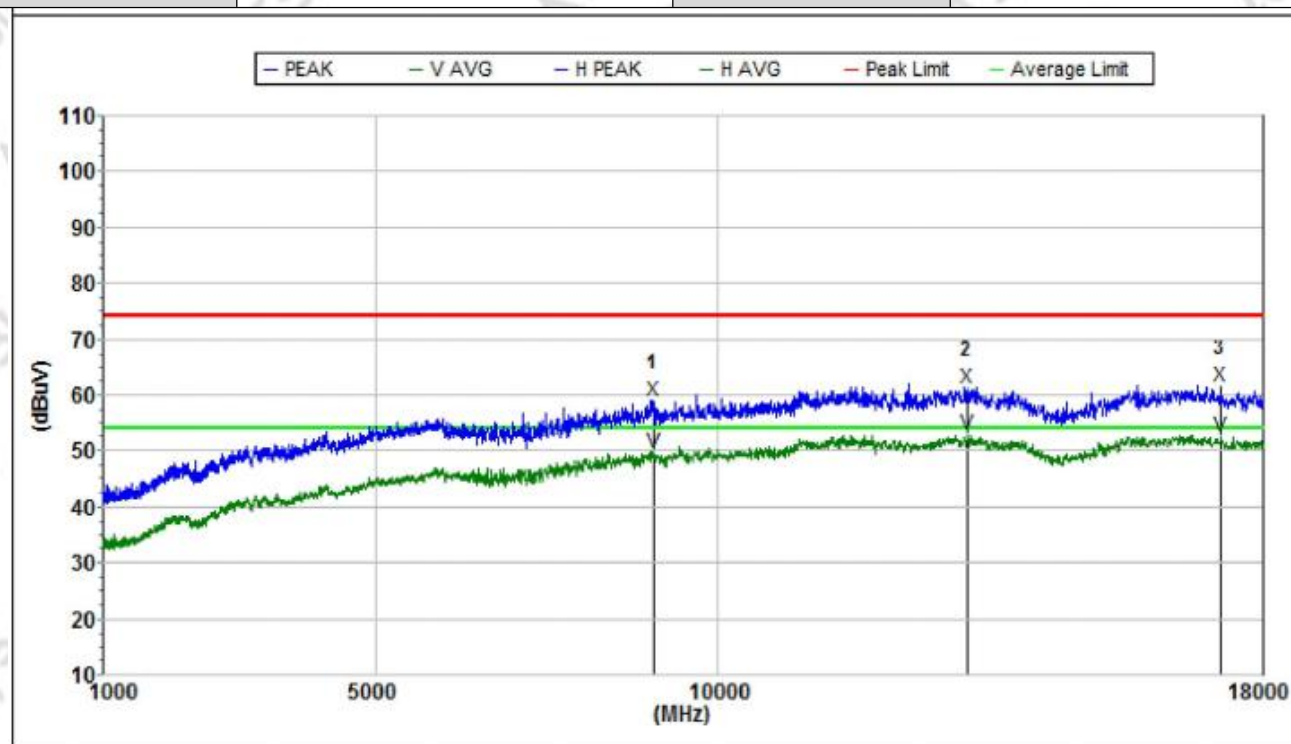
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	42.900	77.6	-45.0	32.6	40.0	7.4	V
2	89.276	73.0	-40.8	32.2	43.5	11.3	V
3	111.347	63.7	-32.9	30.8	43.5	12.7	V
4	128.113	67.6	-37.5	30.1	43.5	13.4	V
5	154.821	65.8	-35.3	30.5	43.5	13.0	V
6	279.044	58.2	-27.6	30.6	46.0	15.4	V

1GHz-18GHz:

Note:

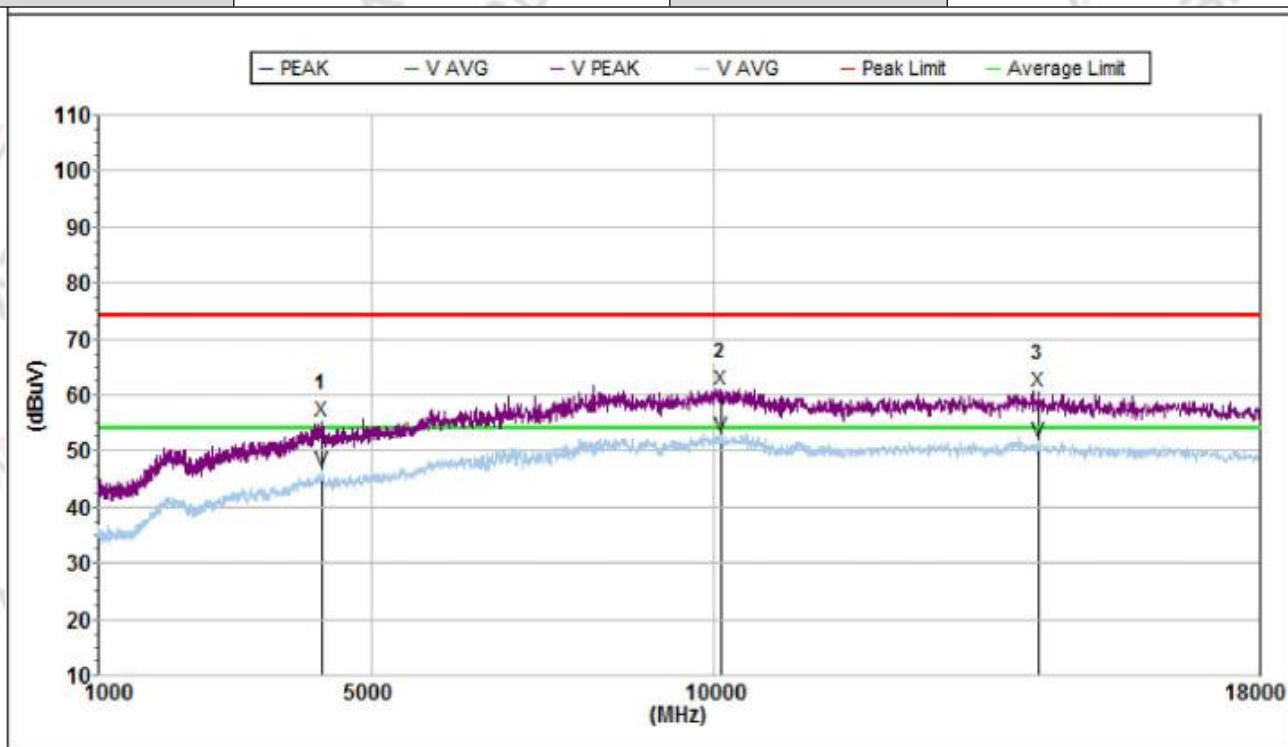
- 1.All modes have been tested, only worst (MIMO 802.11ax20/40)mode was recorded in the test report.
- 2.We used the filter to test and the main frequency was filtered out.
- 3.Emission Level (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
4. Correction Factor (dB/m) = Antenna Pol. Factor (dB/m) + Cable Factor (dB)-Amplifier Gain.
5. Margin value = Emission level-Limit value.

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax20-TX Channel 1 MIMO	Antenna Pol.	Horizontal



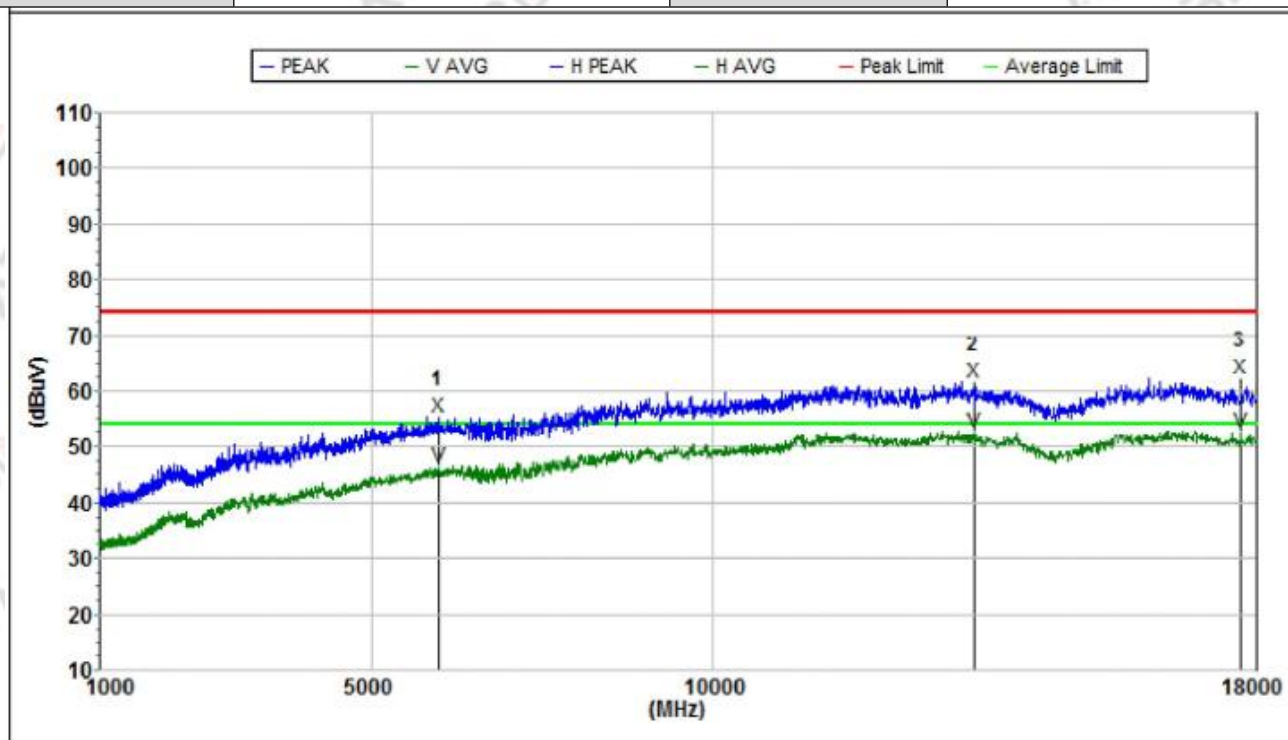
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	9066.000	59.2	-0.1	59.1	74.0	14.9	H
2	13674.000	58.3	2.9	61.2	74.0	12.8	H
3	17382.000	58.0	3.5	61.5	74.0	12.5	H
Avg							
1	9066.000	49.9	-0.1	49.8	54.0	4.2	H
2	13674.000	50.2	2.9	53.1	54.0	0.9	H
3	17382.000	49.2	3.5	52.7	54.0	1.3	H

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax20-TX Channel 1 MIMO	Antenna Pol.	Vertical



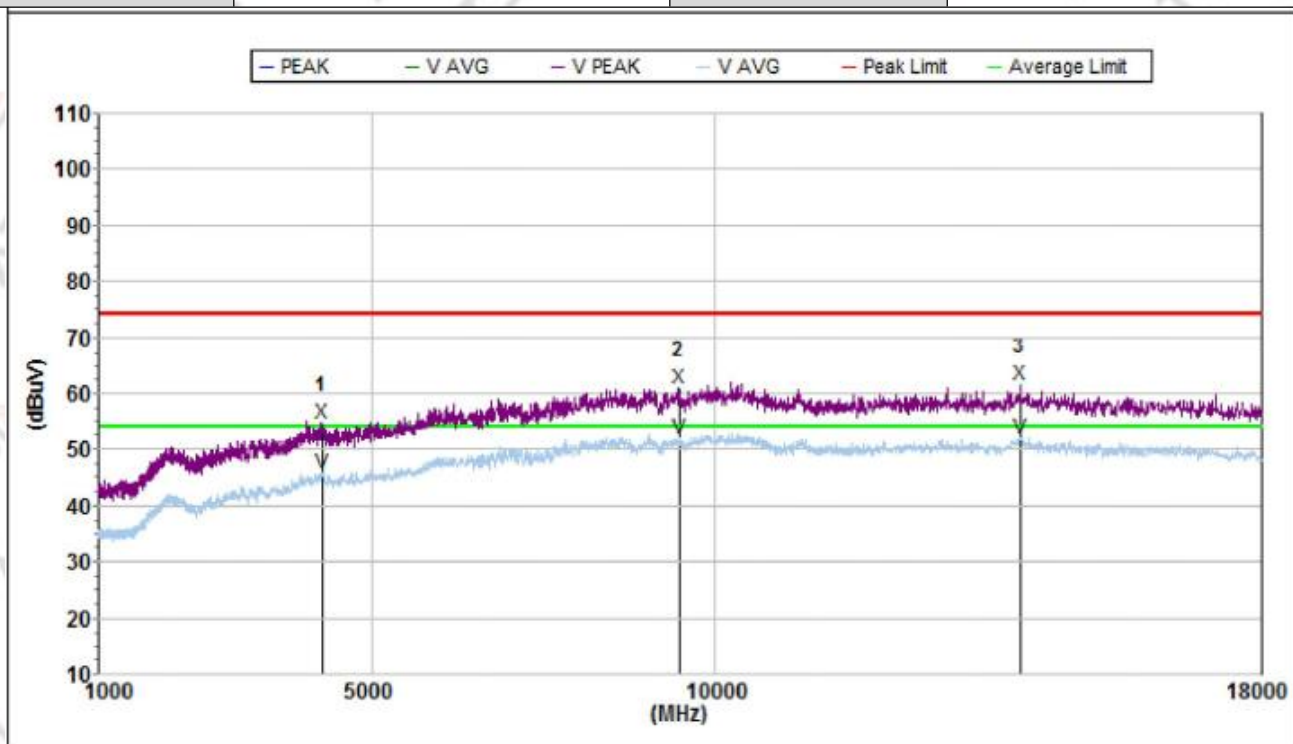
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	4272.500	60.7	-5.2	55.5	74.0	18.5	V
2	10122.000	58.0	3.1	61.1	74.0	12.9	V
3	14754.000	58.5	2.0	60.5	74.0	13.5	V
Avg							
1	4272.500	51.6	-5.2	46.4	54.0	7.6	V
2	10122.000	49.8	3.1	52.9	54.0	1.1	V
3	14754.000	49.7	2.0	51.7	54.0	2.3	V

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax20-TX Channel 6 MIMO	Antenna Pol.	Horizontal



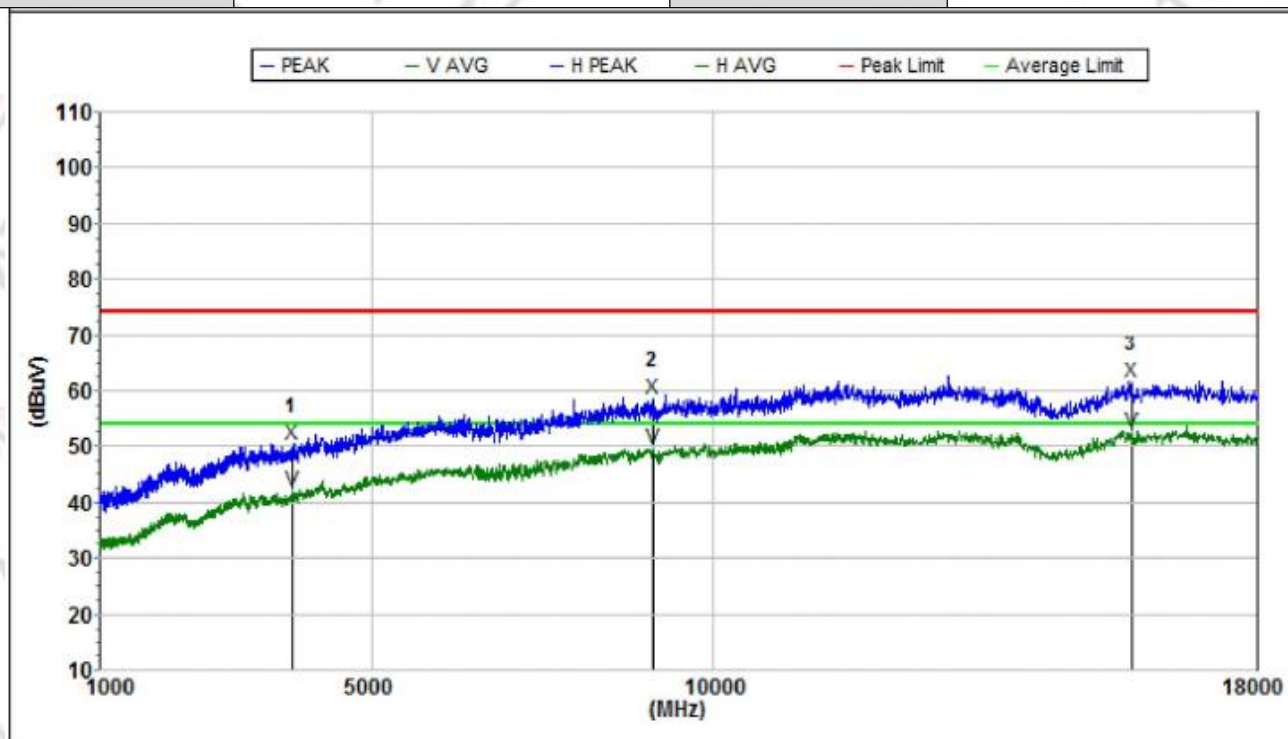
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	5987.500	58.4	-3.1	55.3	74.0	18.7	H
2	13842.000	59.1	2.5	61.6	74.0	12.4	H
3	17766.000	59.0	3.2	62.2	74.0	11.8	H
Avg							
1	5987.500	49.5	-3.1	46.4	54.0	7.6	H
2	13842.000	50.2	2.5	52.7	54.0	1.3	H
3	17766.000	49.7	3.2	52.9	54.0	1.1	H

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax20-TX Channel 6 MIMO	Antenna Pol.	Vertical



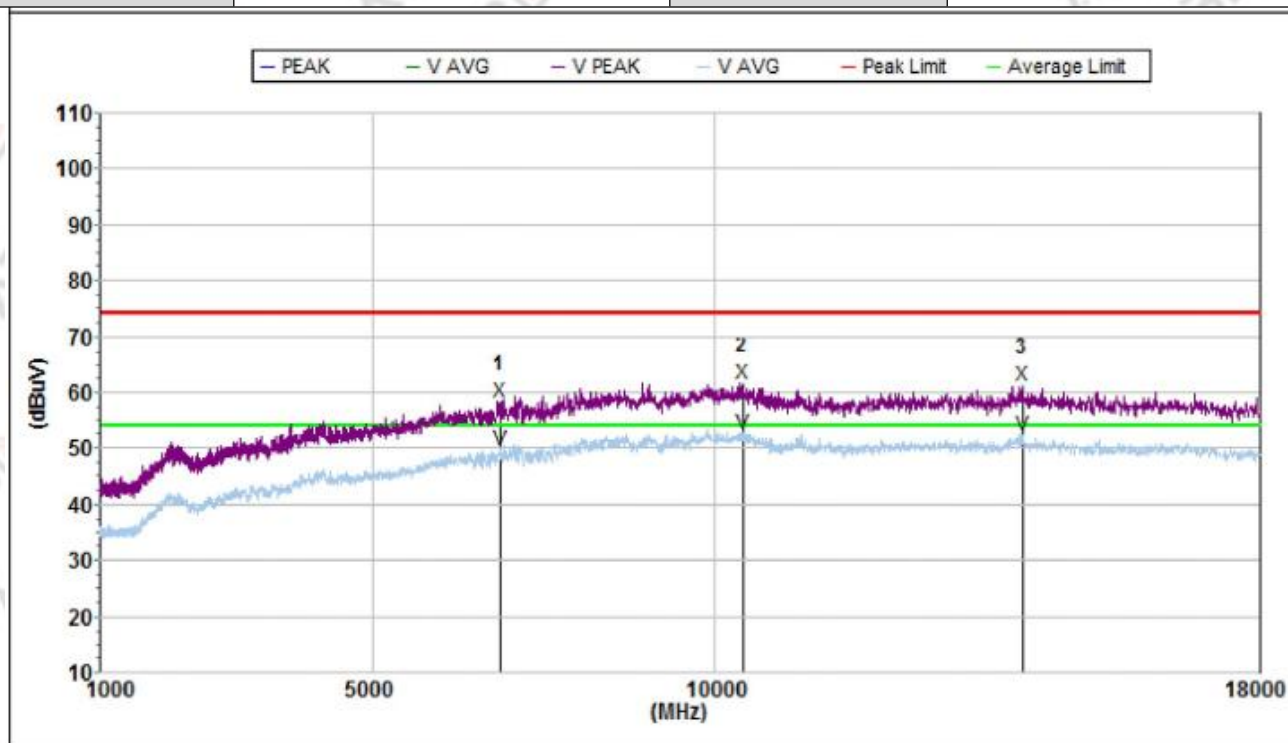
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	4270.000	59.8	-5.2	54.6	74.0	19.4	V
2	9498.000	58.8	2.3	61.1	74.0	12.9	V
3	14478.000	59.1	2.5	61.6	74.0	12.4	V
Avg							
1	4270.000	51.2	-5.2	46.0	54.0	8.0	V
2	9498.000	49.8	2.3	52.1	54.0	1.9	V
3	14478.000	49.7	2.5	52.2	54.0	1.8	V

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax20-TX Channel 11 MIMO	Antenna Pol.	Horizontal



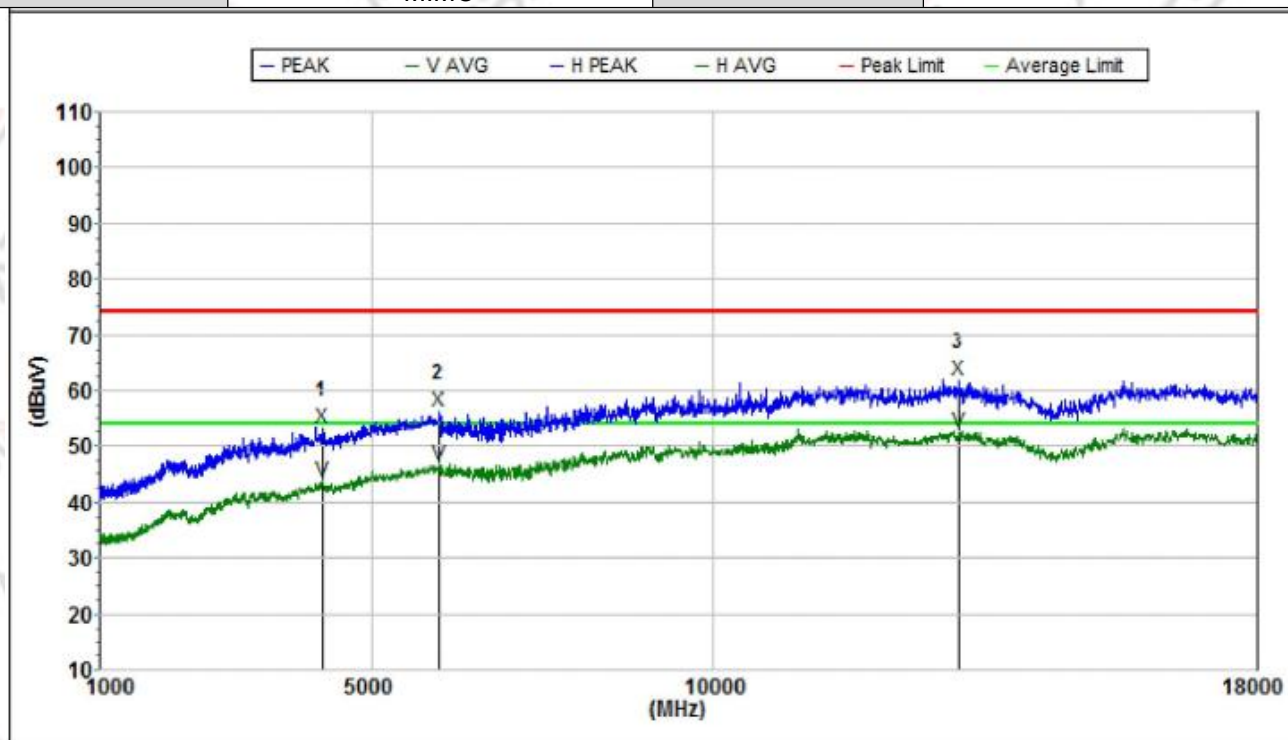
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	3825.000	59.8	-9.2	50.6	74.0	23.4	H
2	9126.000	58.6	0.0	58.6	74.0	15.4	H
3	16152.000	58.1	3.6	61.7	74.0	12.3	H
Avg							
1	3825.000	51.4	-9.2	42.2	54.0	11.8	H
2	9126.000	49.8	0.0	49.8	54.0	4.2	H
3	16152.000	49.0	3.6	52.6	54.0	1.4	H

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax20-TX Channel 11 MIMO	Antenna Pol.	Vertical



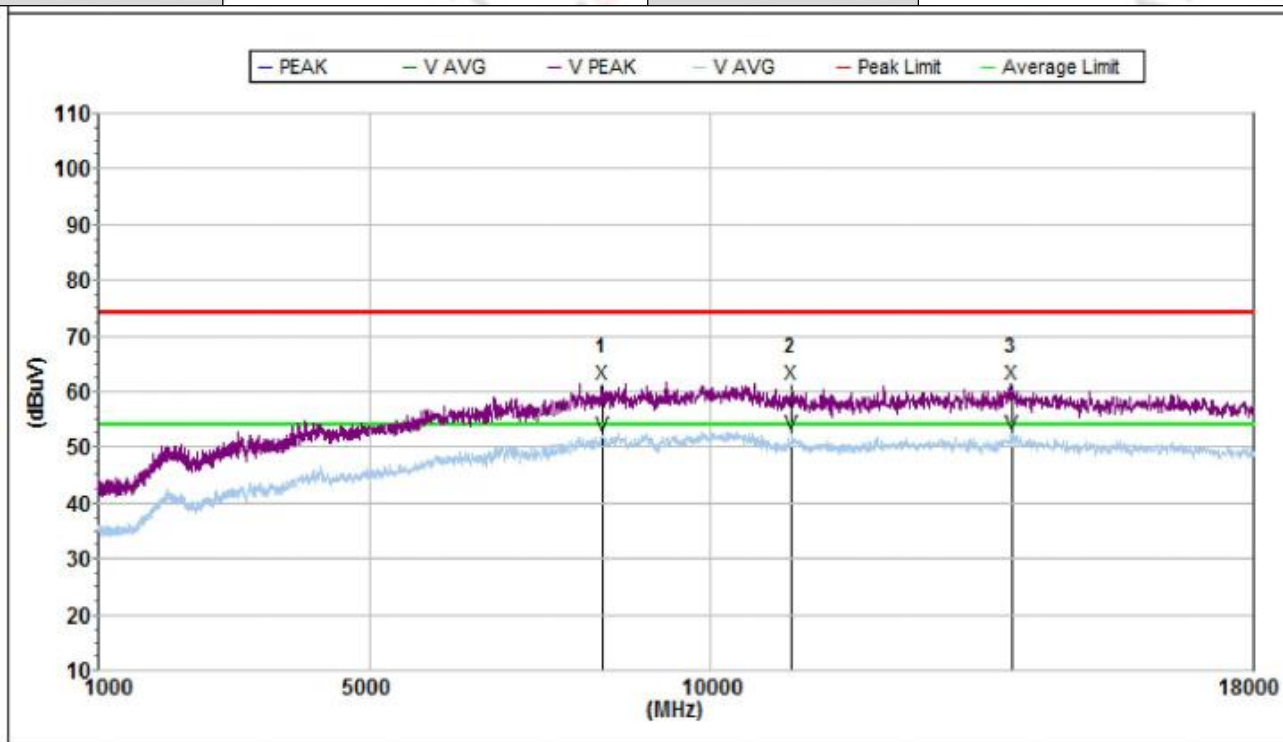
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	6858.000	57.9	0.5	58.4	74.0	15.6	V
2	10410.000	58.4	3.3	61.7	74.0	12.3	V
3	14514.000	58.6	2.6	61.2	74.0	12.8	V
Avg							
1	6858.000	49.3	0.5	49.8	54.0	4.2	V
2	10410.000	49.5	3.3	52.8	54.0	1.2	V
3	14514.000	49.7	2.6	52.3	54.0	1.7	V

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax40-TX Channel 3 MIMO	Antenna Pol.	Horizontal



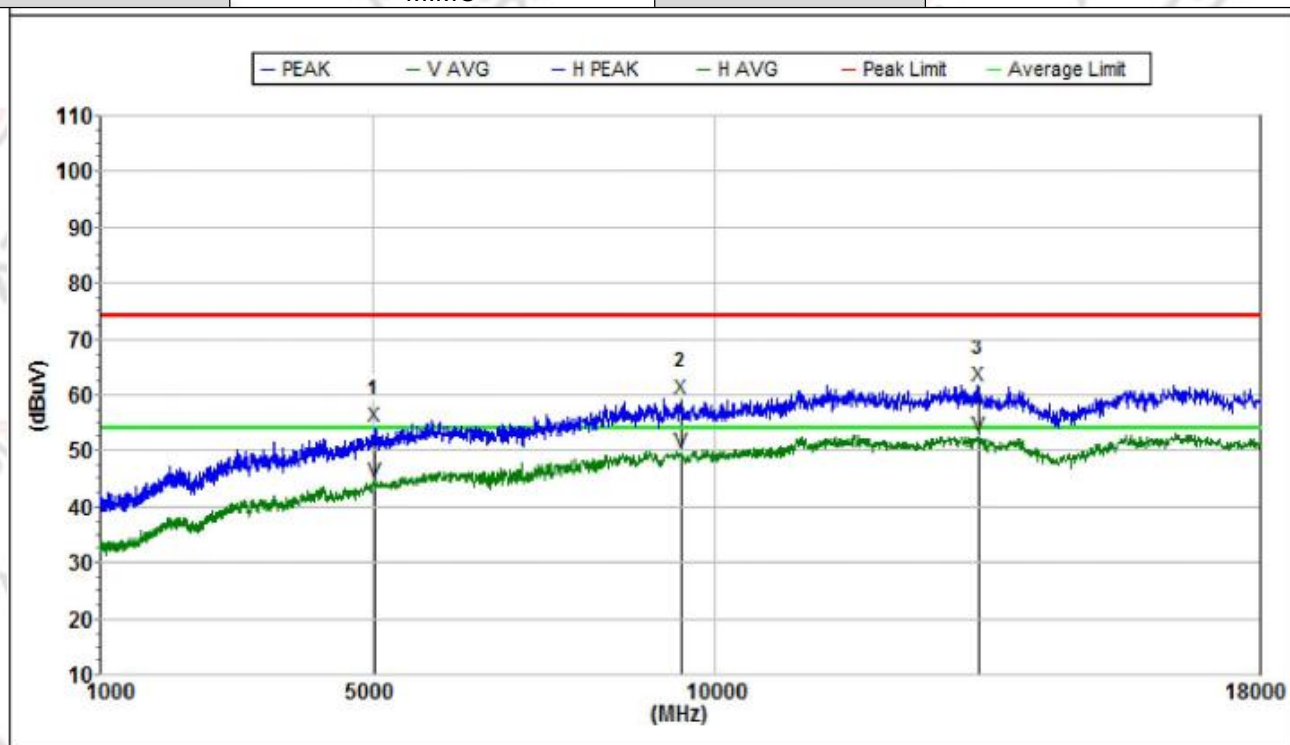
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	4270.000	61.1	-7.8	53.3	74.0	20.7	H
2	5990.000	59.4	-3.1	56.3	74.0	17.7	H
3	13626.000	58.9	3.0	61.9	74.0	12.1	H
Avg							
1	4270.000	51.8	-7.8	44.0	54.0	10.0	H
2	5990.000	49.8	-3.1	46.7	54.0	7.3	H
3	13626.000	49.8	3.0	52.8	54.0	1.2	H

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax40-TX Channel 3 MIMO	Antenna Pol.	Vertical



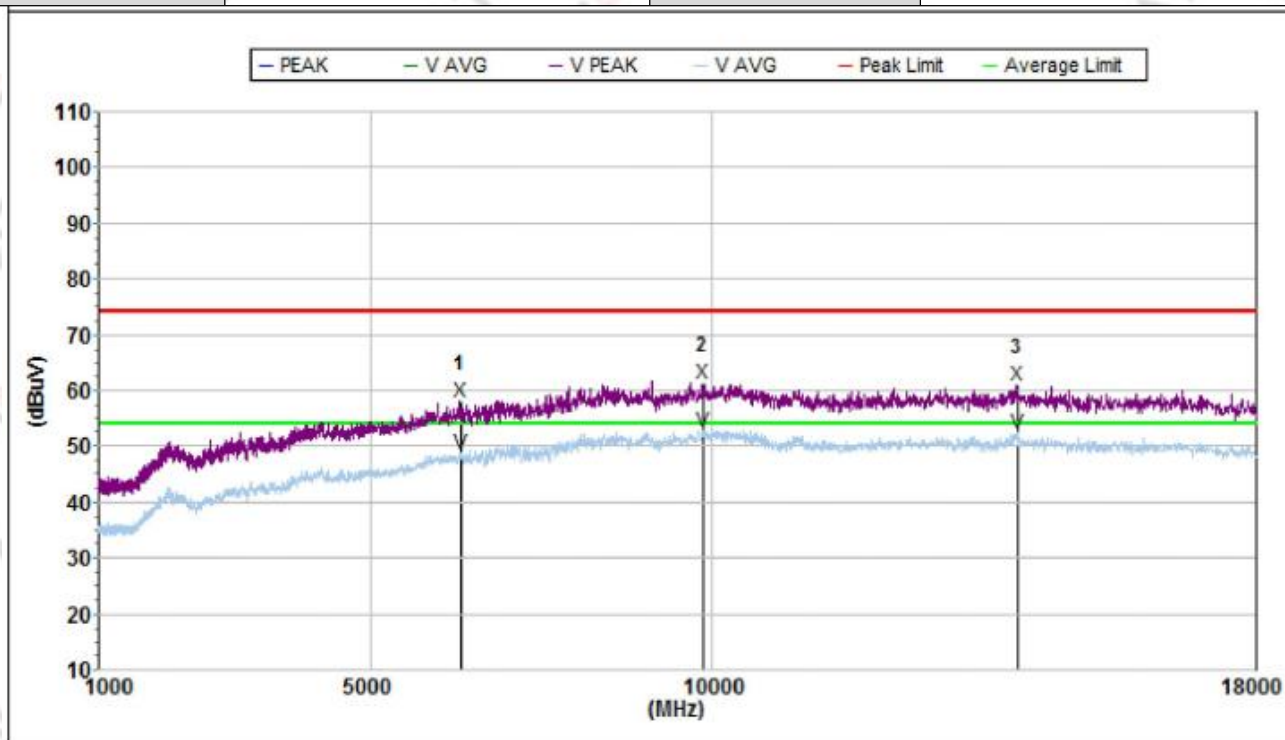
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	8412.000	59.0	2.4	61.4	74.0	12.6	V
2	11202.000	59.6	1.7	61.3	74.0	12.7	V
3	14436.000	58.8	2.4	61.2	74.0	12.8	V
Avg							
1	8412.000	49.6	2.4	52.0	54.0	2.0	V
2	11202.000	50.7	1.7	52.4	54.0	1.6	V
3	14436.000	50.1	2.4	52.5	54.0	1.5	V

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax40-TX Channel 6 MIMO	Antenna Pol.	Horizontal



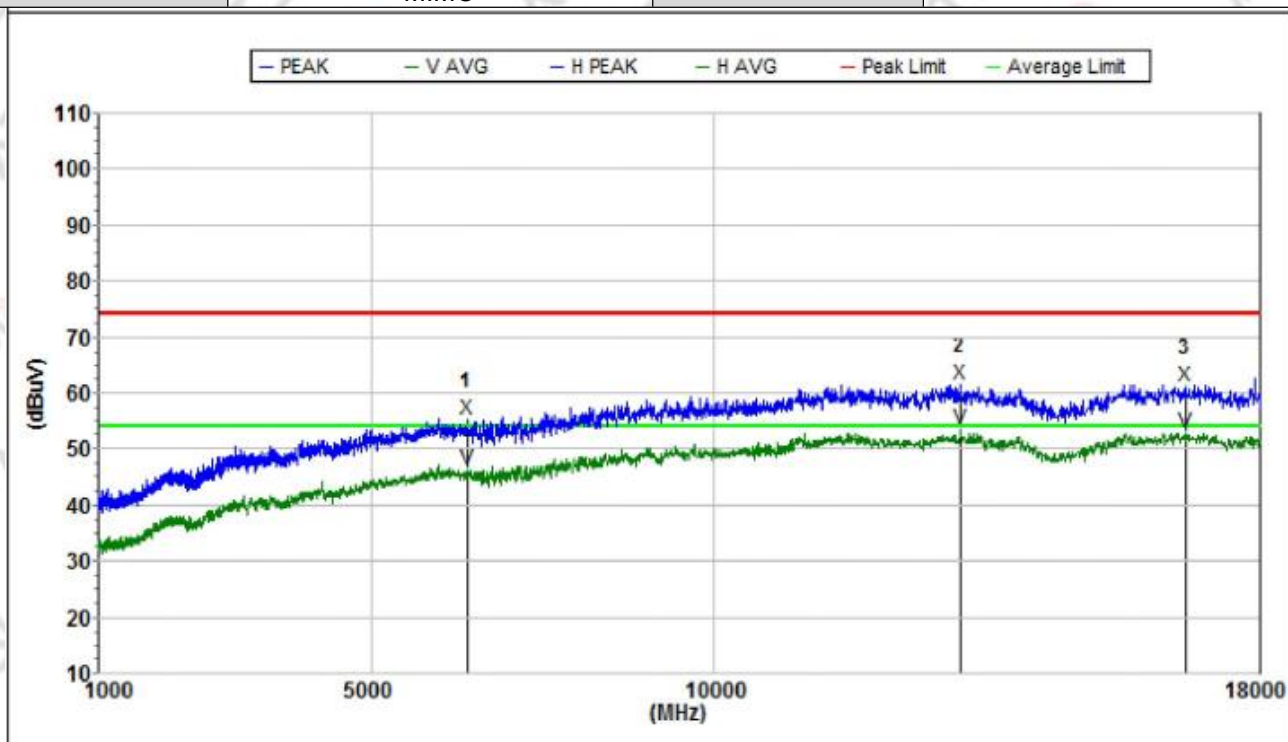
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	5030.000	59.8	-5.5	54.3	74.0	19.7	H
2	9504.000	59.0	0.5	59.5	74.0	14.5	H
3	13878.000	59.1	2.5	61.6	74.0	12.4	H
Avg							
1	5030.000	50.2	-5.5	44.7	54.0	9.3	H
2	9504.000	49.4	0.5	49.9	54.0	4.1	H
3	13878.000	50.2	2.5	52.7	54.0	1.3	H

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax40-TX Channel 6 MIMO	Antenna Pol.	Vertical



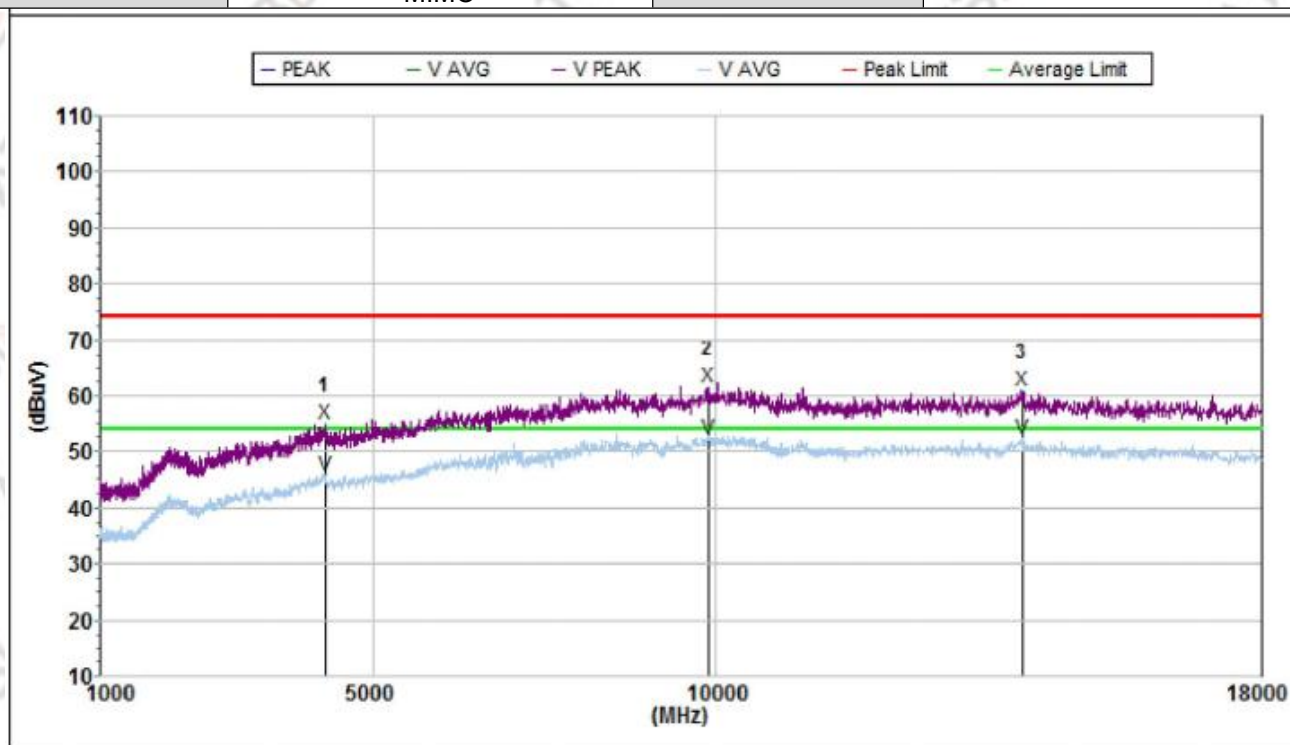
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol
Peak:							
1	6324.000	58.3	-0.4	57.9	74.0	16.1	V
2	9864.000	58.6	2.8	61.4	74.0	12.6	V
3	14484.000	58.3	2.6	60.9	74.0	13.1	V
Avg							
1	6324.000	49.1	-0.4	48.7	54.0	5.3	V
2	9864.000	50.1	2.8	52.9	54.0	1.1	V
3	14484.000	49.8	2.6	52.4	54.0	1.6	V

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax40-TX Channel 9 MIMO	Antenna Pol.	Horizontal



Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	6408.000	58.3	-2.8	55.5	74.0	18.5	H
2	13614.000	58.6	3.0	61.6	74.0	12.4	H
3	16920.000	57.5	3.9	61.4	74.0	12.6	H
Avg							
1	6408.000	49.4	-2.8	46.6	54.0	7.4	H
2	13614.000	50.6	3.0	53.6	54.0	0.4	H
3	16920.000	49.2	3.9	53.1	54.0	0.9	H

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax40-TX Channel 9 MIMO	Antenna Pol.	Vertical



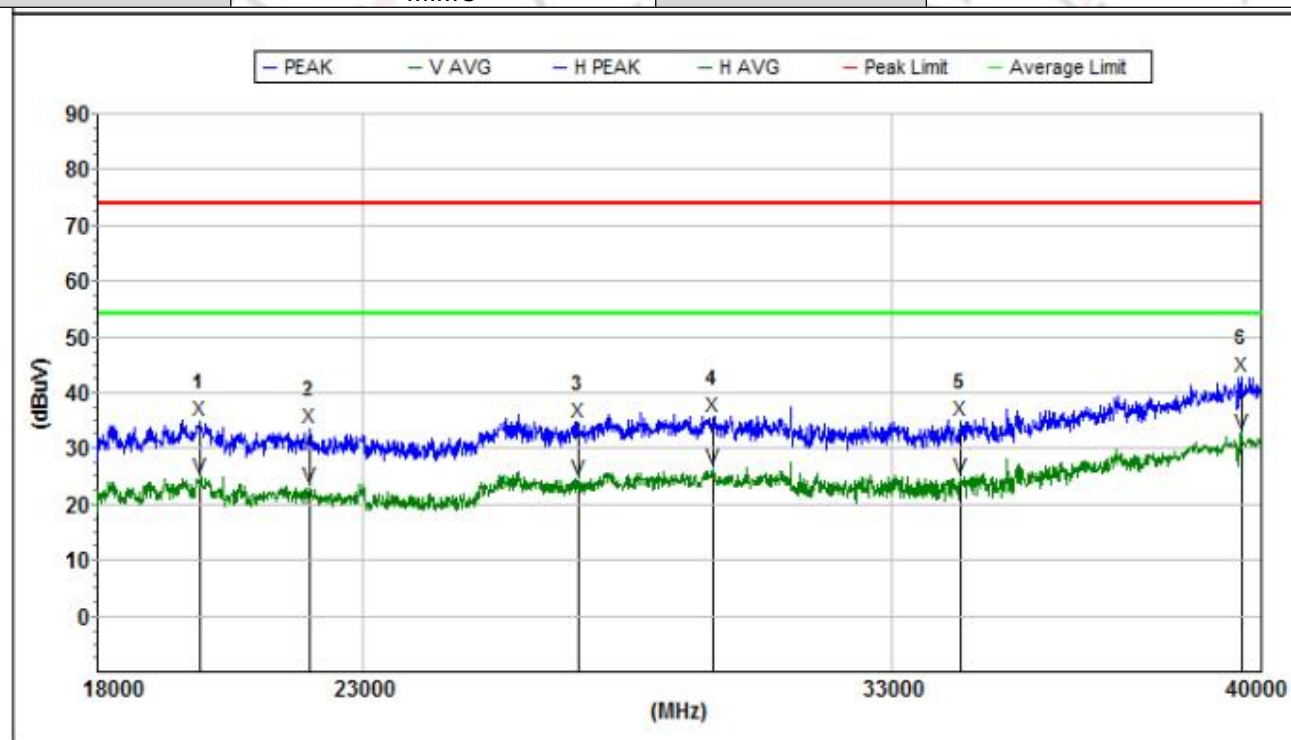
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	4307.500	60.1	-5.1	55.0	74.0	19.0	V
2	9900.000	58.9	2.9	61.8	74.0	12.2	V
3	14484.000	58.4	2.6	61.0	74.0	13.0	V
Avg							
1	4307.500	50.8	-5.1	45.7	54.0	8.3	V
2	9900.000	49.6	2.9	52.5	54.0	1.5	V
3	14484.000	49.7	2.6	52.3	54.0	1.7	V

18GHz-40GHz:

Note:

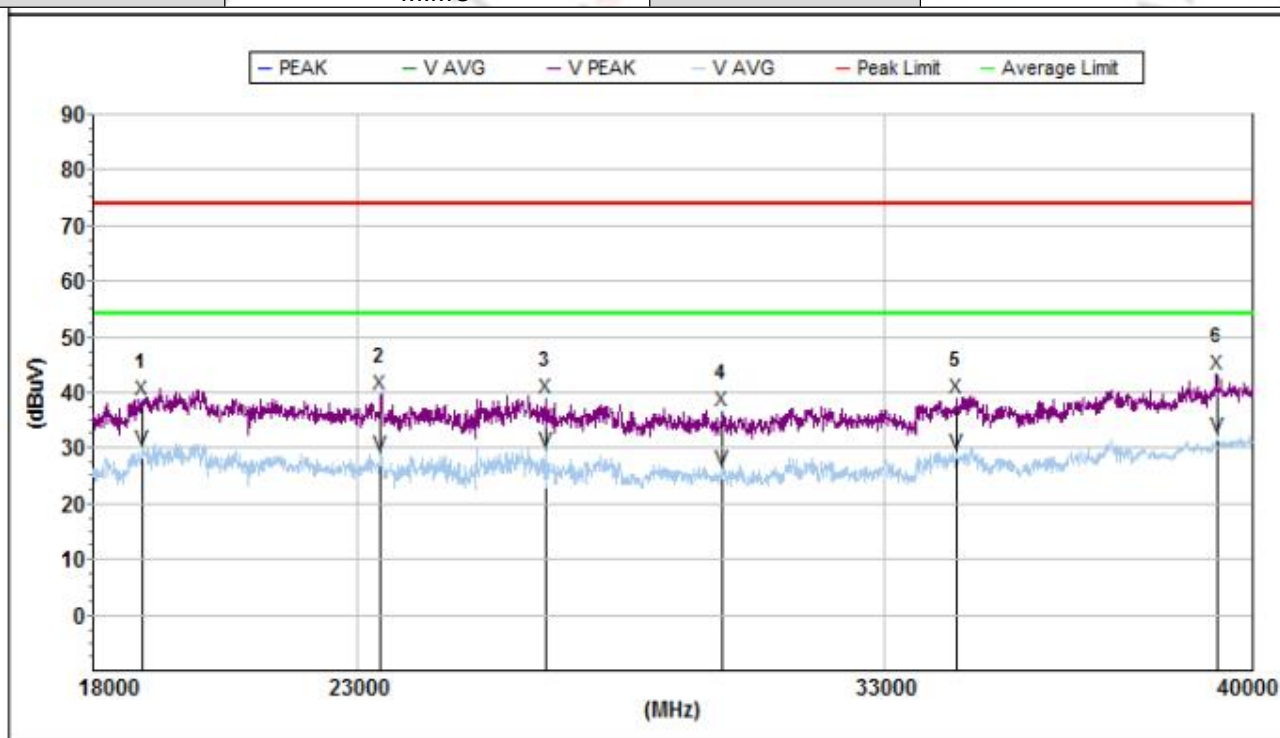
All modes have been tested, only worst (MIMO 802.11ax40-TX Channel 3)mode was recorded in the test report.

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax40-TX Channel 3 MIMO	Antenna Pol.	Horizontal



Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	19947.000	56.7	-21.5	35.2	74.0	38.8	H
2	22026.000	55.3	-21.6	33.7	74.0	40.3	H
3	27086.000	52.5	-17.6	34.9	74.0	39.1	H
4	29627.000	52.2	-16.4	35.8	74.0	38.2	H
5	34324.000	53.7	-18.5	35.2	74.0	38.8	H
6	39626.000	58.1	-15.2	42.9	74.0	31.1	H
Avg							
1	19947.000	46.3	-21.5	24.8	54.0	29.2	H
2	22026.000	44.9	-21.6	23.3	54.0	30.7	H
3	27086.000	42.3	-17.6	24.7	54.0	29.3	H
4	29627.000	42.8	-16.4	26.4	54.0	27.6	H
5	34324.000	43.4	-18.5	24.9	54.0	29.1	H
6	39626.000	48.1	-15.2	32.9	54.0	21.1	H

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax40-TX Channel 3 MIMO	Antenna Pol.	Vertical



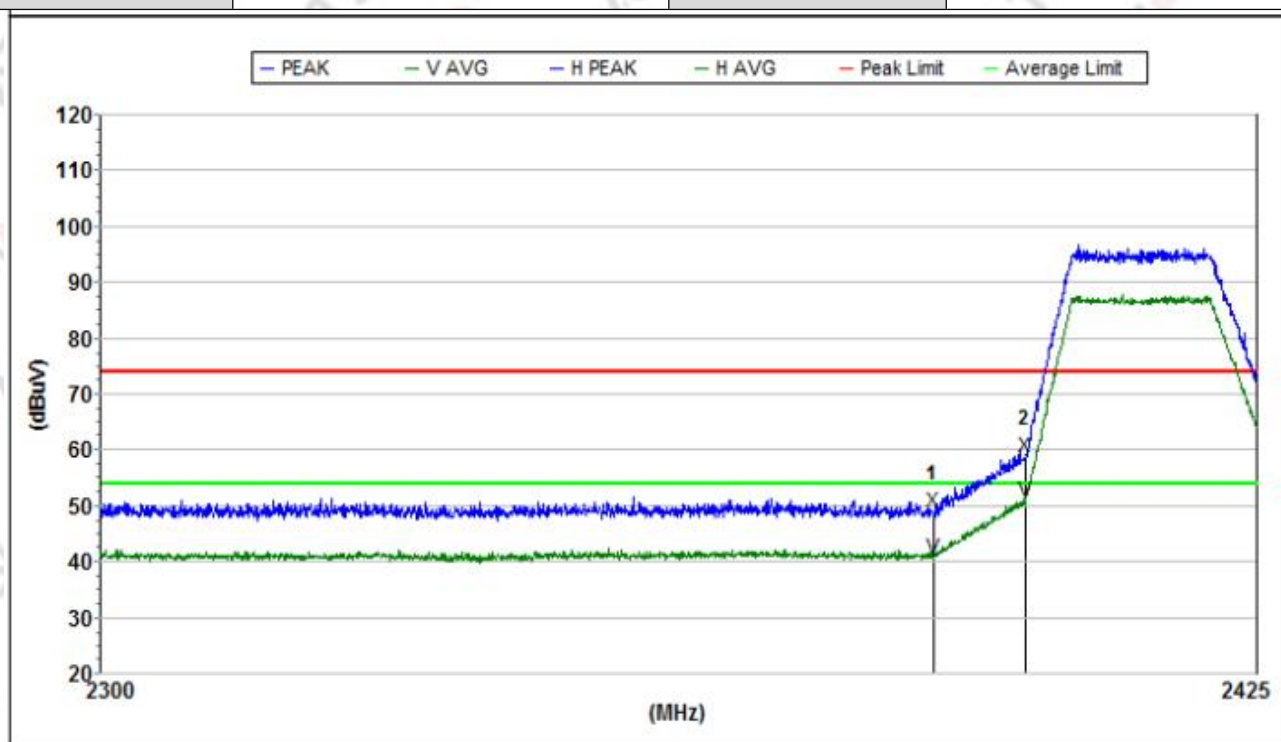
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	18935.000	55.6	-16.9	38.7	74.0	35.3	V
2	23445.000	56.3	-16.5	39.8	74.0	34.2	V
3	26602.000	56.8	-17.7	39.1	74.0	34.9	V
4	29946.000	53.3	-16.7	36.6	74.0	37.4	V
5	34368.000	57.4	-18.5	38.9	74.0	35.1	V
6	39329.000	58.7	-15.3	43.4	74.0	30.6	V
Avg							
1	18935.000	46.6	-16.9	29.7	54.0	24.3	V
2	23445.000	45.3	-16.5	28.8	54.0	25.2	V
3	26602.000	47.1	-17.7	29.4	54.0	24.6	V
4	29946.000	43.0	-16.7	26.3	54.0	27.7	V
5	34368.000	47.6	-18.5	29.1	54.0	24.9	V
6	39329.000	47.4	-15.3	32.1	54.0	21.9	V

Restricted Band:

Note:

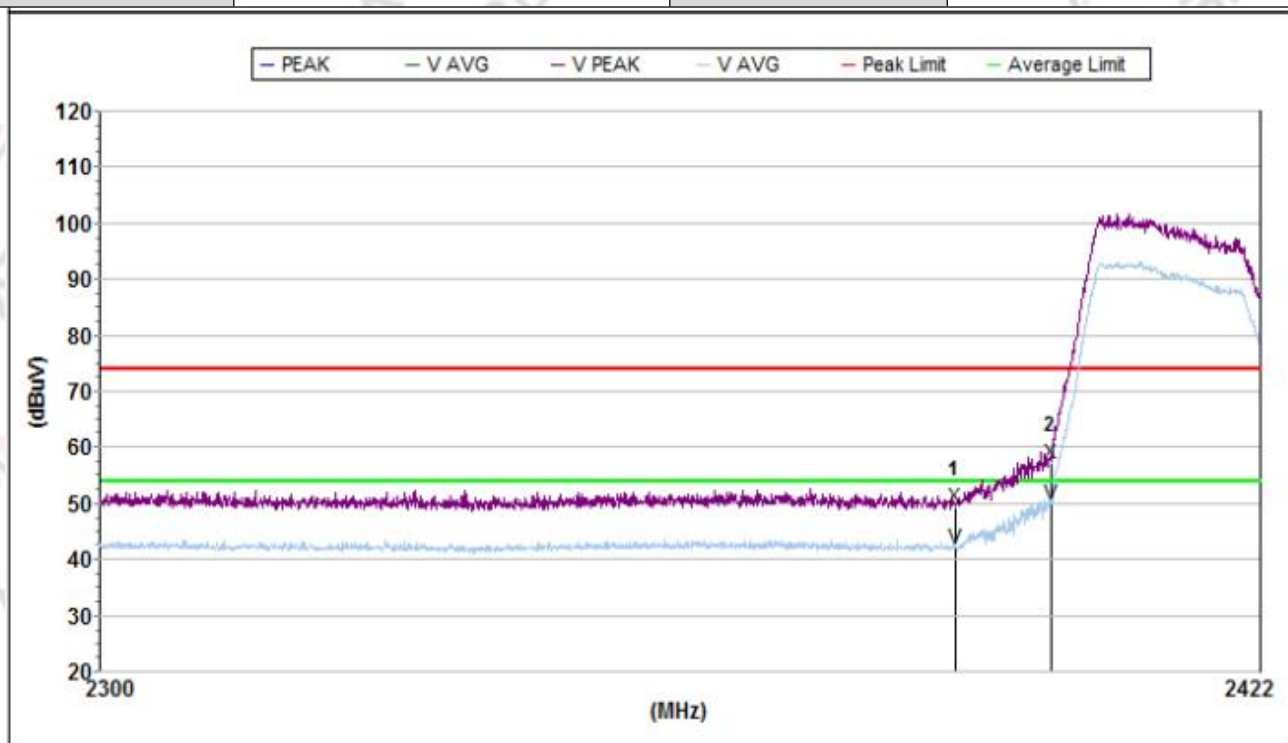
- 1.Only the worst MIMO 802.11AX data is represented in the report.
- 2.Margin=Level-Limit=Reading+factor-Limit

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	AX20_CH1 2412 MIMO	Antenna Pol.	Horizontal



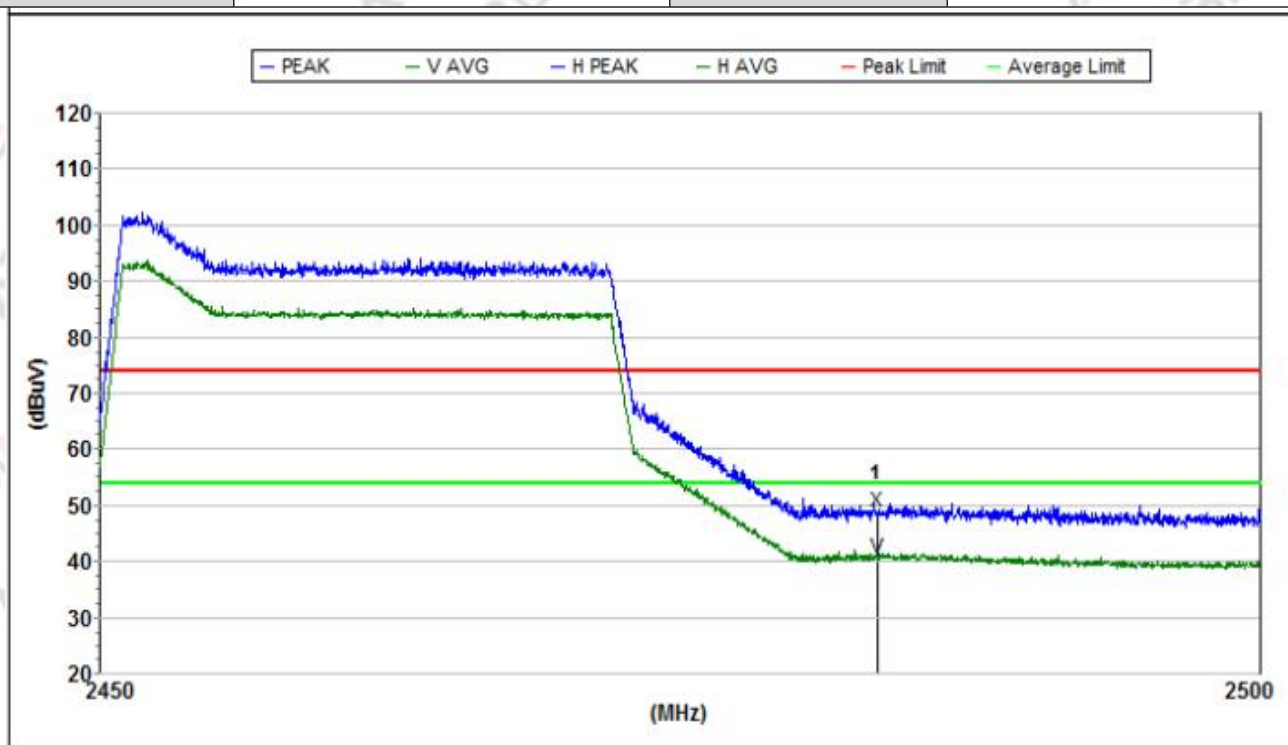
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2390.000	59.5	-10.7	48.8	74.0	25.2	H
2	2400.000	59.8	-0.9	58.9	74.0	15.1	H
Avg							
1	2390.000	51.5	-10.7	40.8	54.0	13.2	H
2	2400.000	51.9	-0.9	51.0	54.0	3.0	H

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	AX20_CH1 2412 MIMO	Antenna Pol.	Vertical



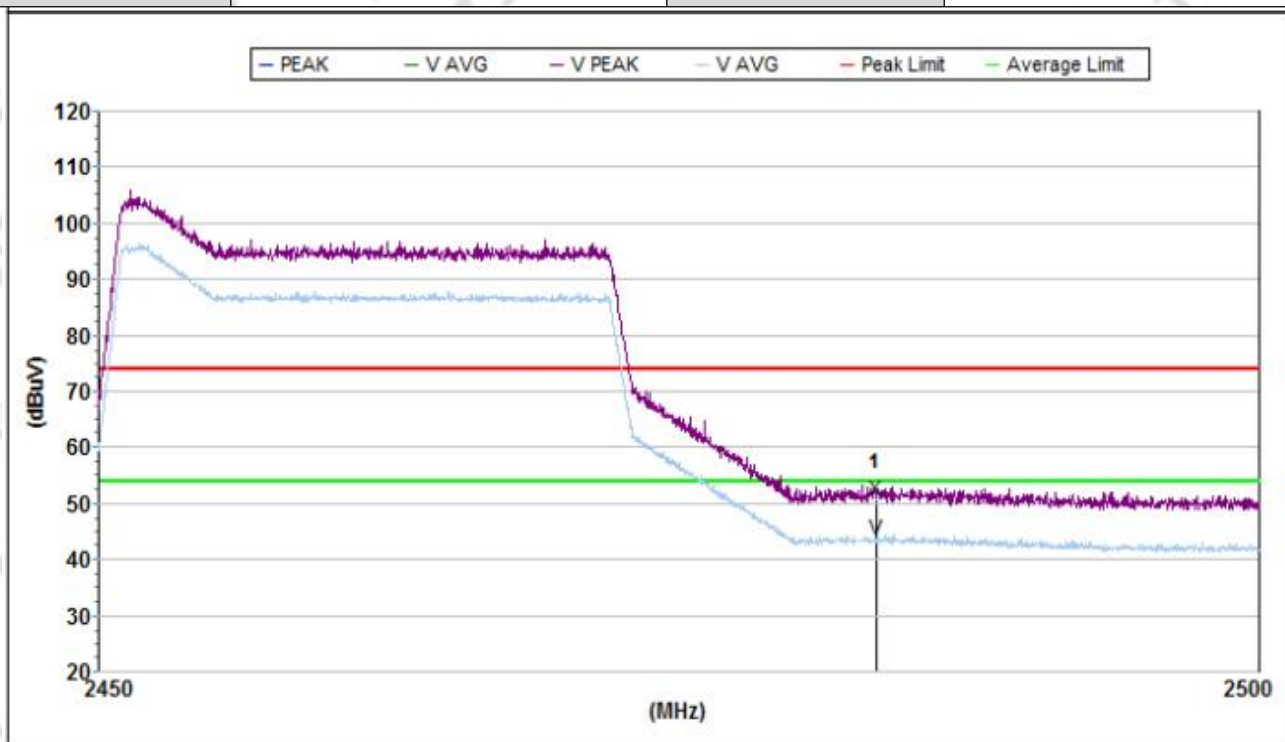
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2390.000	57.1	-7.8	49.3	74.0	24.7	V
2	2400.000	55.4	1.9	57.3	74.0	16.7	V
Avg							
1	2390.000	49.7	-7.8	41.9	54.0	12.1	V
2	2400.000	47.9	1.9	49.8	54.0	4.2	V

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	AX20_CH11 2462 MIMO	Antenna Pol.	Horizontal



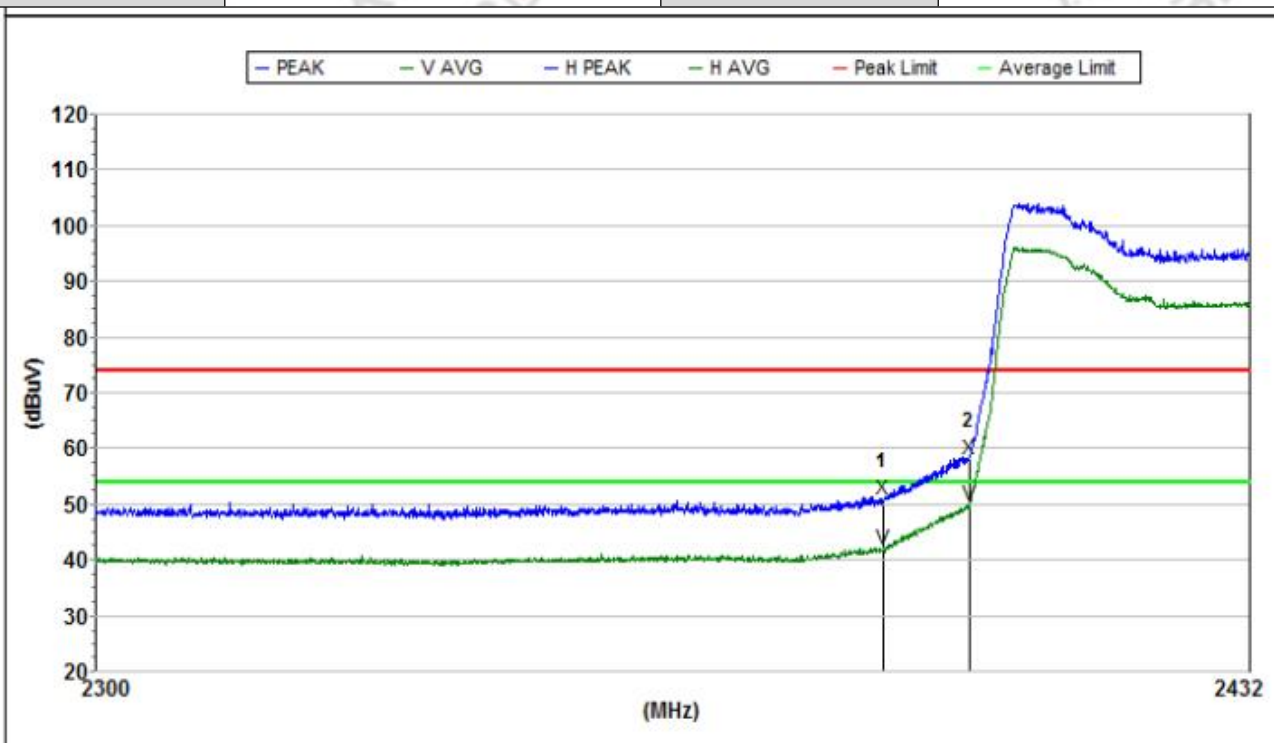
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2483.500	59.6	-10.8	48.8	74.0	25.2	H
Avg							
1	2483.500	51.6	-10.8	40.8	54.0	13.2	H

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	AX20_CH11 2462 MIMO	Antenna Pol.	Vertical



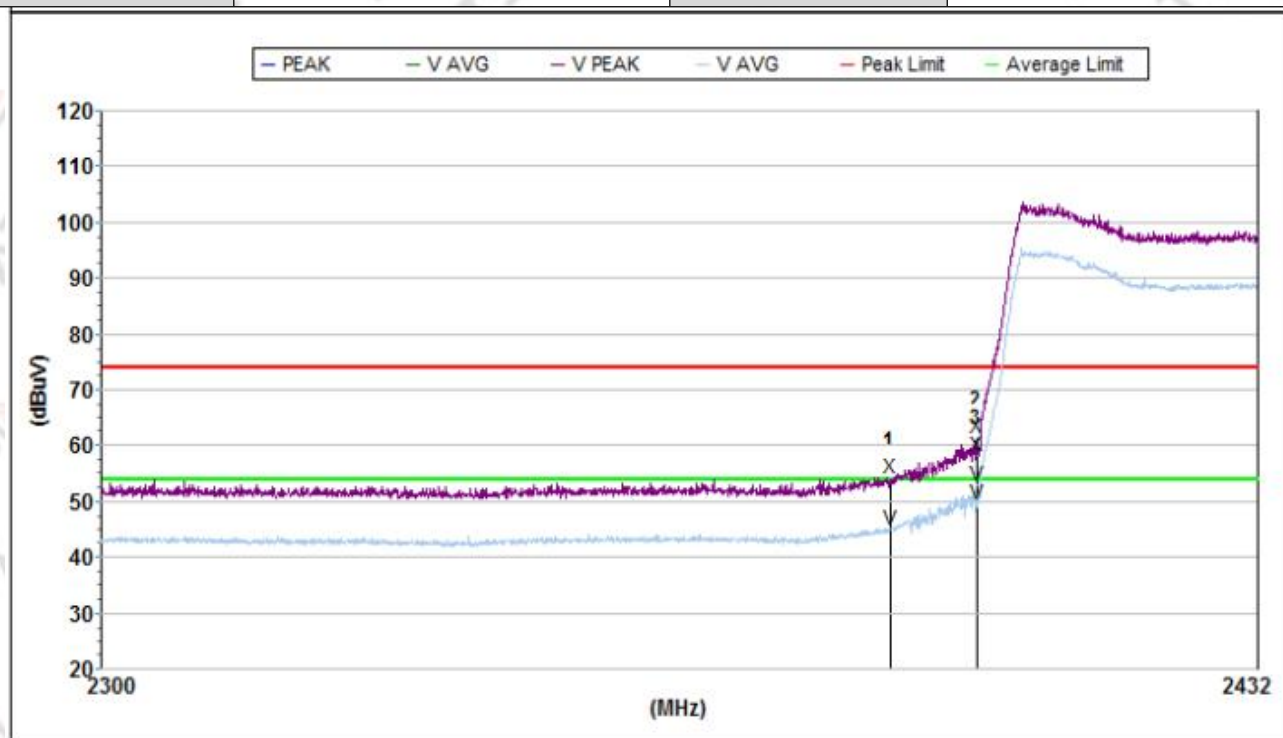
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2483.500	58.7	-8.2	50.5	74.0	23.5	V
Avg							
1	2483.500	51.9	-8.2	43.7	54.0	10.3	V

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	AX40_CH3 2422 MIMO	Antenna Pol.	Horizontal



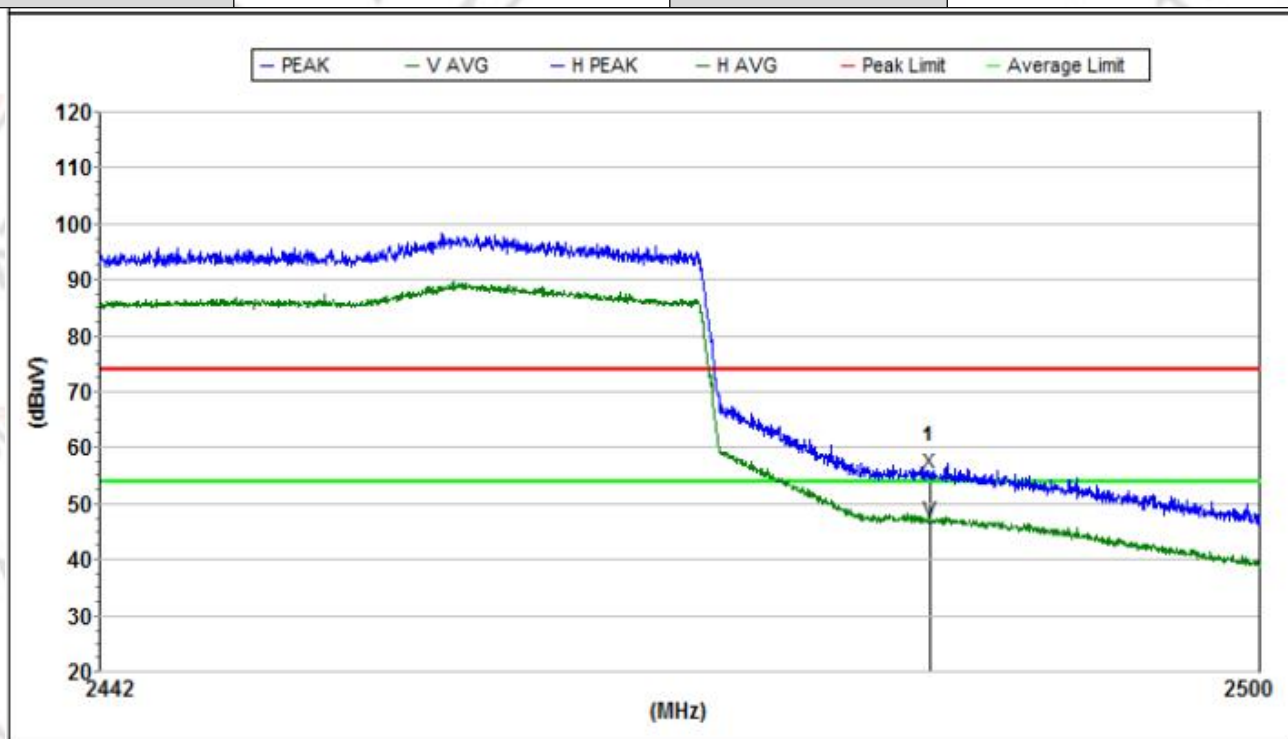
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2390.000	59.5	-8.7	50.8	74.0	23.2	H
2	2400.000	58.7	-0.7	58.0	74.0	16.0	H
Avg							
1	2390.000	50.6	-8.7	41.9	54.0	12.1	H
2	2400.000	50.7	-0.7	50.0	54.0	4.0	H

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	AX40_CH3 2422 MIMO	Antenna Pol.	Vertical



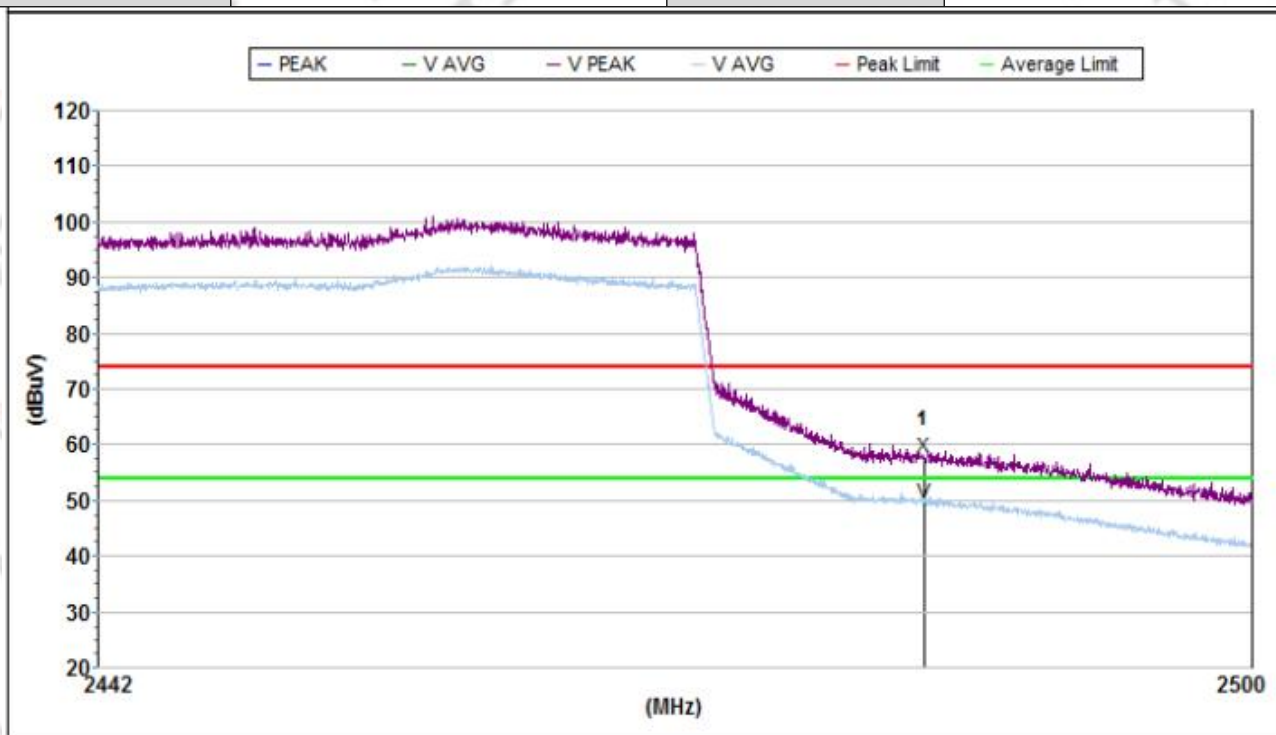
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2390.000	60.0	-5.8	54.2	74.0	19.8	V
2	2400.000	59.5	2.1	61.6	74.0	12.4	V
3	2400.000	56.1	2.1	58.2	74.0	15.8	V
Avg							
1	2390.000	50.8	-5.8	45.0	54.0	9.0	V
2	2400.000	50.9	2.1	53.0	54.0	1.0	V
3	2400.000	47.5	2.1	49.6	54.0	4.4	V

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	AX40_CH3 2452 MIMO	Antenna Pol.	Horizontal



Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2483.500	60.0	-4.5	55.5	74.0	18.5	H
Avg							
1	2483.500	51.5	-4.5	47.0	54.0	7.0	H

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	AX40_CH11 2452 MIMO	Antenna Pol.	Vertical



Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2483.500	59.6	-1.9	57.7	74.0	16.3	V
Avg							
1	2483.500	51.5	-1.9	49.6	54.0	4.4	V

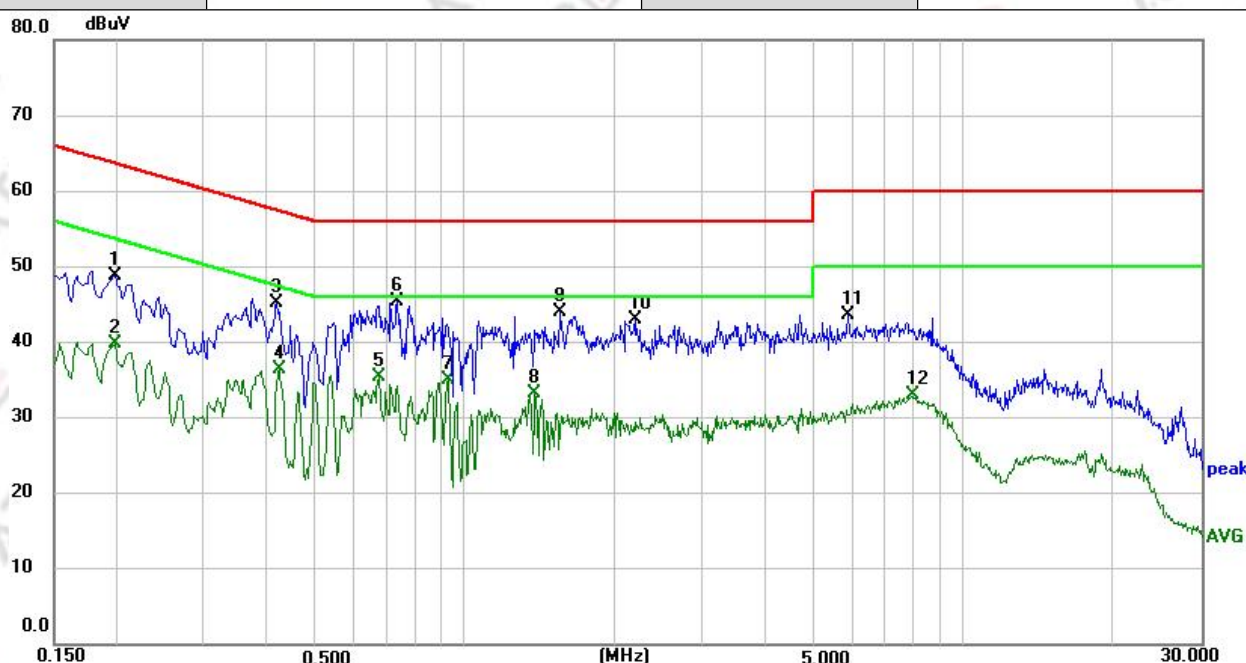
2.AC Power-Line Conducted Emission

Test Result

Note:

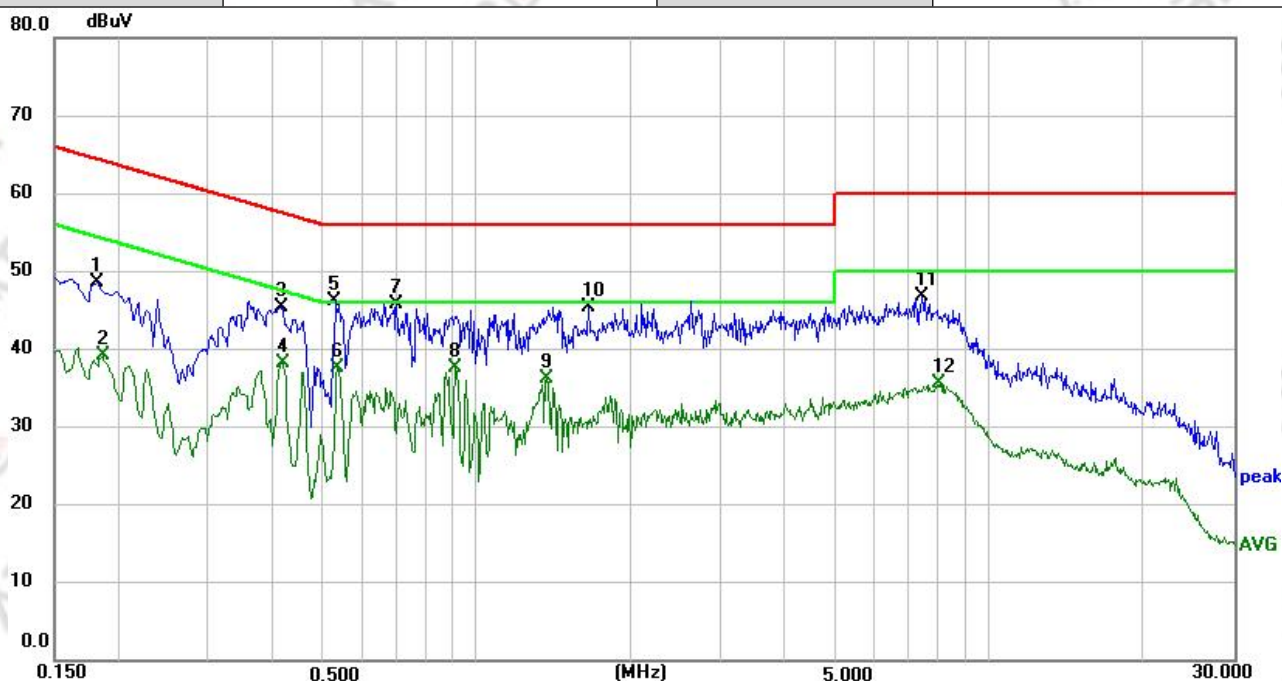
- 1.All modes have been tested, only worst mode(802.11ax20-TX Channel 6) was recorded in the test report.
- 2.Emission Level = Reading Value + Correction Factor .
3. Correction Factor = Insertion loss + Cable loss.
4. The emission levels of other frequencies were less than 20dB margin against the limit.
5. Margin value = Emission level-Limit value.

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax20-TX Channel 6	Phase	L1



No.	Frequency (MHz)	Reading Level(dBuV)	Factor (dB)	Measure- ment(dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1980	29.13	19.62	48.75	63.69	-14.94	peak
2	0.1980	20.13	19.62	39.75	53.69	-13.94	AVG
3	0.4180	25.77	19.50	45.27	57.49	-12.22	peak
4	0.4220	16.90	19.50	36.40	47.41	-11.01	AVG
5 *	0.6740	16.13	19.36	35.49	46.00	-10.51	AVG
6	0.7340	26.00	19.37	45.37	56.00	-10.63	peak
7	0.9260	15.44	19.51	34.95	46.00	-11.05	AVG
8	1.3820	13.69	19.60	33.29	46.00	-12.71	AVG
9	1.5580	24.30	19.63	43.93	56.00	-12.07	peak
10	2.1900	23.33	19.65	42.98	56.00	-13.02	peak
11	5.8900	24.11	19.49	43.60	60.00	-16.40	peak
12	7.9020	13.39	19.53	32.92	50.00	-17.08	AVG

EUT	Obook Laptop	Model Name	ORICO-H1-15-680-12256-S V
Test Mode	802.11ax20-TX Channel 6	Phase	N



No.	Frequency (MHz)	Reading Level(dBuV)	Factor (dB)	Measure- ment(dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1819	28.94	19.59	48.53	64.40	-15.87	peak
2	0.1860	19.65	19.60	39.25	54.21	-14.96	AVG
3	0.4140	25.87	19.51	45.38	57.57	-12.19	peak
4	0.4180	18.67	19.50	38.17	47.49	-9.32	AVG
5	0.5299	26.69	19.48	46.17	56.00	-9.83	peak
6	0.5340	18.09	19.48	37.57	46.00	-8.43	AVG
7	0.6980	26.21	19.65	45.86	56.00	-10.14	peak
8 *	0.9100	18.04	19.58	37.62	46.00	-8.38	AVG
9	1.3700	16.55	19.56	36.11	46.00	-9.89	AVG
10	1.6620	25.89	19.57	45.46	56.00	-10.54	peak
11	7.3900	27.28	19.53	46.81	60.00	-13.19	peak
12	8.0219	15.98	19.58	35.56	50.00	-14.44	AVG