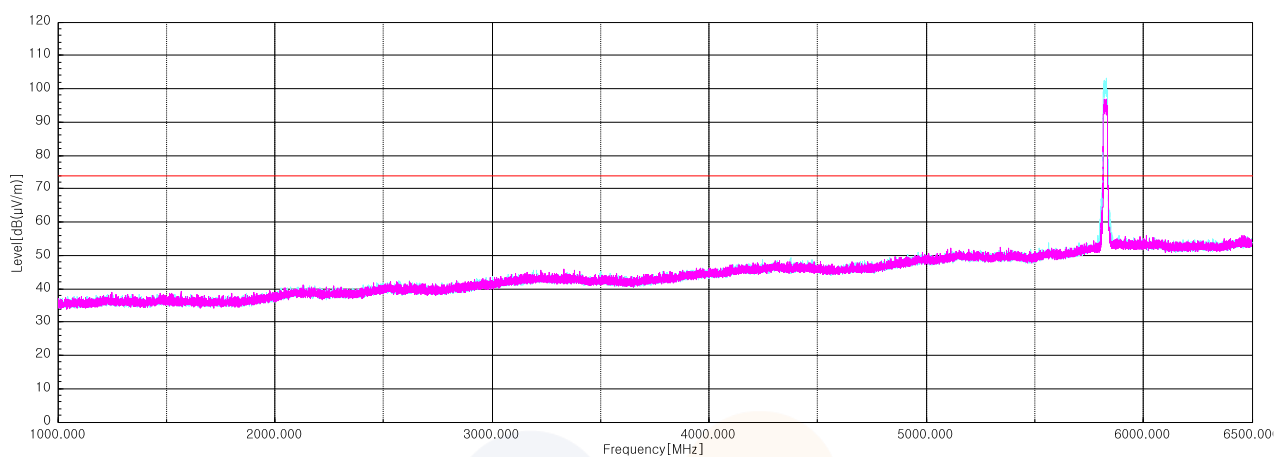
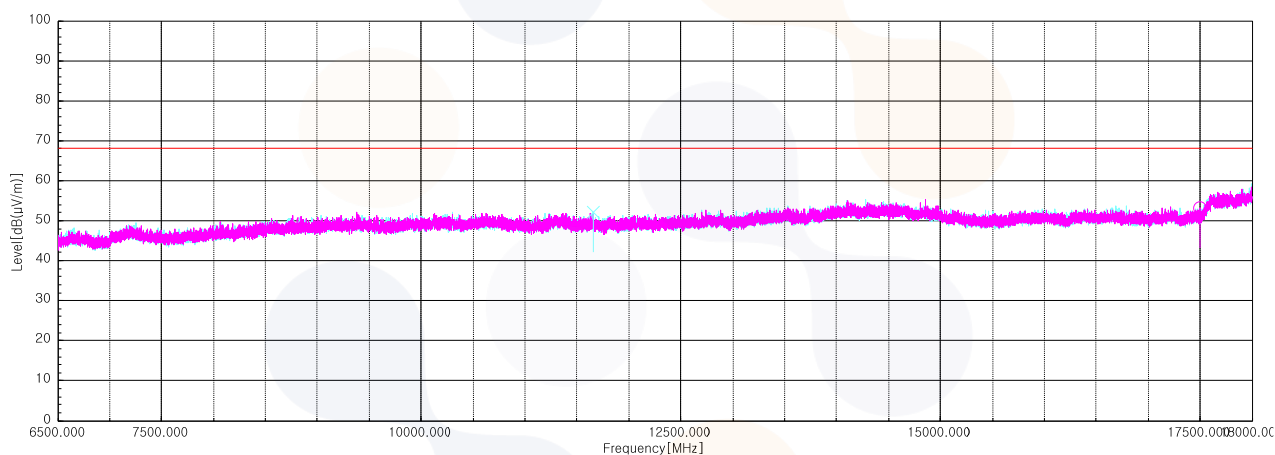


Horizontal/Vertical for 1 GHz ~ 6.5 GHz



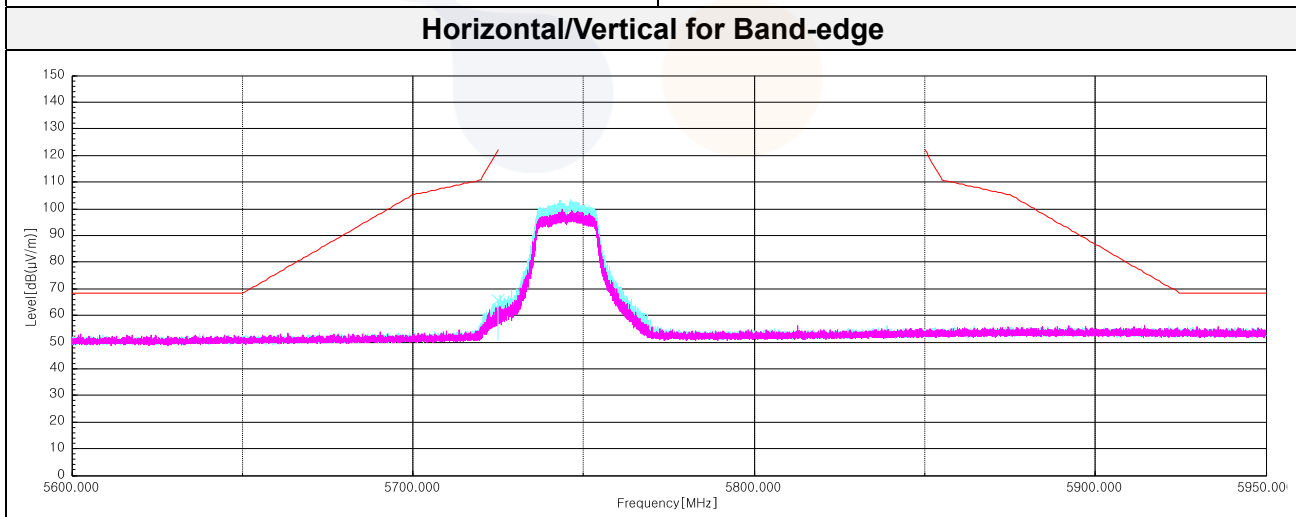
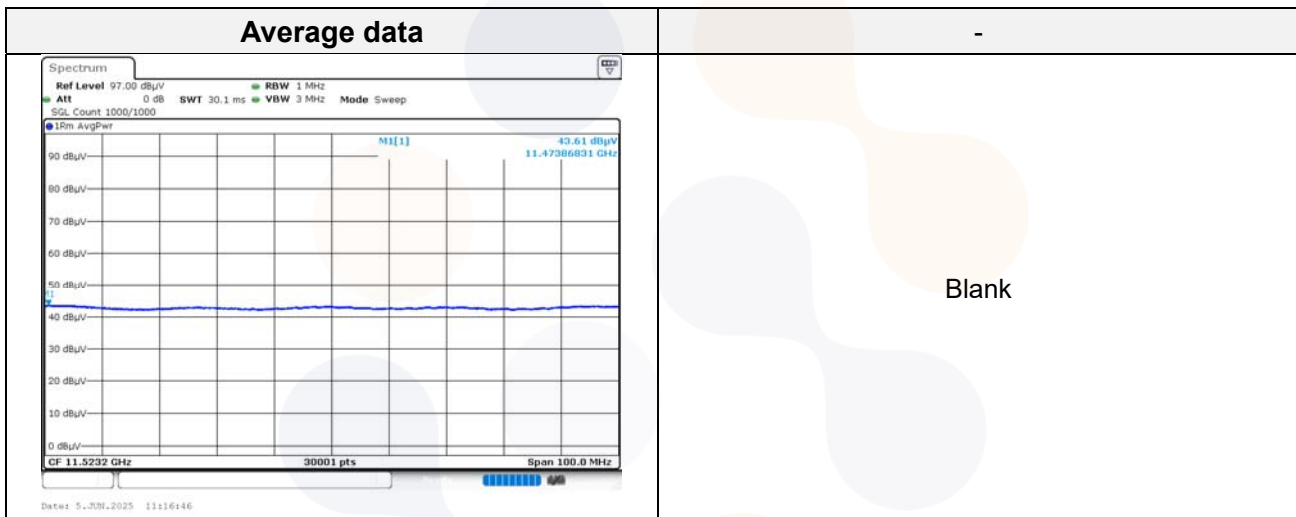
Horizontal/Vertical for 6.5 GHz ~ 18 GHz



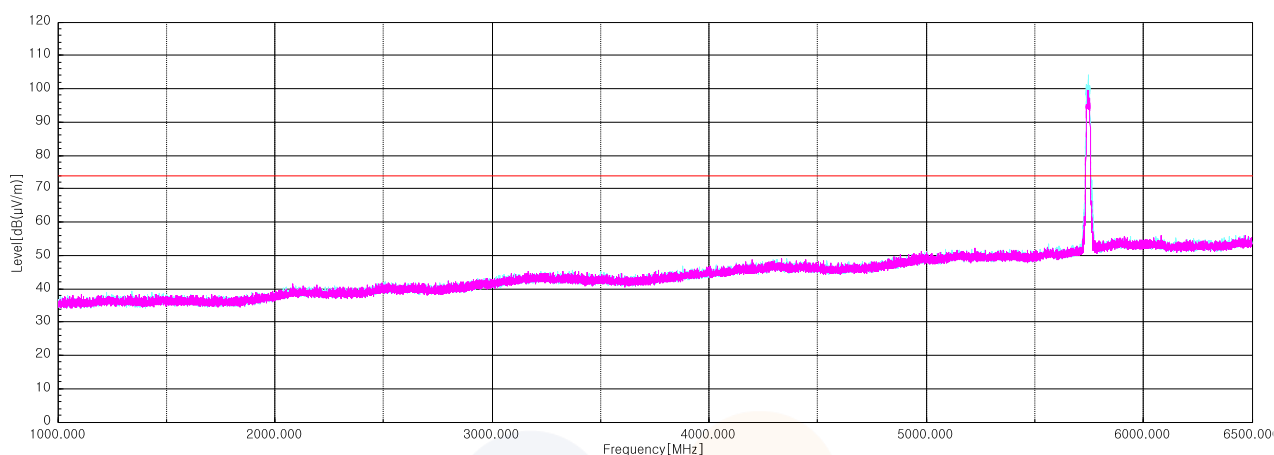
802.11n HT20 UNII 3

Lowest Channel (5 745 MHz)

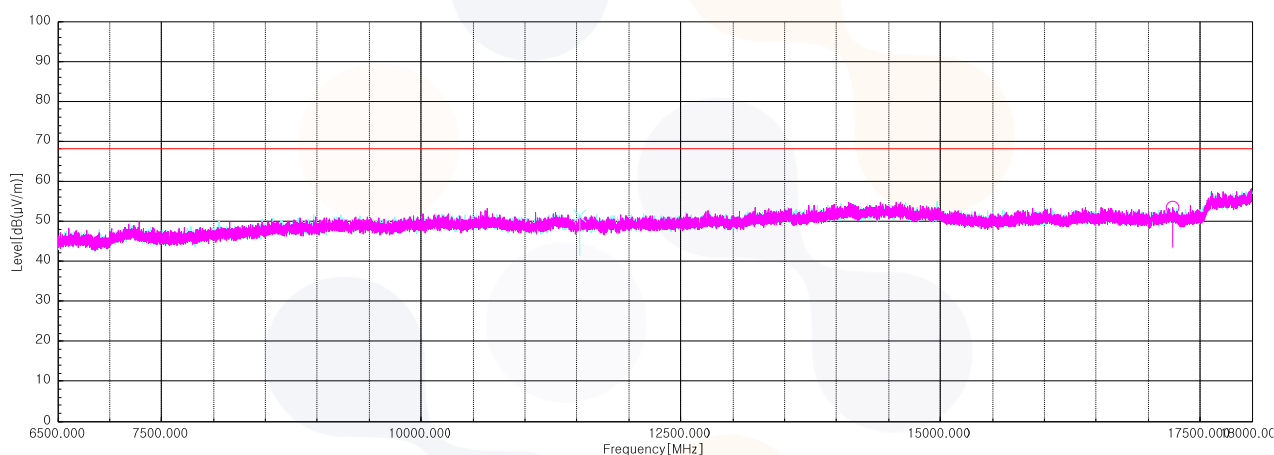
Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
5 724.96	V	57.70	33.50	-25.67	-	65.53	122.10	56.57
11 473.87 ¹⁾	V	54.70	38.95	-42.25	-	51.40	74.00	22.60
17 237.17	H	55.70	38.15	-40.55	-	53.30	68.20	14.90
Average Data								
11 473.87 ¹⁾	V	43.61	38.95	-42.25	0.09	40.40	54.00	13.60



Horizontal/Vertical for 1 GHz ~ 6.5 GHz

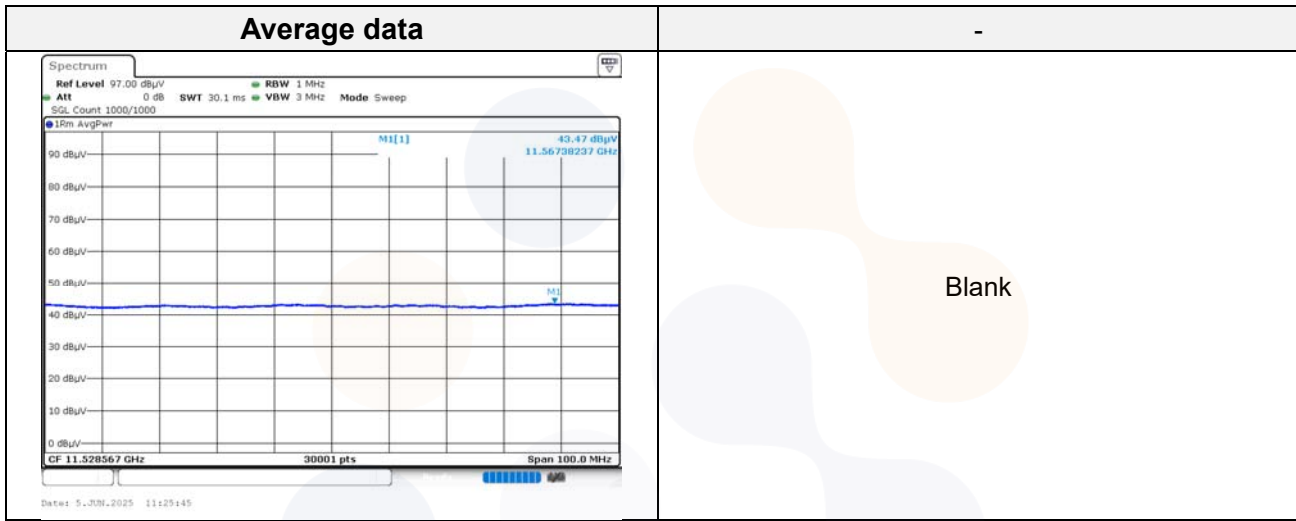


Horizontal/Vertical for 6.5 GHz ~ 18 GHz

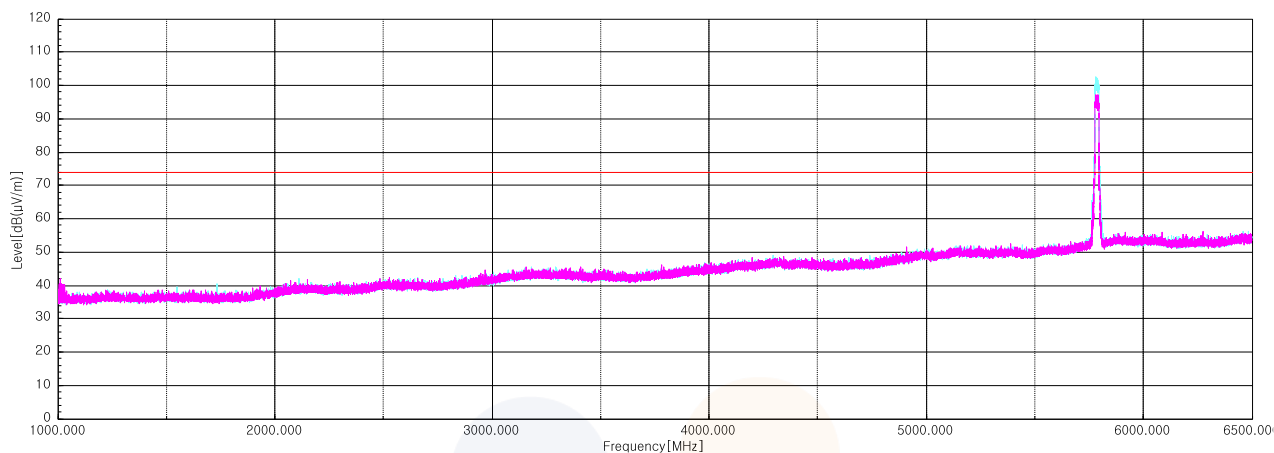


Middle Channel (5 785 MHz)

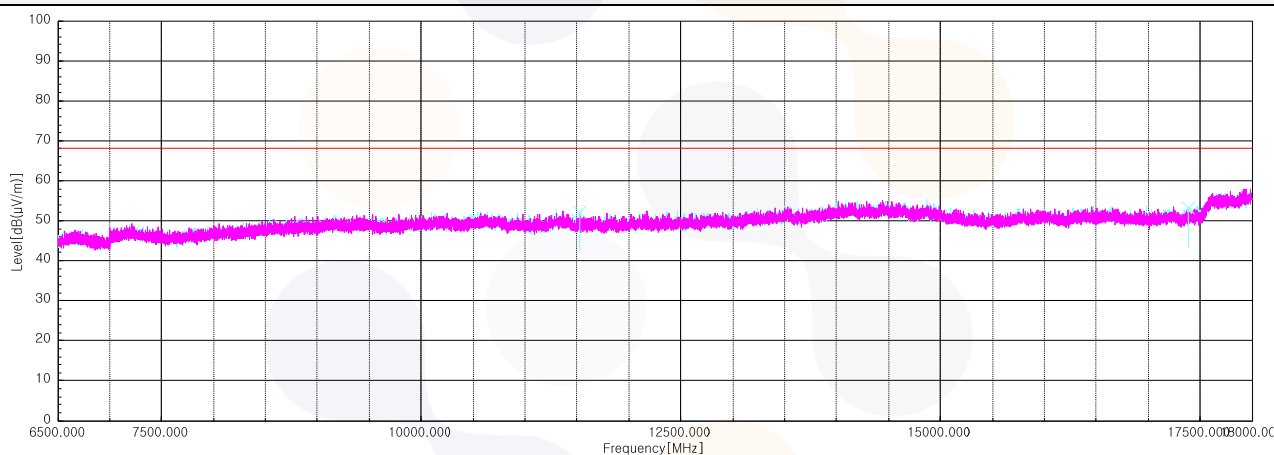
Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 567.38 ¹⁾	V	55.30	38.77	-41.97	-	52.10	74.00	21.90
17 386.67	V	55.60	38.57	-41.01	-	53.16	68.20	15.04
Average Data								
11 567.38 ¹⁾	V	43.47	38.77	-41.97	0.09	40.36	54.00	13.64



Horizontal/Vertical for 1 GHz ~ 6.5 GHz

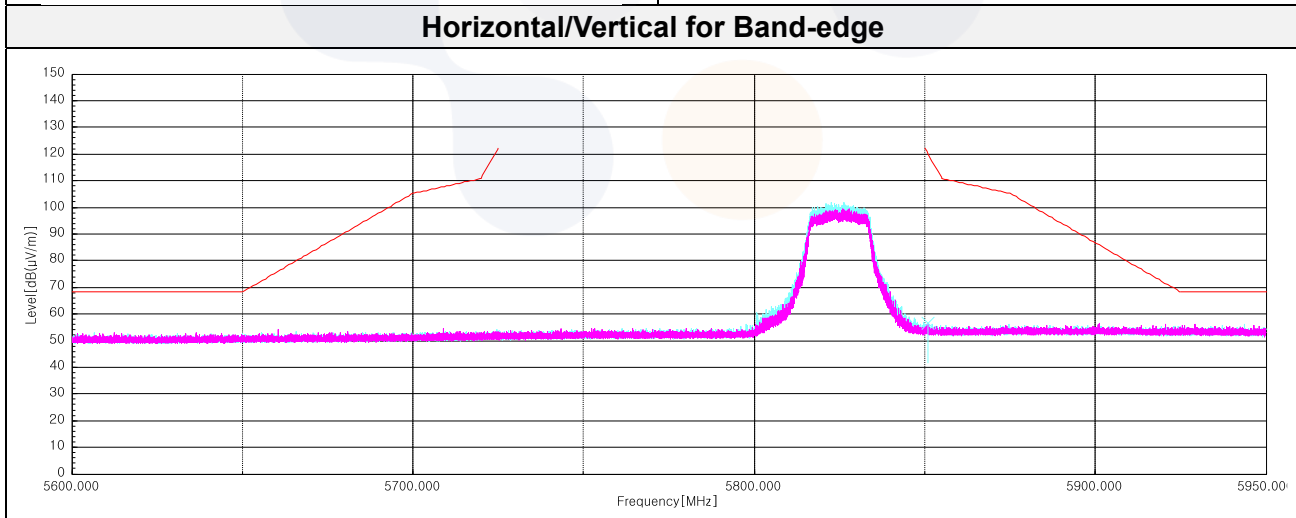
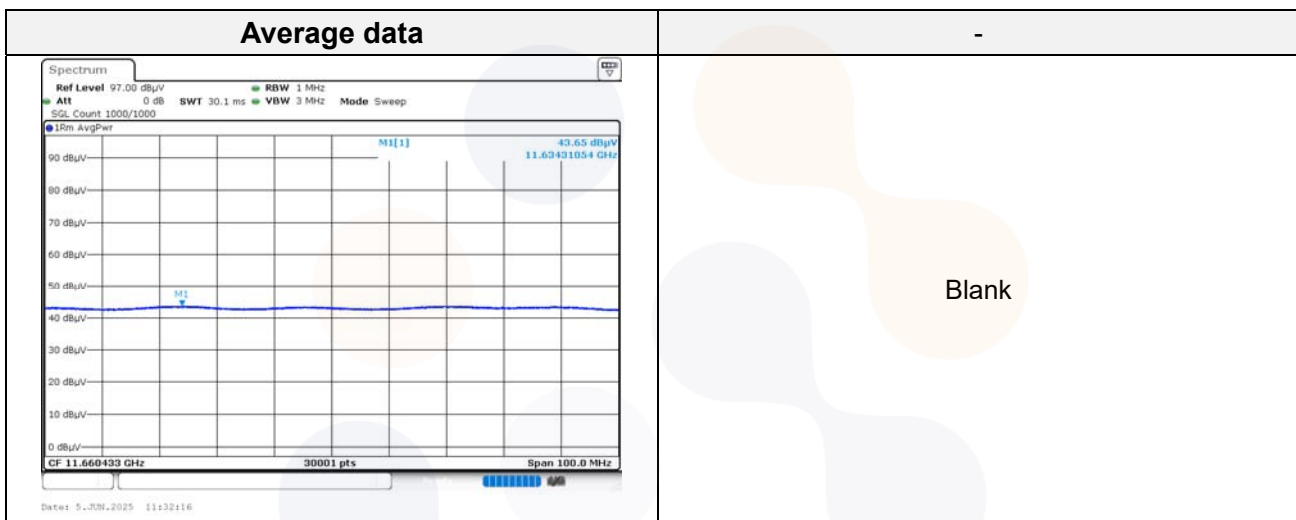


Horizontal/Vertical for 6.5 GHz ~ 18 GHz

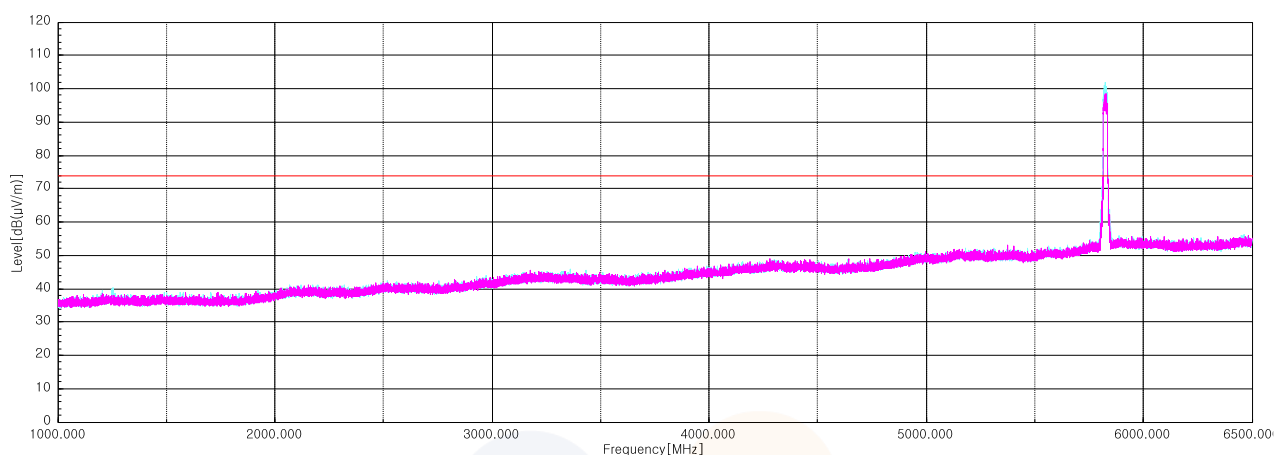


Highest Channel (5 825 MHz)

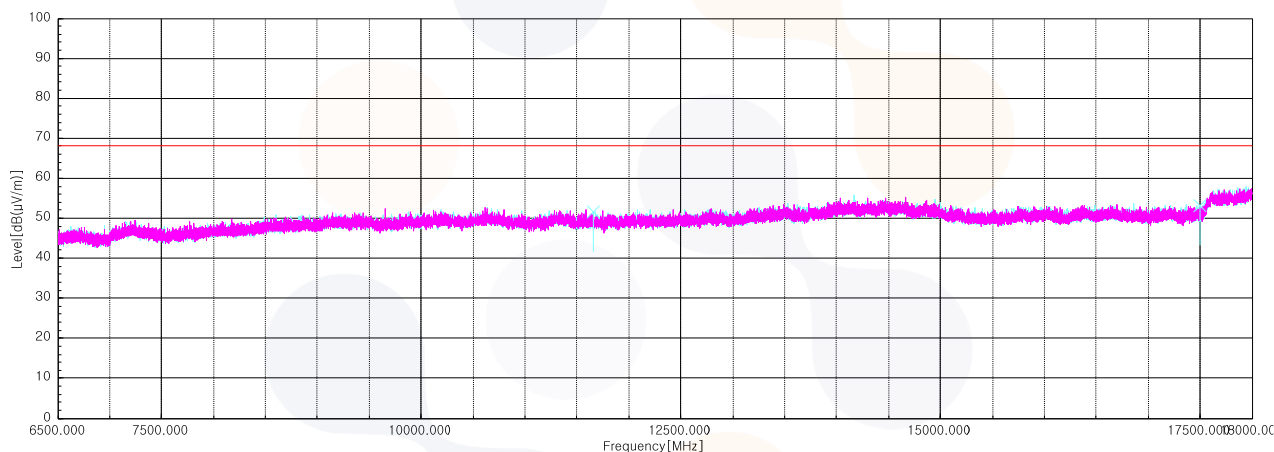
Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
5 851.07	V	47.50	34.20	-25.43	-	56.27	119.80	63.53
11 634.63 ¹⁾	V	54.60	38.63	-41.73	-	51.50	74.00	22.50
17 499.75	V	55.40	39.30	-41.44	-	53.26	68.20	14.94
Average Data								
11 634.63 ¹⁾	V	43.65	38.63	-41.73	0.09	40.64	54.00	13.36



Horizontal/Vertical for 1 GHz ~ 6.5 GHz



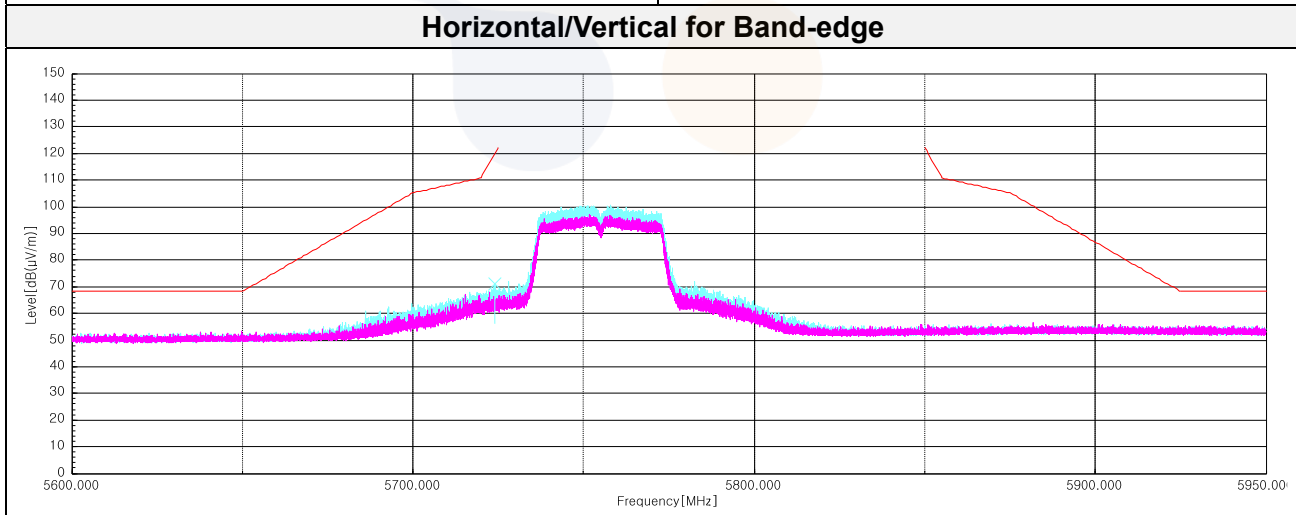
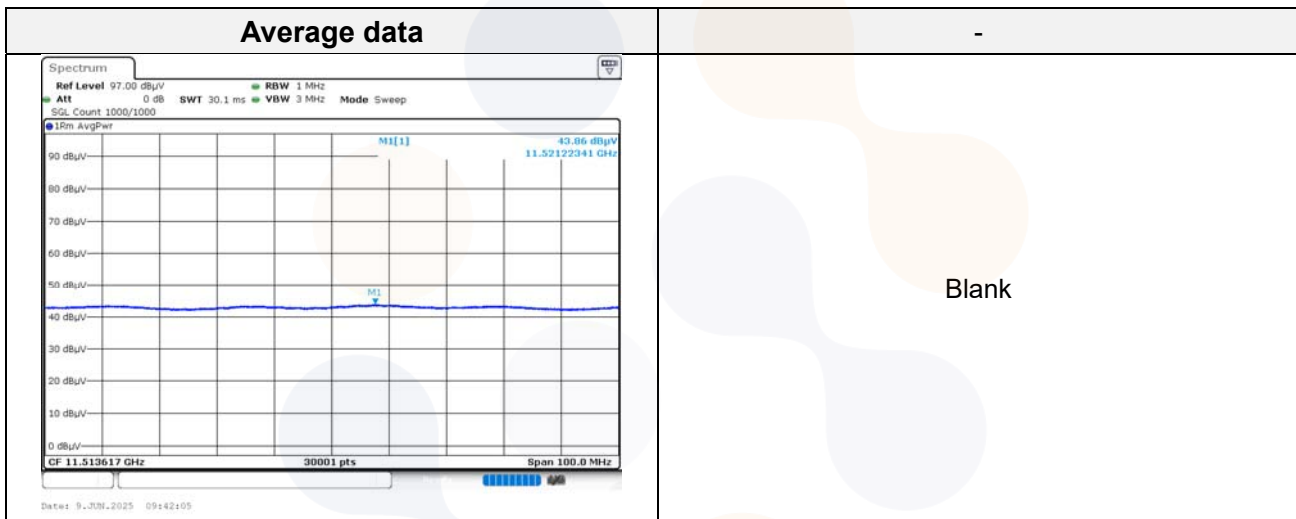
Horizontal/Vertical for 6.5 GHz ~ 18 GHz



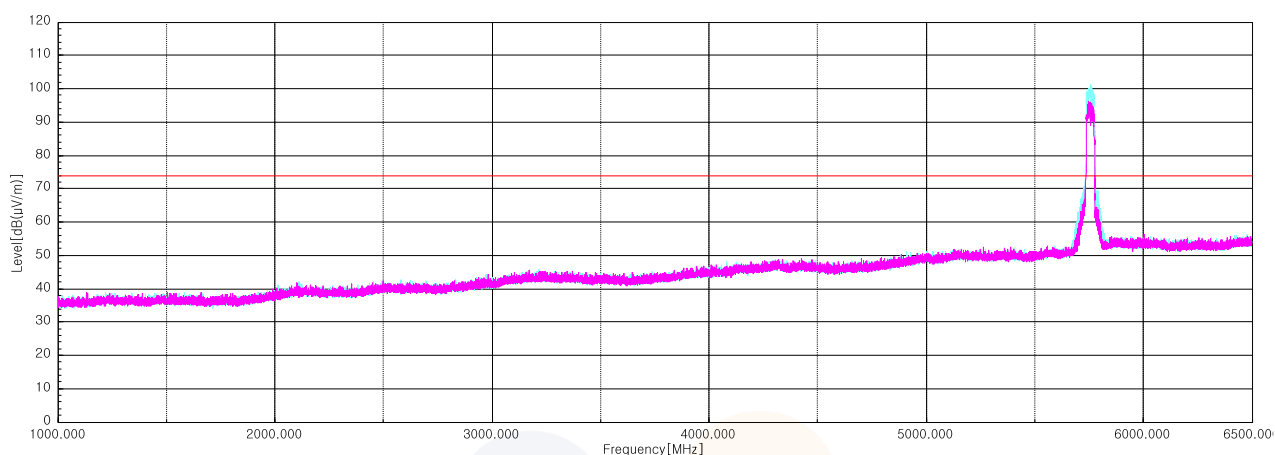
802.11n HT40 UNII 3

Lowest Channel (5 755 MHz)

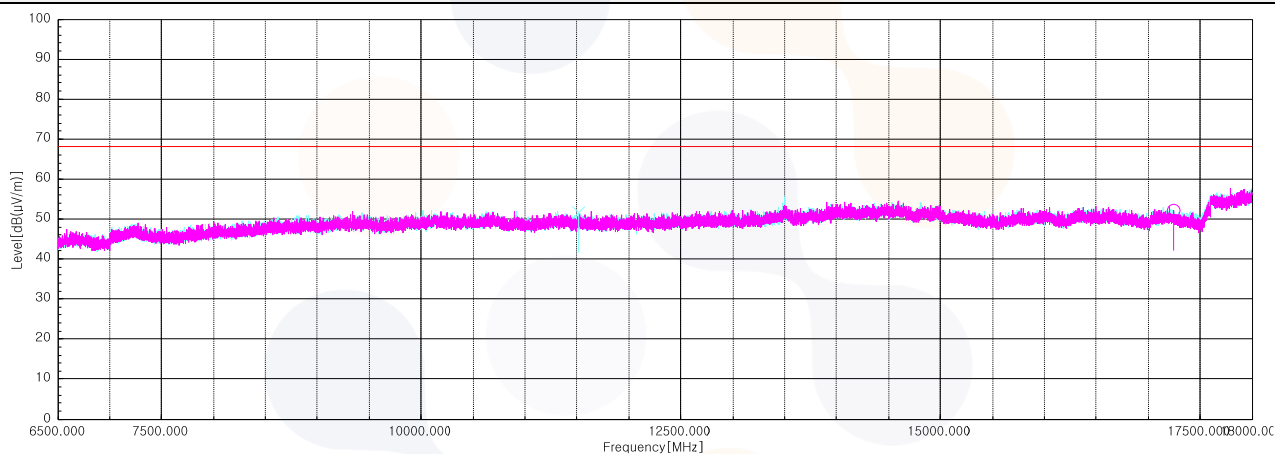
Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
5 724.15	V	63.00	33.50	-25.67	-	70.83	120.30	49.47
11 521.22 ¹⁾	V	55.00	38.86	-42.13	-	51.73	74.00	22.27
17 245.98	H	54.50	38.18	-40.51	-	52.17	68.20	16.03
Average Data								
11 521.22 ¹⁾	V	43.86	38.86	-42.13	0.17	40.76	54.00	13.24



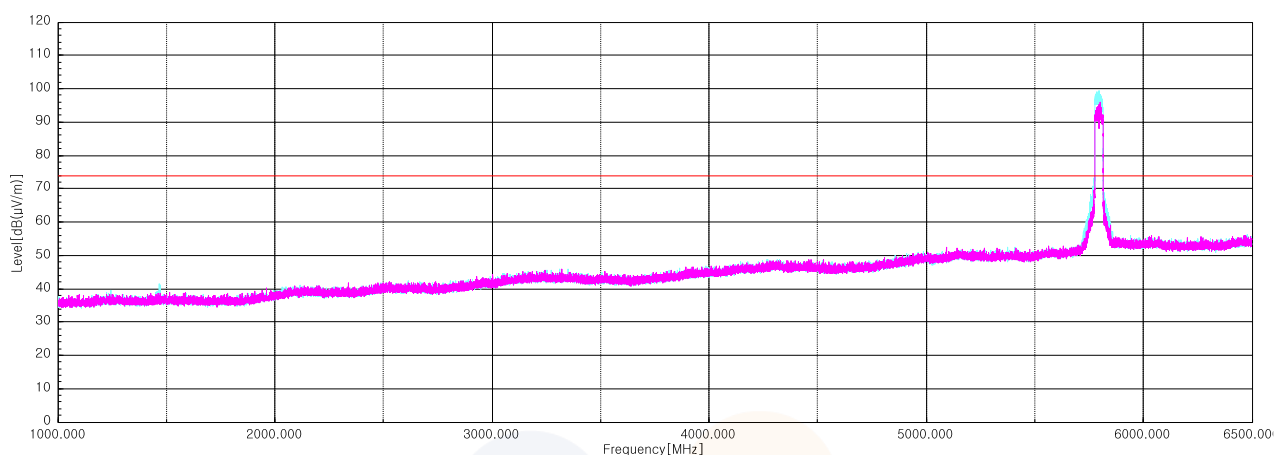
Horizontal/Vertical for 1 GHz ~ 6.5 GHz



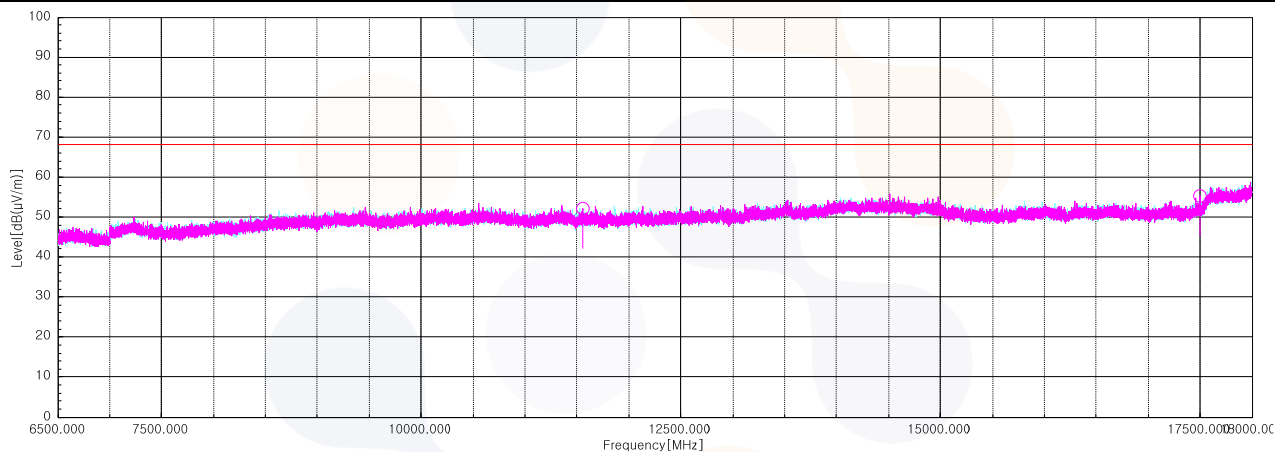
Horizontal/Vertical for 6.5 GHz ~ 18 GHz



Horizontal/Vertical for 1 GHz ~ 6.5 GHz



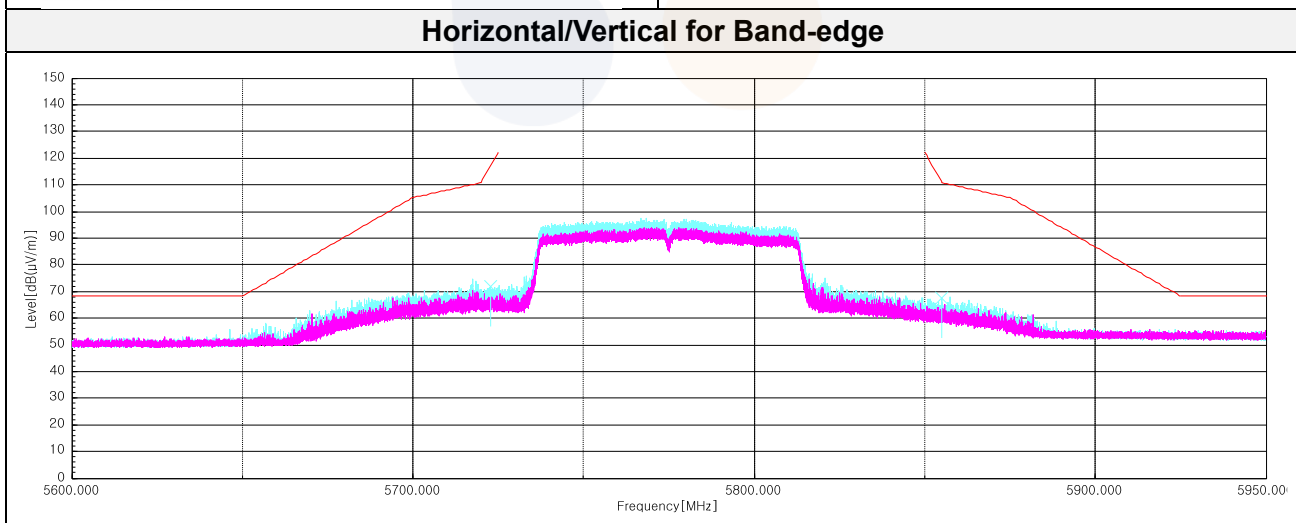
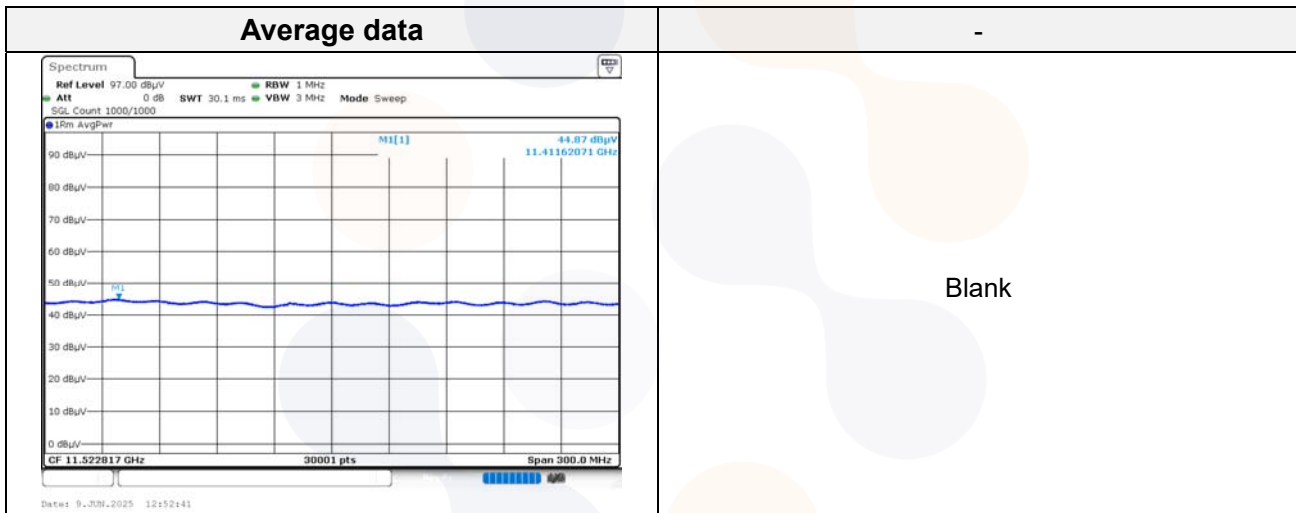
Horizontal/Vertical for 6.5 GHz ~ 18 GHz



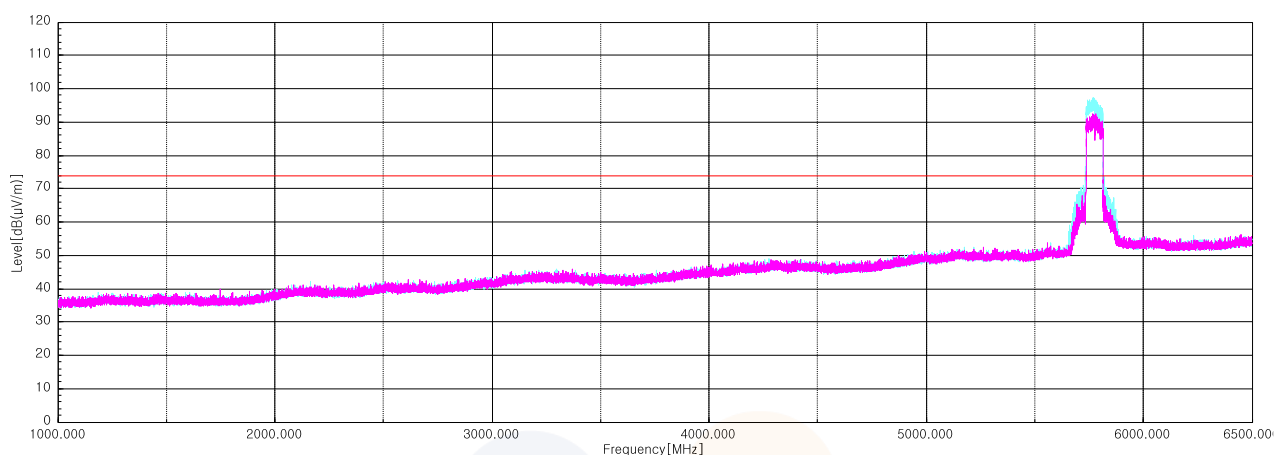
802.11ac VHT80 UNII 3

Lowest Channel (5 775 MHz)

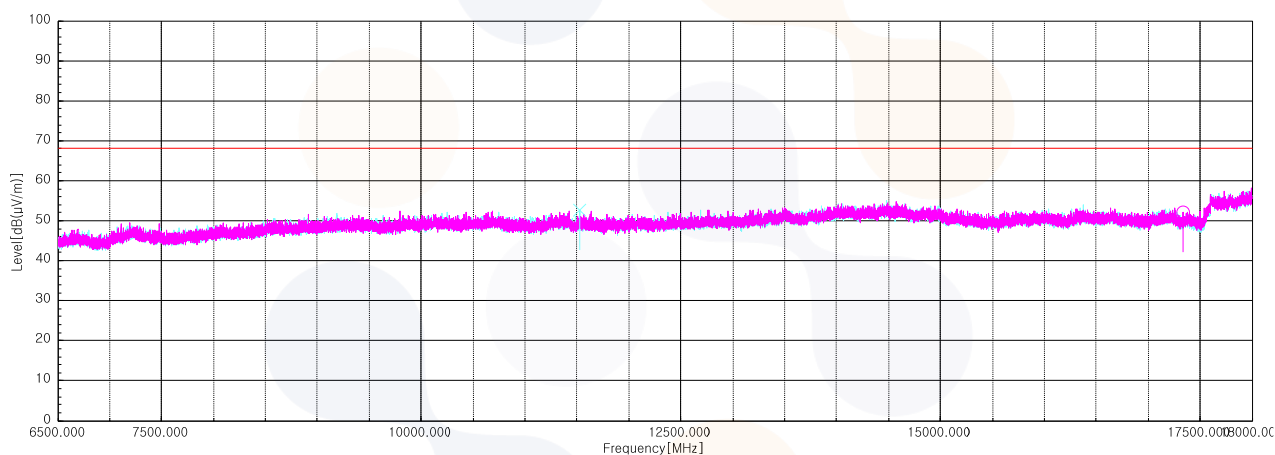
Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
5 722.63	V	63.90	33.49	-25.67	-	71.72	116.80	45.08
5 854.87	V	58.60	34.22	-25.42	-	67.40	111.10	43.70
11 411.62 ¹⁾	V	55.80	39.10	-42.36	-	52.54	74.00	21.46
17 336.83	H	54.40	38.55	-40.82	-	52.13	68.20	16.07
Average Data								
11 411.62 ¹⁾	V	44.87	39.10	-42.36	0.33	41.94	54.00	12.06



Horizontal/Vertical for 1 GHz ~ 6.5 GHz

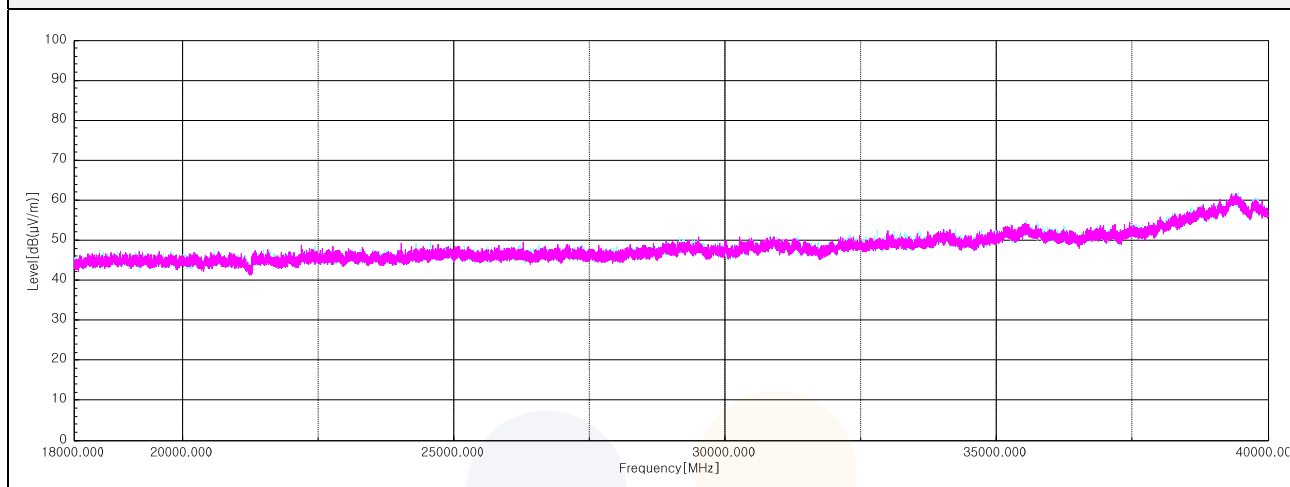


Horizontal/Vertical for 6.5 GHz ~ 18 GHz



Test results (Above 18 GHz) – Worst case: 802.11ac VHT80_UNII 3_5 775 MHz

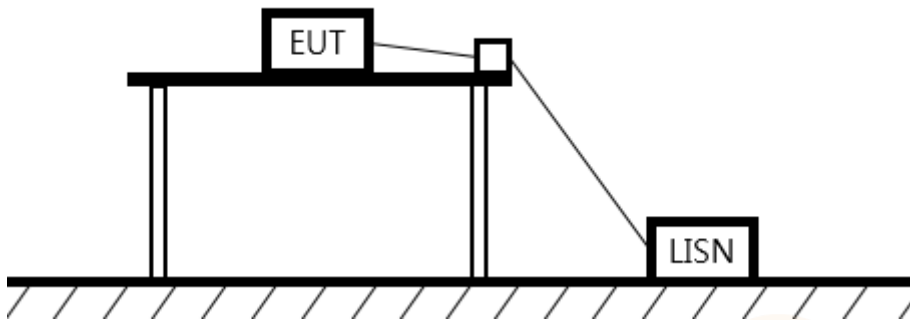
Horizontal/Vertical for 18 GHz ~ 40 GHz



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

7.6. AC Conducted emission

Test setup



Limit

According to 15.207(a), 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 50uH/50 ohm line impedance stabilization network (LISN). Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequencies ranges.

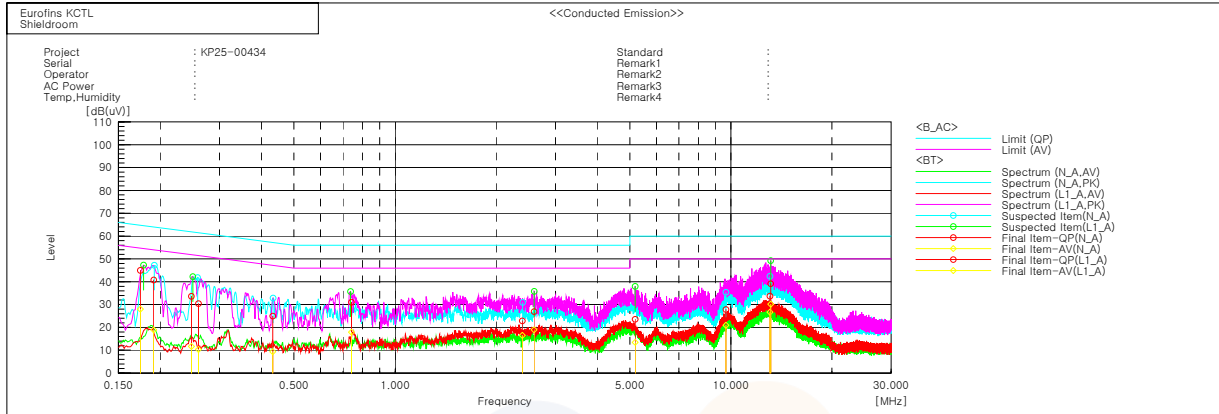
Frequency of Emission (MHz)	Conducted limit (dBμV/m)	
	Quasi-peak	Average
0.15 – 0.50	66 - 56*	56 - 46*
0.50 – 5.00	56	46
5.00 – 30.0	60	50

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 1.5m away from the side wall of the shielded room.
2. Each current-carrying conductor of the EUT power cord was individually connected through a 50Ω/50μH 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 quasi-peak and average within a bandwidth of 9 kHz. The EUT was in transmitting mode during the measurements.

Test results

Worst case: 802.11n HT40_UNII 3_5 795 MHz



Final Result

--- L2 Phase ---

No.	Frequency	Reading QP	Reading CAV	c.f	Result QP	Result CAV	Limit QP	Limit AV	Margin QP	Margin CAV
	[MHz]	[dB(uV)]	[dB(uV)]	[dB]	[dB(uV)]	[dB(uV)]	[dB(uV)]	[dB(uV)]	[dB]	[dB]
1	0.19116	30.7	8.8	10.1	40.8	18.9	64.0	54.0	23.2	35.1
2	0.25992	20.6	0.5	9.9	30.5	10.4	61.4	51.4	30.9	41.0
3	0.43215	14.9	-0.7	10.1	25.0	9.4	57.2	47.2	32.2	37.8
4	2.39437	13.0	6.6	9.9	22.9	16.5	56.0	46.0	33.1	29.5
5	9.66668	17.3	10.4	10.5	27.8	20.9	60.0	50.0	32.2	29.1
6	13.06733	23.0	16.0	10.7	33.7	26.7	60.0	50.0	26.3	23.3

--- L3 Phase ---

No.	Frequency	Reading QP	Reading CAV	c.f	Result QP	Result CAV	Limit QP	Limit AV	Margin QP	Margin CAV
	[MHz]	[dB(uV)]	[dB(uV)]	[dB]	[dB(uV)]	[dB(uV)]	[dB(uV)]	[dB(uV)]	[dB]	[dB]
1	0.1745	34.8	17.8	10.2	45.0	28.0	64.7	54.7	19.7	26.7
2	0.24739	23.7	1.7	9.9	33.6	11.6	61.8	51.8	28.2	40.2
3	0.74181	21.1	7.9	10.0	31.1	17.9	56.0	46.0	24.9	28.1
4	2.53389	17.0	9.1	9.9	26.9	19.0	56.0	46.0	29.1	27.0
5	5.18836	13.6	3.5	10.0	23.6	13.5	60.0	50.0	36.4	36.5
6	13.14336	28.4	19.5	10.7	39.1	30.2	60.0	50.0	20.9	19.8

8. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	R&S	FSV30	100914	25.07.02
Spectrum Analyzer	R&S	FSV40	100988	26.04.24
Spectrum Analyzer	R&S	FSV40	101575	26.04.23
PSA Spectrum Analyzer	Agilent	E4440A	MY44303500	25.07.02
Vector Signal Generator	R&S	SMBV100A	257566	25.07.01
Signal Generator	R&S	SMB100A	176206	26.01.17
DC Power Supply	AGILENT	E3632A	MY40007371	26.04.23
DC Power Supply	POWERCOM	DCP-50100A	20220610-01	26.01.16
EMI TEST RECEIVER	R&S	ESCI3	101428	25.08.12
TWO-LINE V - NETWORK	R&S	ENV216	101584	26.03.25
Attenuator	API Inmet	40AH2W-10	11	26.04.28
Bilog Antenna	Teseq GmbH	CBL 6112D	61521	26.12.11
Loop Antenna	R&S	HFH2-Z2	100355	26.06.25
Horn Antenna	SCHWARZBECK	BBHA9120D	2763	25.10.24
Horn Antenna	SCHWARZBECK	BBHA9170	1267	25.10.15
Amplifier	SONOMA INSTRUMENT	310N	421910	25.10.11
Broadband PreAmplifier	SCHWARZBECK	BBV9718D	57	26.01.16
Low Noise Amplifier	TESTEK	TK-PA18H	220124-L	25.10.11
Low Noise Amplifier	TESTEK	TK-PA1840H	220133-L	25.10.14
High Pass Filter	Wainwright Instruments GmbH	WHKX8-5655-6500-18000-40SS	SN8	25.10.15
High Pass Filter	Qotana TECHNOLOGIES	DBHF058004000A	23041800061	25.06.24

End of test report