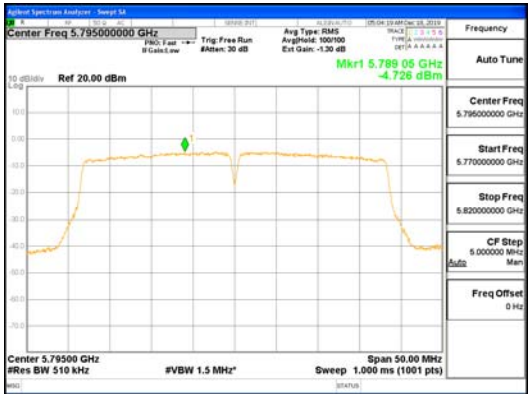
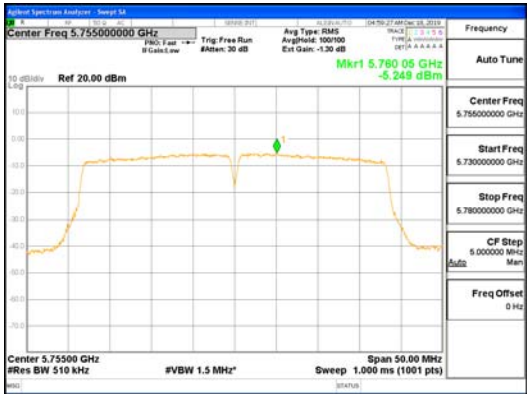


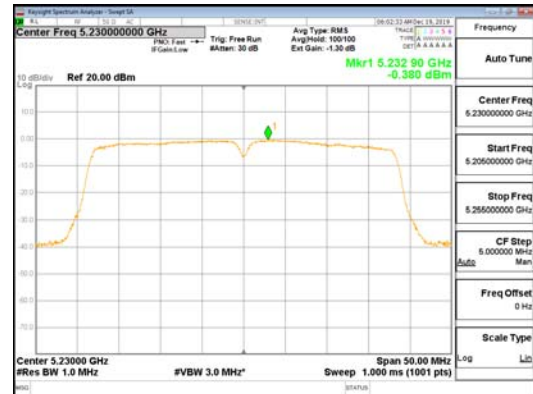
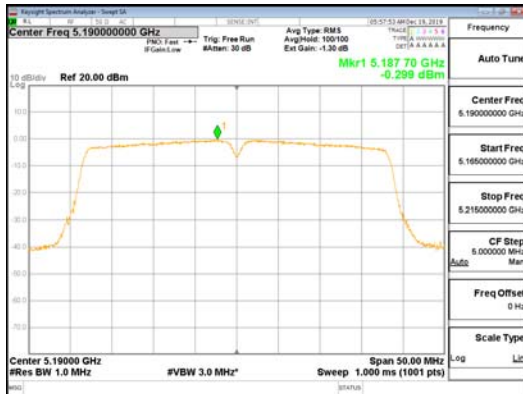


CTK Co., Ltd.
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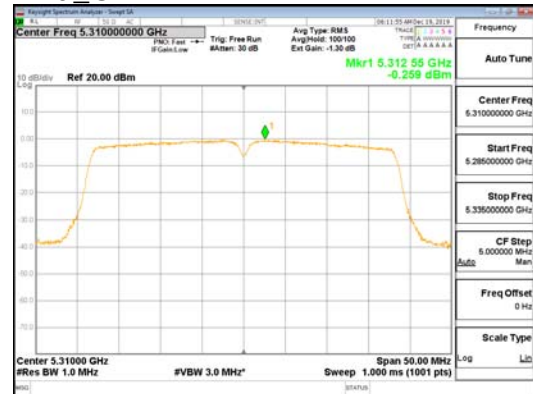
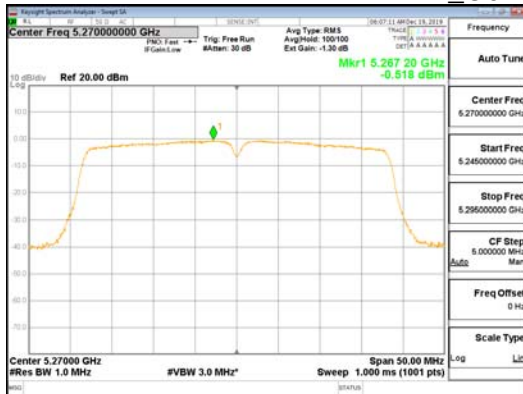
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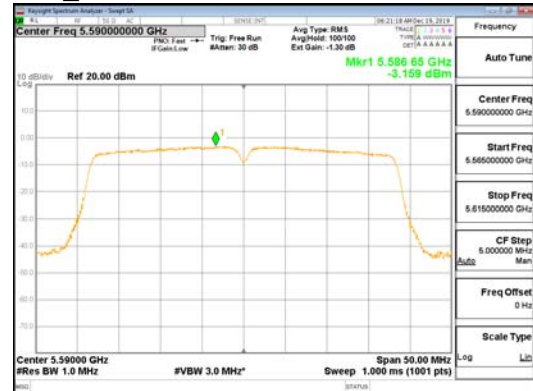
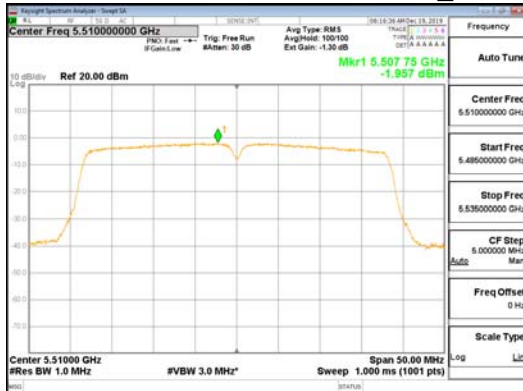
ANT-L_802.11ac_VHT40_UNII 3



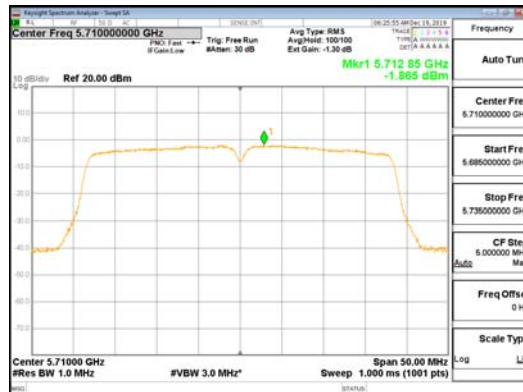
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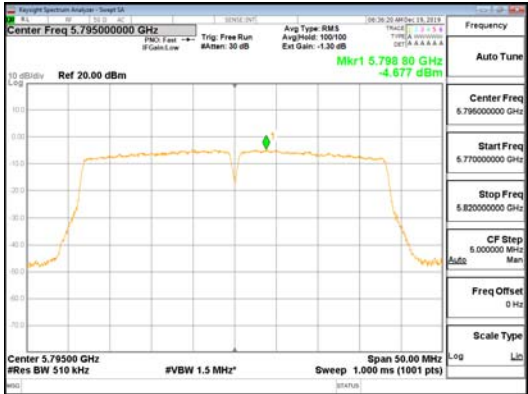
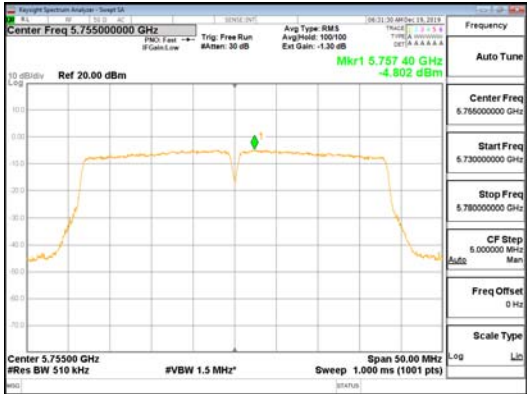
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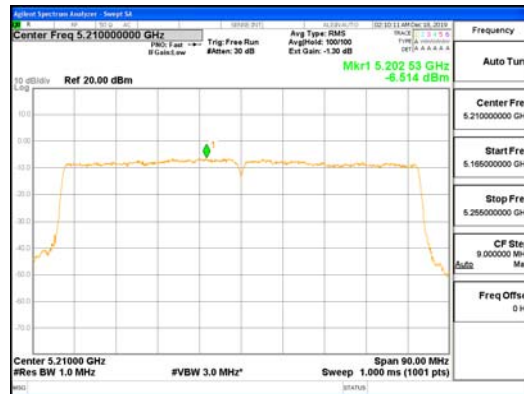
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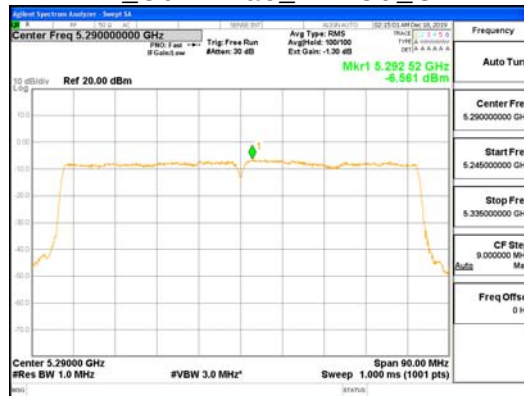
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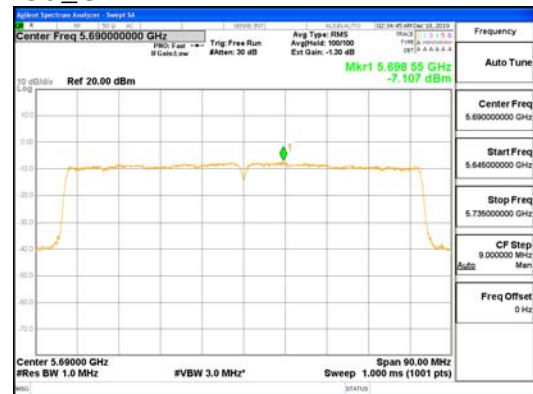
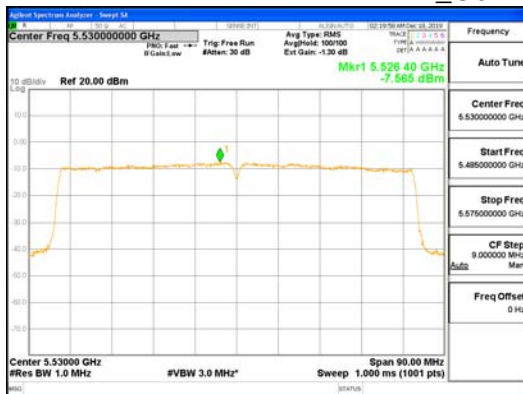
ANT-R_802.11ac_VHT40_UNII 3



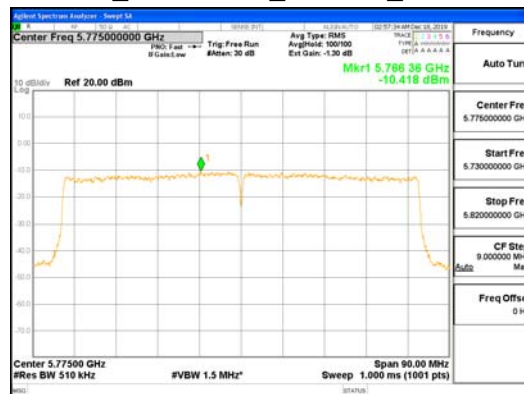
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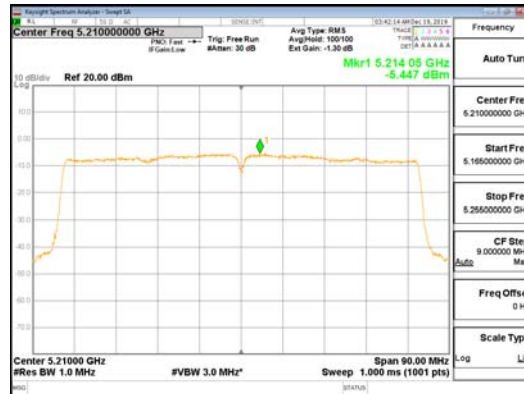
ANT-L_802.11ac_VHT80_UNII 2A



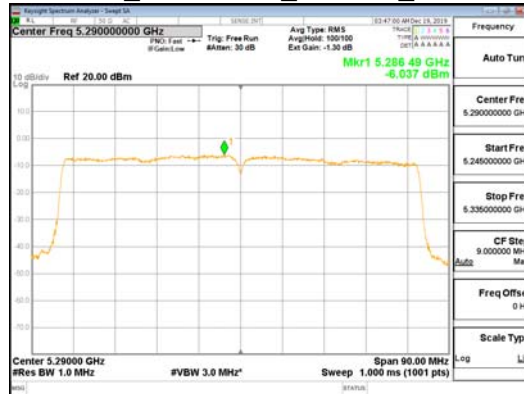
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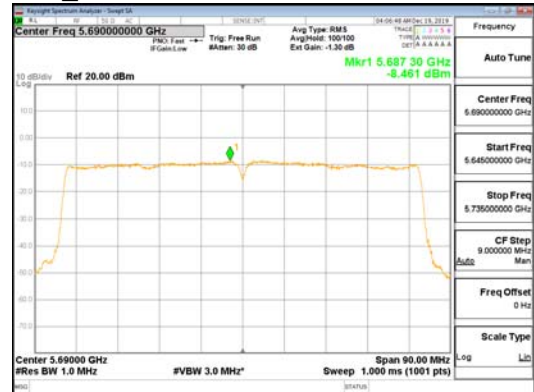
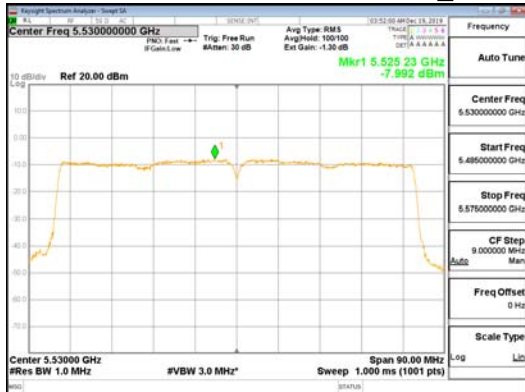
ANT-L_802.11ac_VHT80_UNII 3



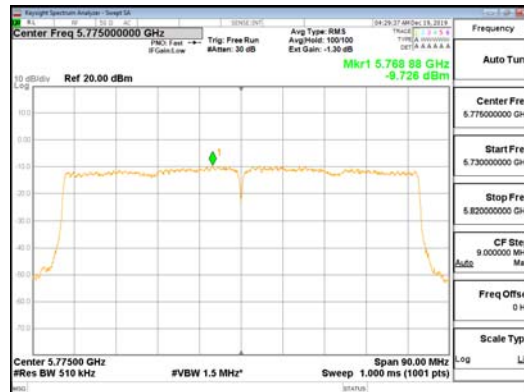
ANT-R_802.11ac_VHT80_UNII 1



ANT-R_802.11ac_VHT80_UNII 2A



ANT-R_802.11ac_VHT80_UNII 2C



ANT-R_802.11ac_VHT80_UNII 3

4.5 Frequency Stability

Test Procedures

KDB 789033 – Section A.3

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between -20 °C and +50 °C (Declaration by the Manufacturer). The temperature was incremented by 10 °C intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.

Data for the worst case channel is shown below.

Temperature (°C)	-20	-10	0	10	20	30	40	50
Frequency	Measured Frequency Error (kHz)							
5 180 MHz	15.131	40.212	36.644	13.911	9.372	3.330	2.582	19.033
5 200 MHz	33.709	39.195	29.620	14.184	4.251	2.926	2.277	15.162
5 240 MHz	38.328	37.334	36.961	16.857	18.804	21.706	41.698	124.853
5 260 MHz	44.212	29.230	27.173	12.706	15.326	5.334	25.563	35.868
5 300 MHz	45.490	57.119	49.470	51.510	43.141	88.217	135.651	203.544
5 320 MHz	53.470	46.947	46.262	35.661	38.620	45.728	101.110	252.047
5 500 MHz	72.576	108.783	101.902	121.315	154.917	138.779	173.227	226.675
5 600 MHz	52.827	94.011	124.683	118.776	160.769	150.661	156.695	187.391
5 720 MHz	51.462	44.451	34.654	24.930	23.329	23.220	15.127	76.828
5 745 MHz	44.380	55.359	46.890	22.024	36.053	39.352	14.102	13.722
5 785 MHz	40.212	52.428	59.185	57.349	43.289	74.542	58.030	129.185
5 825 MHz	36.182	49.484	54.182	-8.093	12.714	8.934	4.955	50.766

Note :

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature range as tested.

4.6 Unwanted Emissions

Test Location

- ☒ 10 m SAC (test distance : ☐ 10 m, ☒ 3 m)
☒ 3 m SAC (test distance : 3 m)

Test Procedures

KDB 789033 - Section G

- 1) In the frequency range of 9 kHz to 30 MHz, magnetic field is measured with Loop Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
- 2) In the frequency range above 30 MHz, Bi-Log Test Antenna(30 MHz to 1 GHz) and Horn Test Antenna(above 1 GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is carried from 1m to 4m above the ground to determine the maximum value of the field strength. The emissions levels at both horizontal and vertical polarizations should be tested.

Test Settings:

Frequency Range = 9 kHz ~ 1 GHz

a) RBW = 100 kHz for $f < 1$ GHz, 9 kHz for $f < 30$ MHz

b) VBW $\geq$ RBW

c) Detector = CISPR Quasi-peak

d) Sweep time = auto couple

- Peak

Frequency Range = 1 GHz ~ 40 GHz

a) RBW = 1 MHz

b) VBW $\geq 3 \times$ RBW

d) Sweep time = auto

c) Detector = Peak

e) Trace mode = max hold

- Average (duty cycle $\geq 98\%$)

Frequency Range = 1 GHz ~ 40 GHz

a) RBW = 1 MHz

b) VBW $\geq 3 \times$ RBW

d) Sweep time = auto

f) Trace mode = average (at least 100 traces)

c) Detector = RMS

e) Averaging type = power (i.e., RMS)

- Average (duty cycle < 98%)

Frequency Range = 1 GHz ~ 40 GHz

a) RBW = 1 MHz

b) VBW $\geq 3 \times$ RBW

c) Detector = RMS

d) Sweep time = auto

e) Averaging type = power (i.e., RMS)

f) Trace mode = average (at least 100 traces)

If power averaging (RMS) mode, then the applicable correction factor is $10 \log(1/x)$, where x is the duty cycle.

Test mode	Duty Cycle Factor (dB)
802.11a	0.12
802.11n_HT20	0.13
802.11n_HT40	0.28
802.11ac_VHT20	0.27
802.11ac_VHT40	0.50
802.11ac_VHT80	0.73

Limit

- 15.209(a)

Frequency(MHz)	Field Strength uV/m@3m	Field Strength dBuV/m@3m	Deasurement Distance (meters)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	30
1.705-30	30	-	30
30-88	100**	40	3
88-216	150**	43.5	3
216-960	200**	46	3
Above 960	500	54	3

** Except as provided in 15.209(g).fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72MHz, 76-88MHz, 174-216MHz, 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g.15.231 and 15.241.

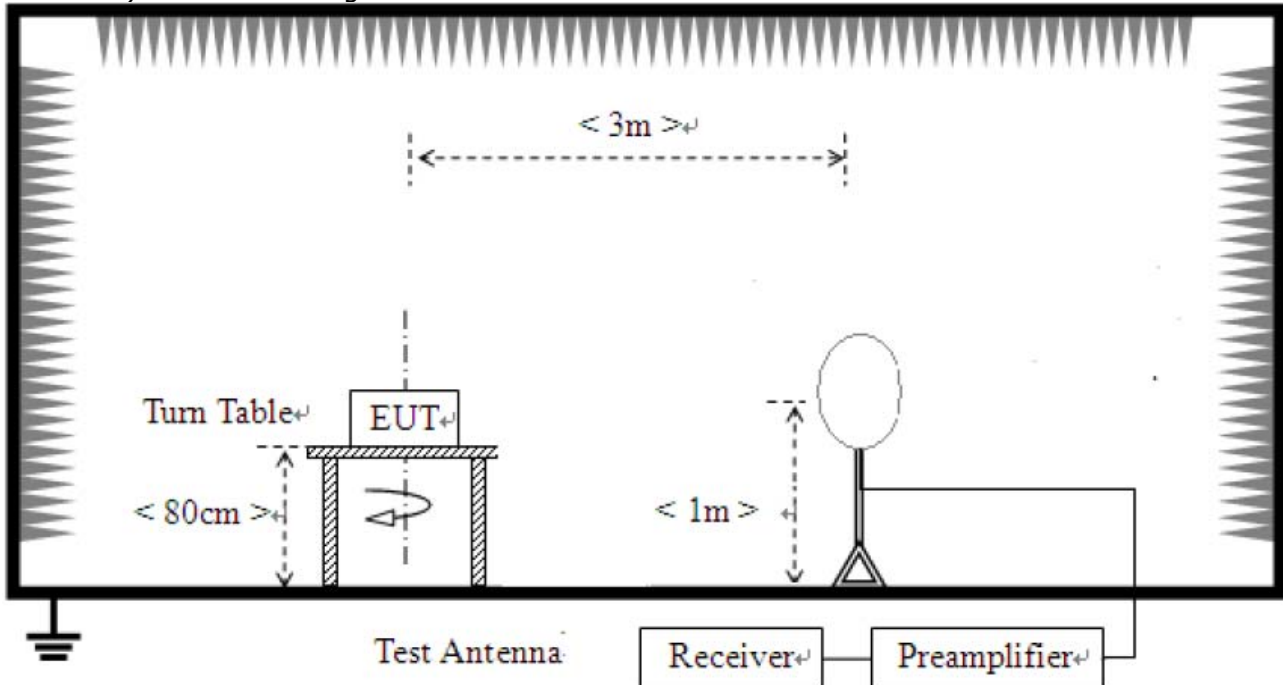
- 15.407, KDB 789033

E.I.R.P -27 dBm/MHz

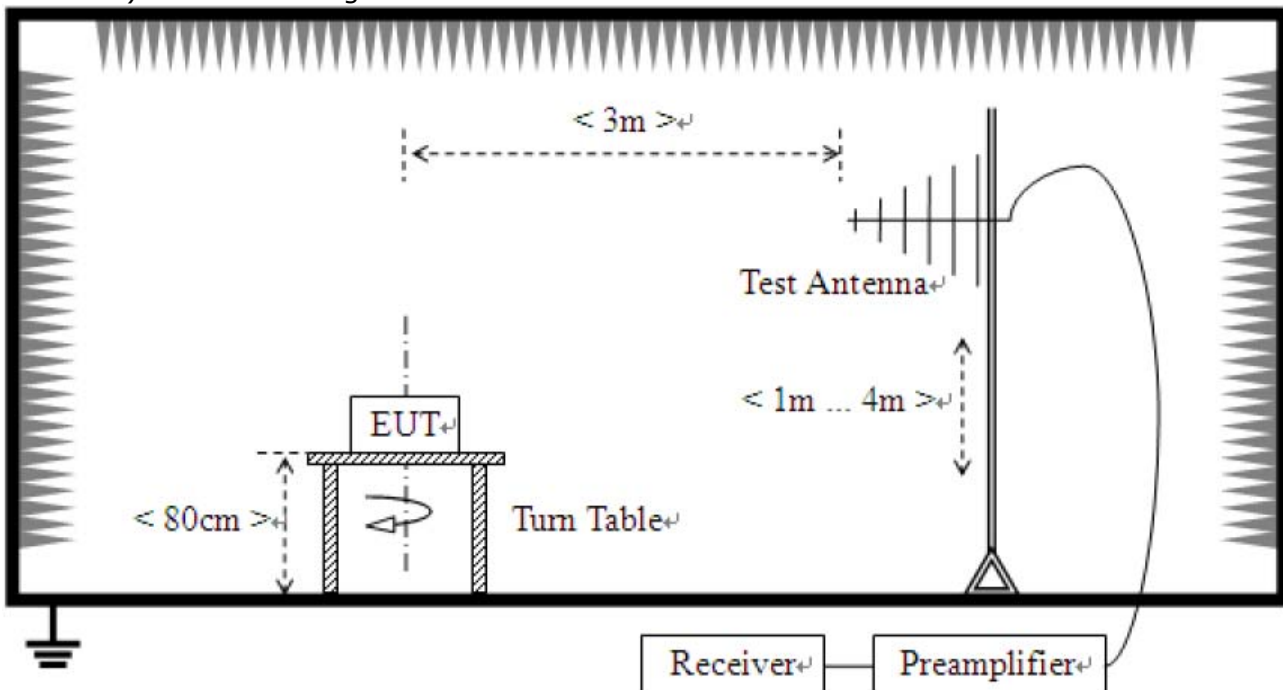
$E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2$, for $d = 3\text{m}$

Test Setup:

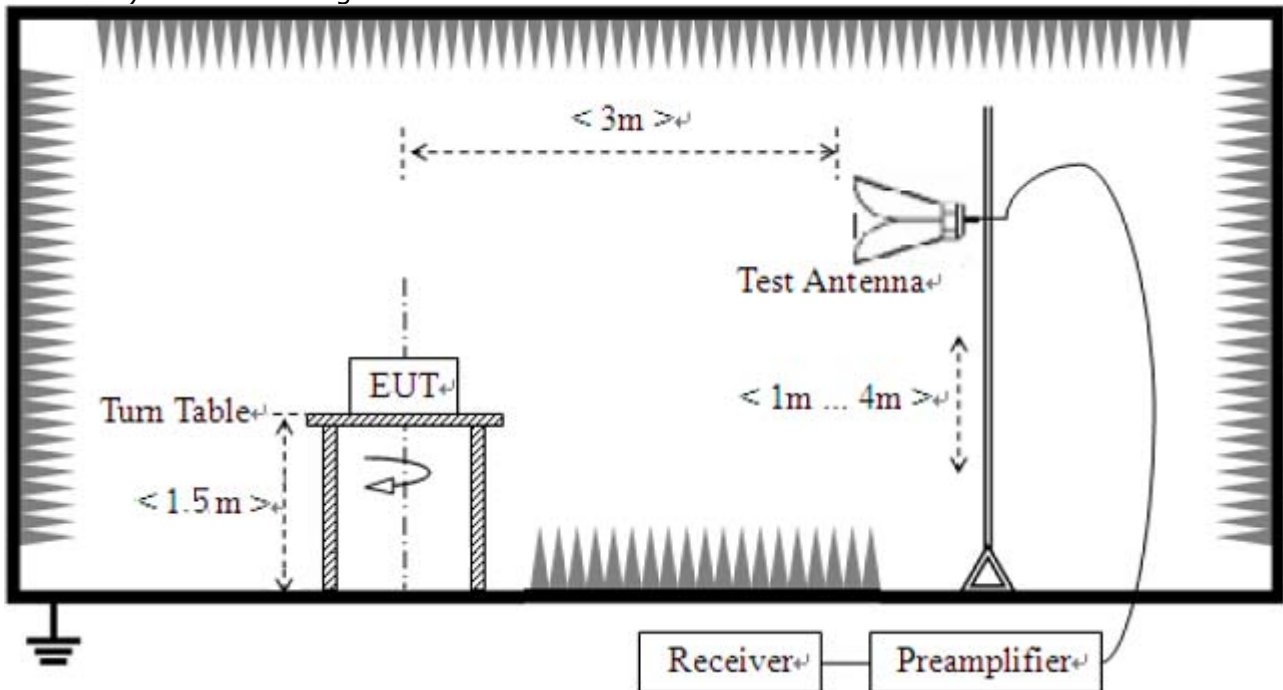
- 1) For field strength of emissions from 9 kHz to 30 MHz



- 2) For field strength of emissions from 30 MHz to 1 GHz



3) For field strength of emissions above 1 GHz



Test Mode

We have done all test mode.

The worst case antenna configuration and Test mode are determined to be as follows.

802.11a : ANT-R + ANT-L (MIMO)
802.11n : ANT-R + ANT-L (MIMO)
802.11ac : ANT-R + ANT-L (MIMO)

So the results are only attached worst cases.

Test Results

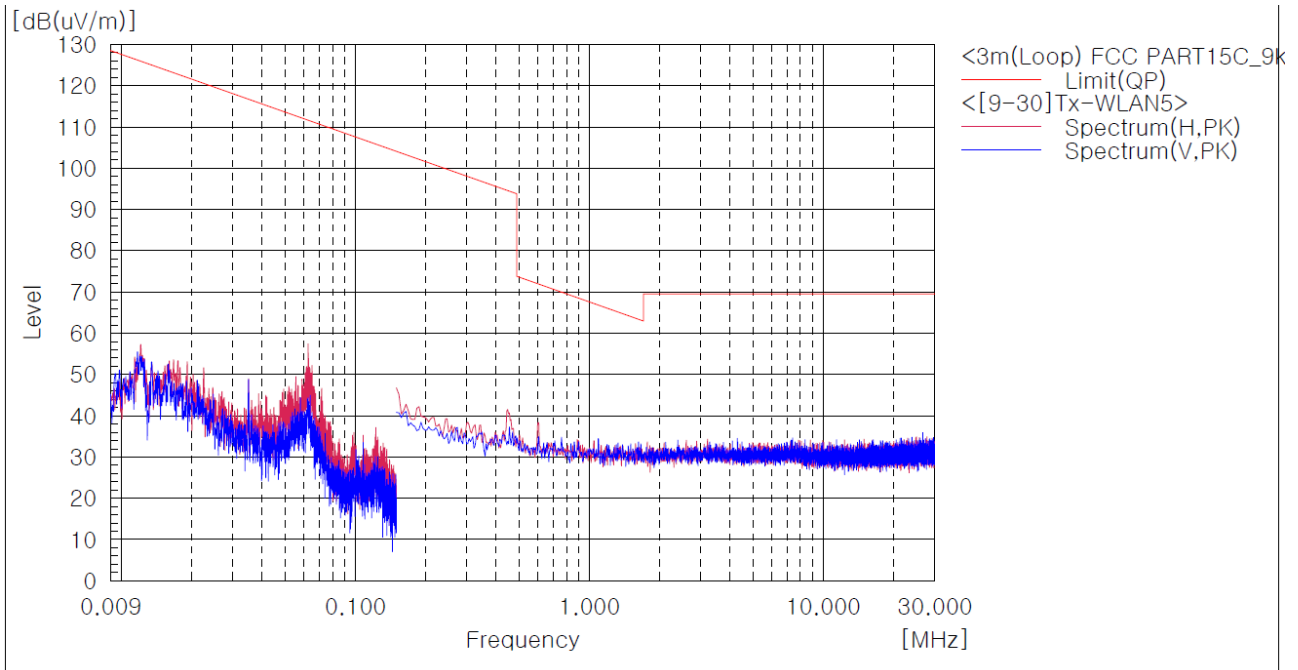
1) 9 kHz to 30 MHz

Test mode : Transmitter (Worst Case)

The requirements are:

☒ Complies

Test Data



Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
The emissions 9 kHz to 30 MHz were 20 dB lower than the limit.			

Remark :

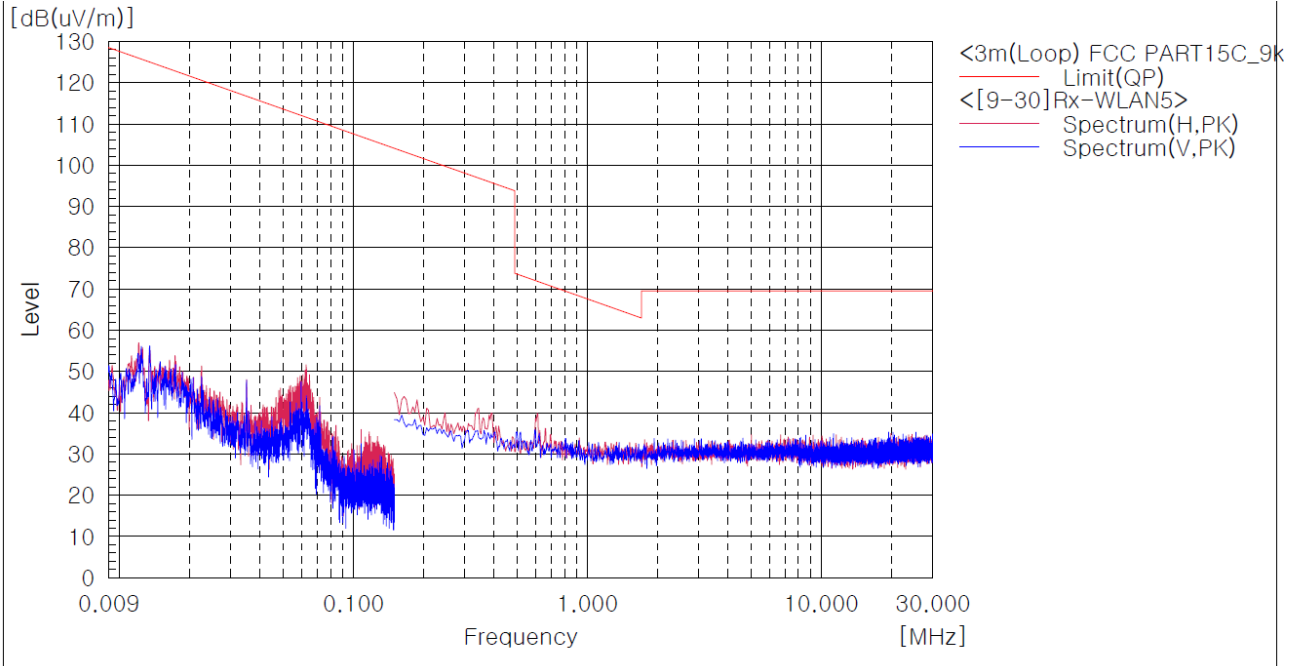
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain
4. This data is the Peak(PK) value.

Test mode : Receiver (Worst Case)

The requirements are:

☒ Complies

Test Data



Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
The emissions 9 kHz to 30 MHz were 20 dB lower than the limit.			

Remark :

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain
4. This data is the Peak(PK) value.

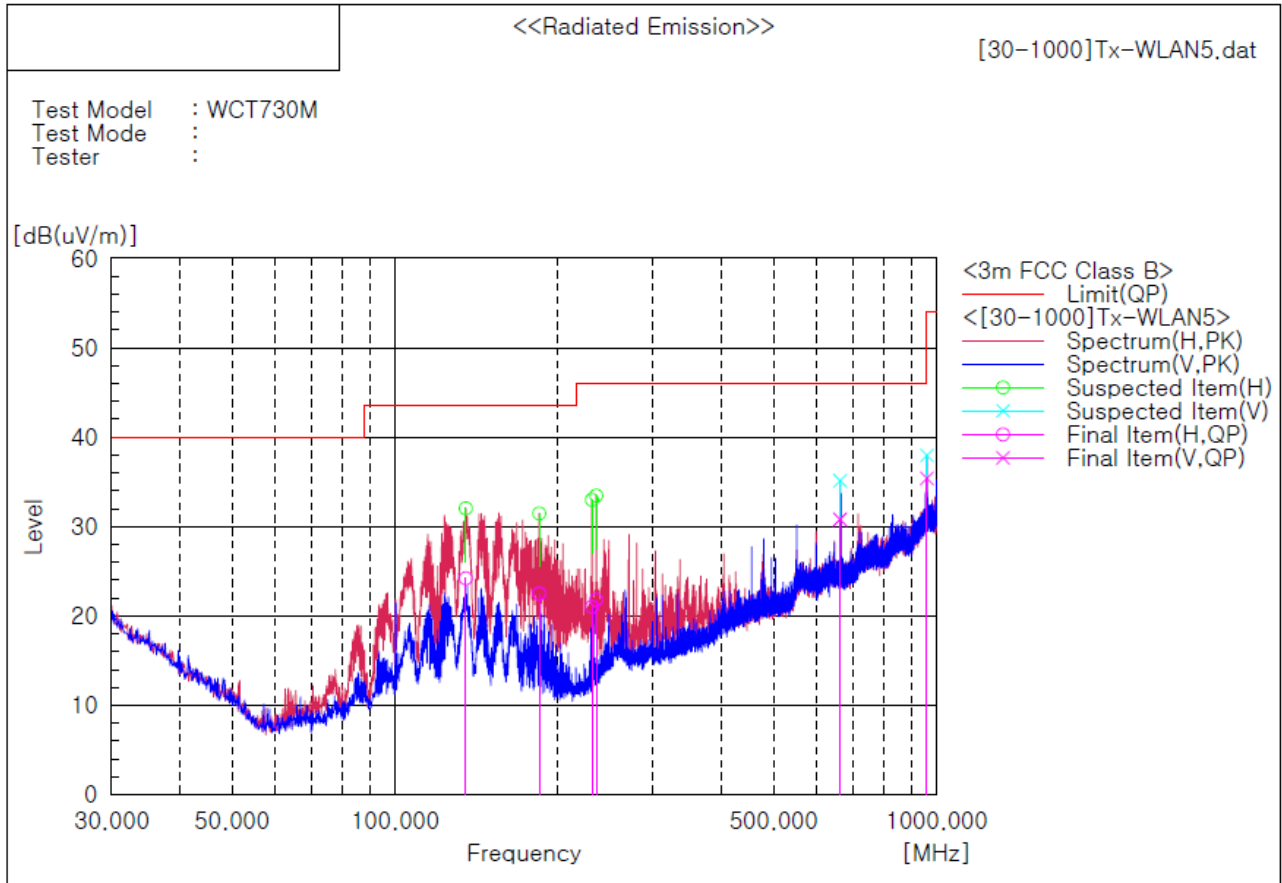
2) 30 MHz to 1 GHz

Test mode : Transmitter (Worst Case)

The requirements are:

☒ Complies

Test Data

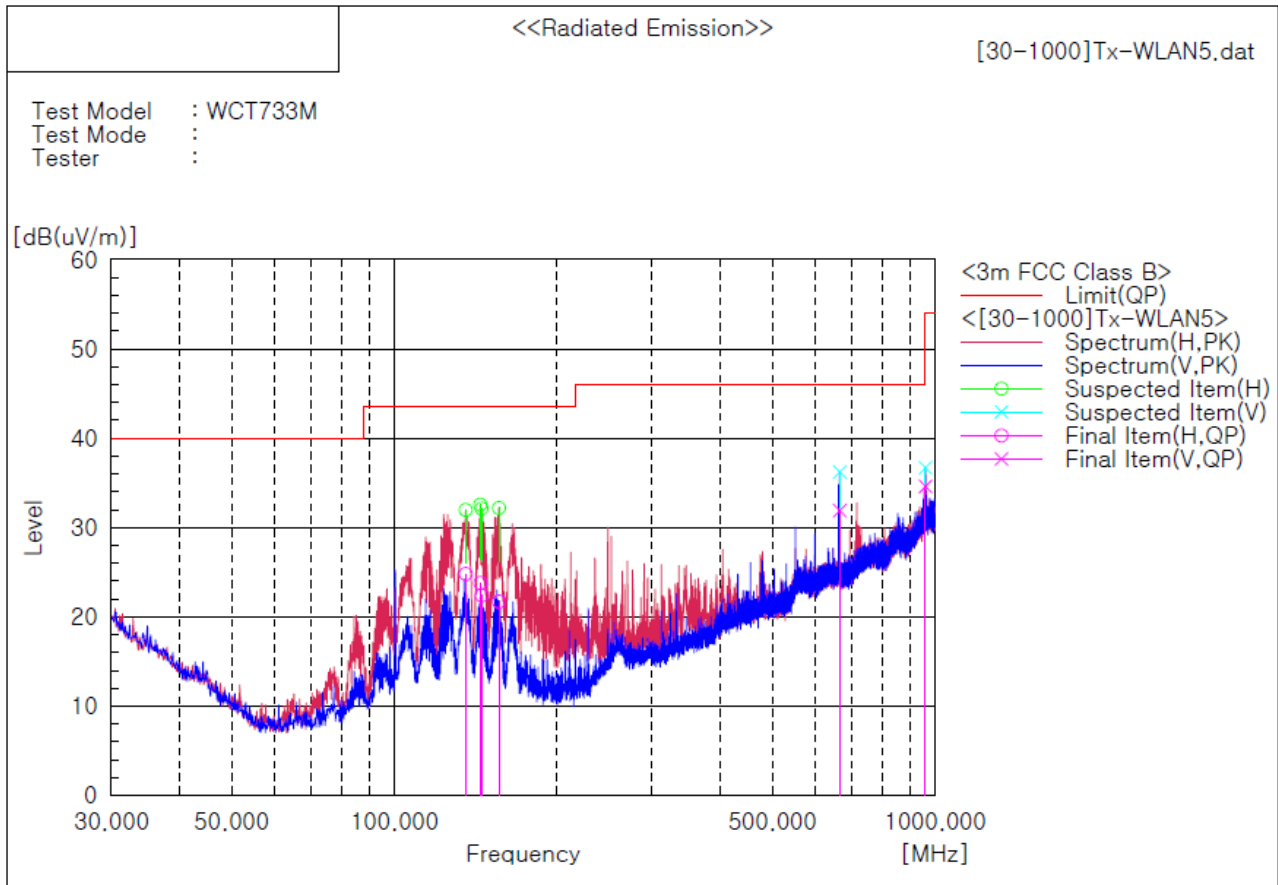


Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	135.245	H	35.6	-11.4	24.2	43.5	19.3	309.0	37.0
2	184.715	H	36.2	-13.7	22.5	43.5	21.0	101.0	358.0
3	231.154	H	32.9	-11.9	21.0	46.0	25.0	101.0	203.0
4	235.398	H	33.2	-11.4	21.8	46.0	24.2	101.0	177.0
5	663.774	V	30.2	0.6	30.8	46.0	15.2	101.0	132.0
6	960.109	V	28.2	7.2	35.4	54.0	18.6	191.0	301.0

Remark :

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain

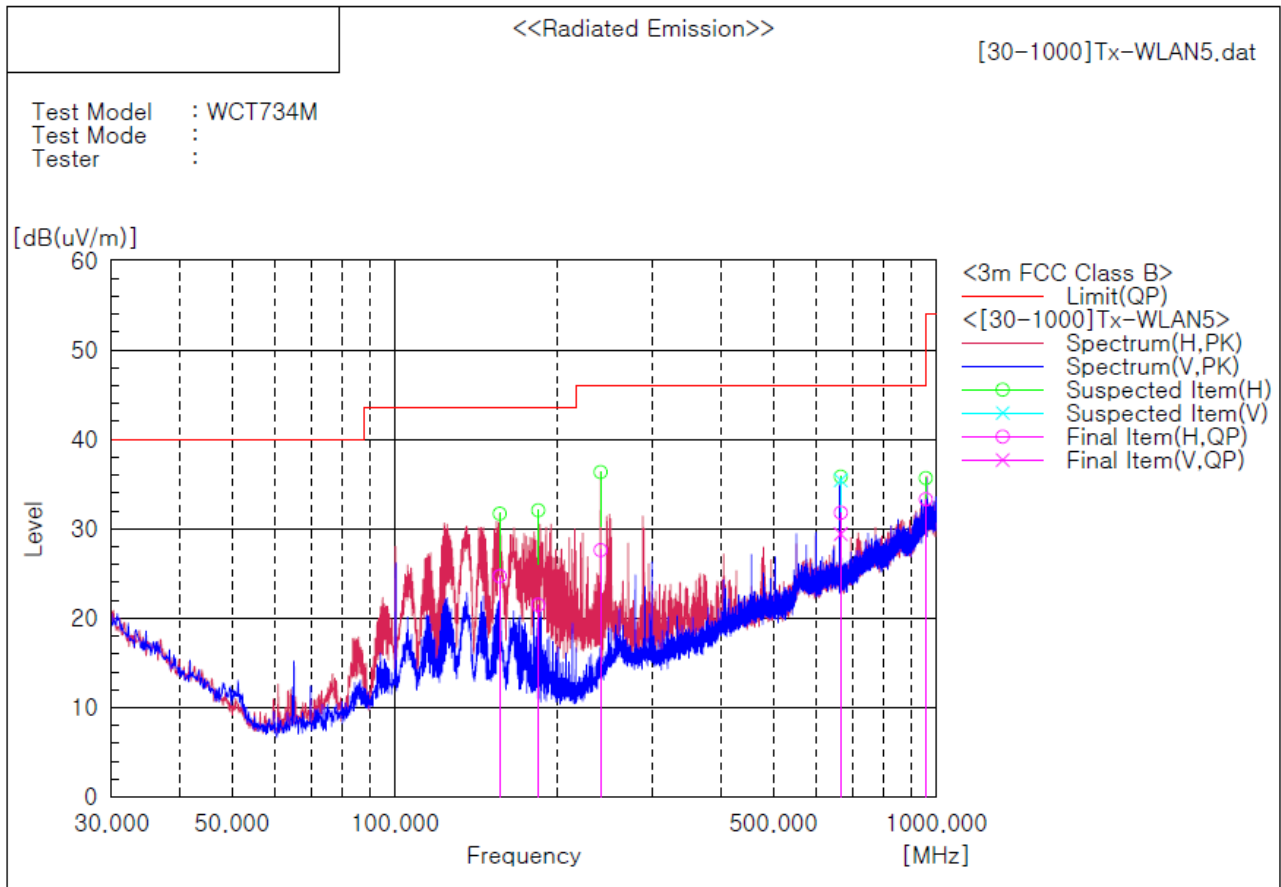


Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	135.609	H	36.2	-11.4	24.8	43.5	18.7	205.0	14.0
2	144.339	H	35.5	-11.7	23.8	43.5	19.7	205.0	5.0
3	145.066	H	34.1	-11.7	22.4	43.5	21.1	205.0	5.0
4	156.221	H	33.9	-12.2	21.7	43.5	21.8	205.0	6.0
5	666.441	V	31.4	0.5	31.9	46.0	14.1	101.0	120.0
6	960.230	V	27.4	7.2	34.6	54.0	19.4	209.0	280.0

Remark :

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	156.343	H	36.9	-12.2	24.7	43.5	18.8	292.0	11.0
2	184.109	H	35.2	-13.7	21.5	43.5	22.0	100.0	11.0
3	240.005	H	38.4	-10.8	27.6	46.0	18.4	100.0	4.0
4	666.563	H	31.3	0.5	31.8	46.0	14.2	100.0	290.0
5	666.563	V	28.9	0.5	29.4	46.0	16.6	100.0	87.0
6	957.199	H	26.1	7.2	33.3	46.0	12.7	100.0	57.0

Remark :

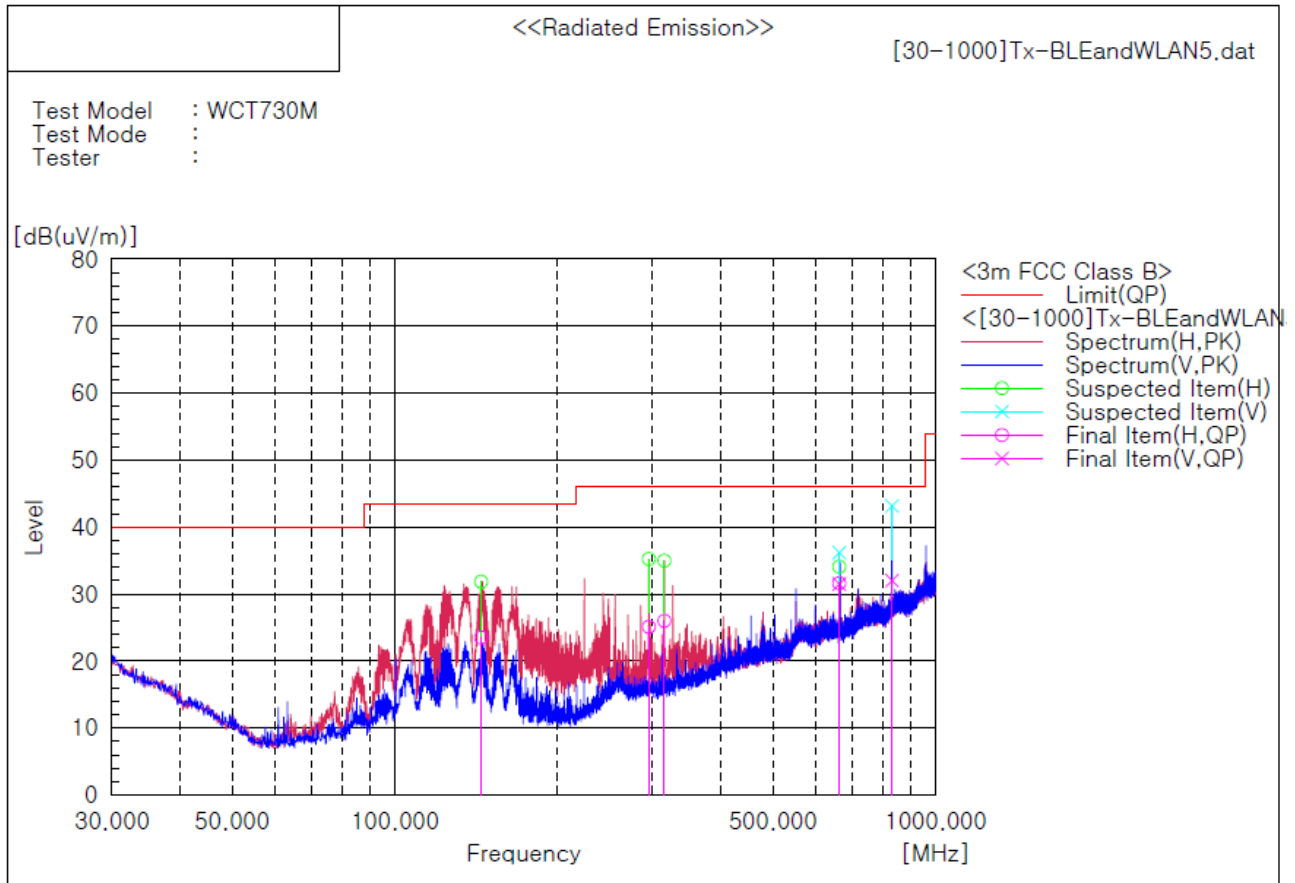
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain

Test mode : Transmitter (simultaneous transmissions BLE + NII)

The requirements are:

☒ Complies

Test Data



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	144.460	H	35.2	-11.7	23.5	43.5	20.0	209.0	19.0
2	295.053	H	33.6	-8.5	25.1	46.0	20.9	101.0	308.0
3	315.180	H	34.1	-8.1	26.0	46.0	20.0	101.0	308.0
4	663.774	V	30.9	0.6	31.5	46.0	14.5	100.0	82.0
5	663.774	H	31.0	0.6	31.6	46.0	14.4	101.0	292.0
6	830.614	V	27.9	4.1	32.0	46.0	14.0	100.0	290.0

Remark :

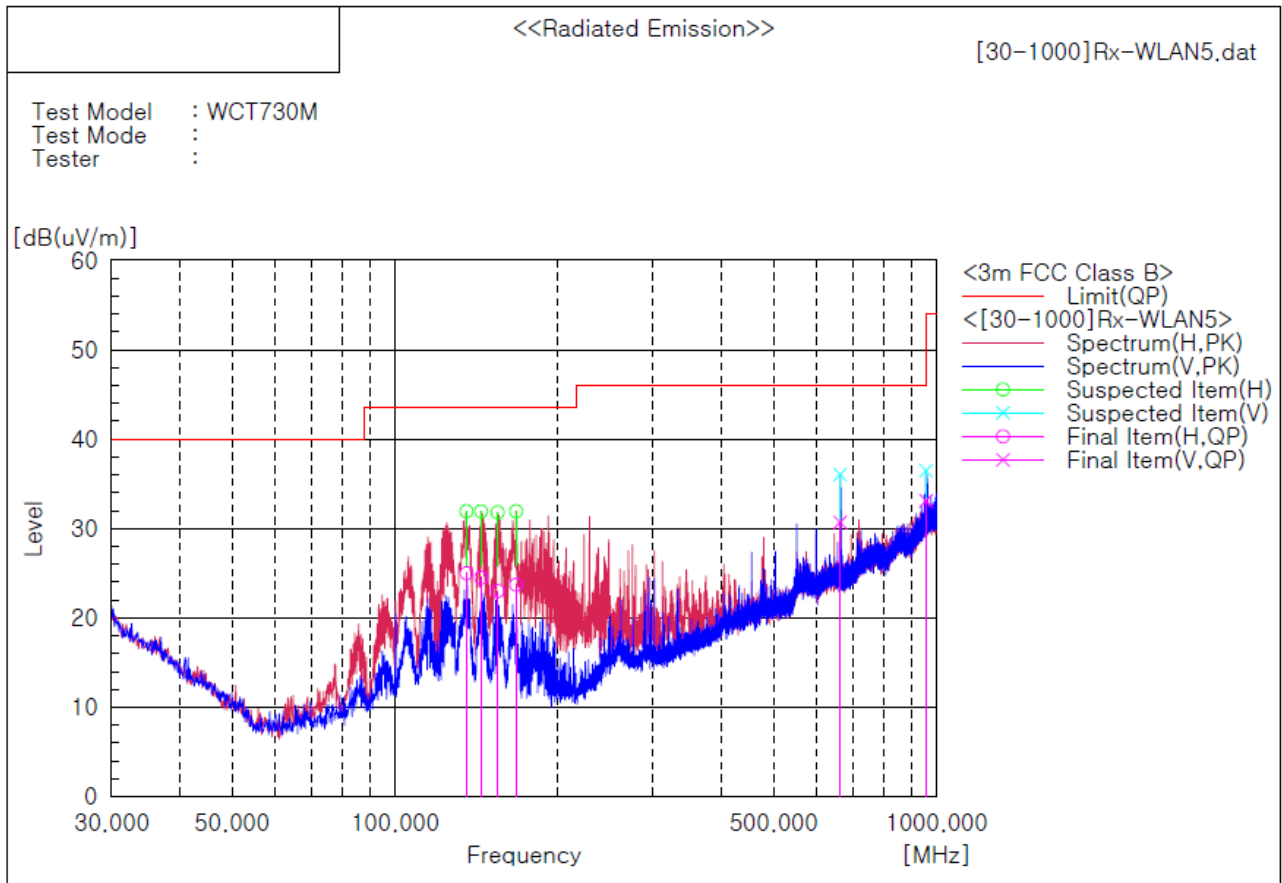
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain

Test mode : Receiver (Worst Case)

The requirements are:

☒ Complies

Test Data

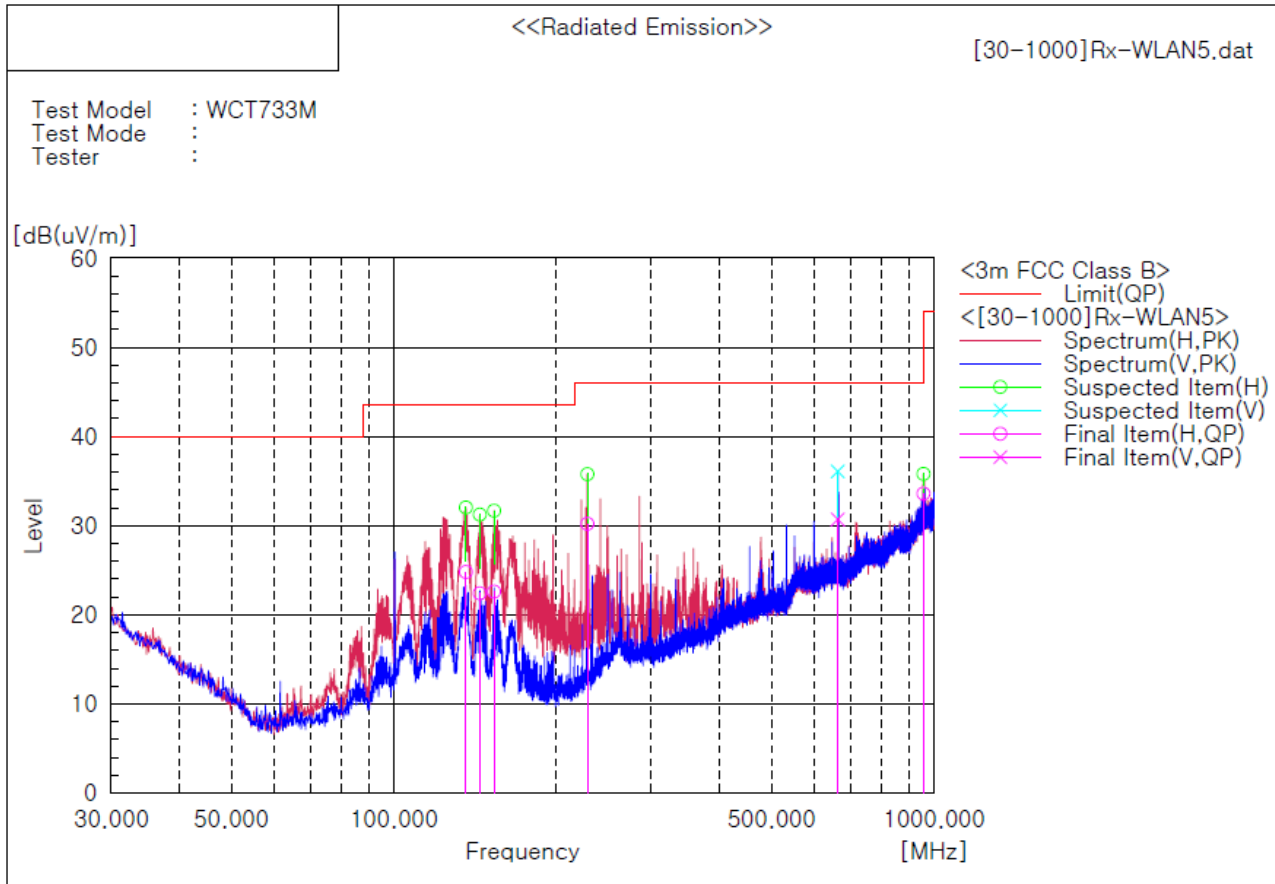


Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	135.609	H	36.4	-11.4	25.0	43.5	18.5	205.0	8.0
2	144.218	H	36.2	-11.7	24.5	43.5	19.0	205.0	3.0
3	154.888	H	35.1	-12.1	23.0	43.5	20.5	205.0	4.0
4	167.498	H	36.5	-12.8	23.7	43.5	19.8	205.0	220.0
5	664.016	V	30.1	0.6	30.7	46.0	15.3	100.0	81.0
6	956.593	V	25.9	7.2	33.1	46.0	12.9	195.0	285.0

Remark :

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain

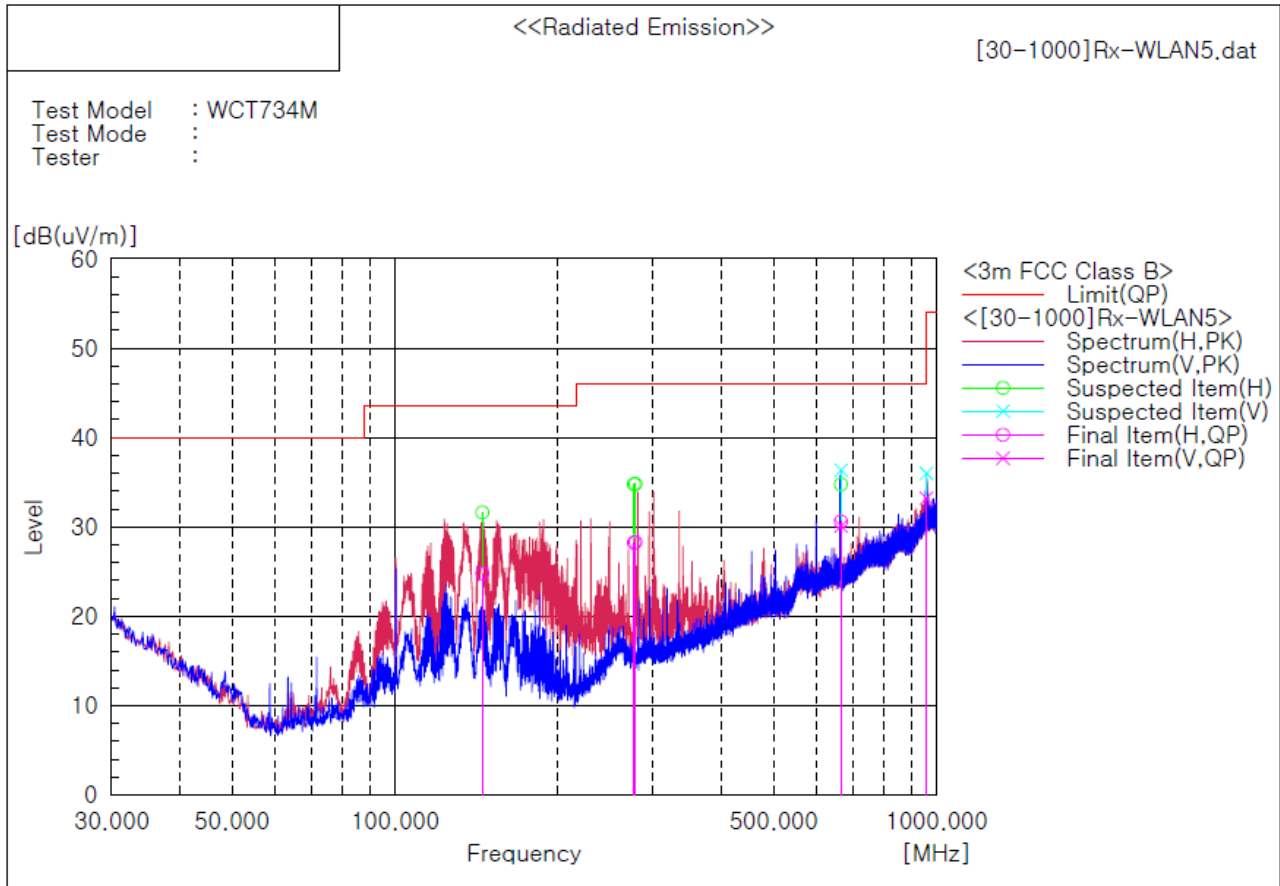


Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	135.973	H	36.2	-11.4	24.8	43.5	18.7	191.0	352.0
2	144.339	H	34.1	-11.7	22.4	43.5	21.1	191.0	355.0
3	153.433	H	34.6	-12.0	22.6	43.5	20.9	191.0	355.0
4	228.244	H	42.4	-12.2	30.2	46.0	15.8	101.0	19.0
5	663.774	V	30.1	0.6	30.7	46.0	15.3	101.0	87.0
6	956.714	H	26.4	7.2	33.6	46.0	12.4	101.0	194.0

Remark :

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	145.066	H	36.5	-11.7	24.8	43.5	18.7	191.0	37.0
2	276.380	H	37.2	-9.0	28.2	46.0	17.8	100.0	310.0
3	278.078	H	37.3	-9.0	28.3	46.0	17.7	100.0	323.0
4	666.199	H	30.1	0.5	30.6	46.0	15.4	191.0	292.0
5	666.441	V	29.6	0.5	30.1	46.0	15.9	100.0	104.0
6	957.926	V	26.0	7.2	33.2	46.0	12.8	208.0	208.0

Remark :

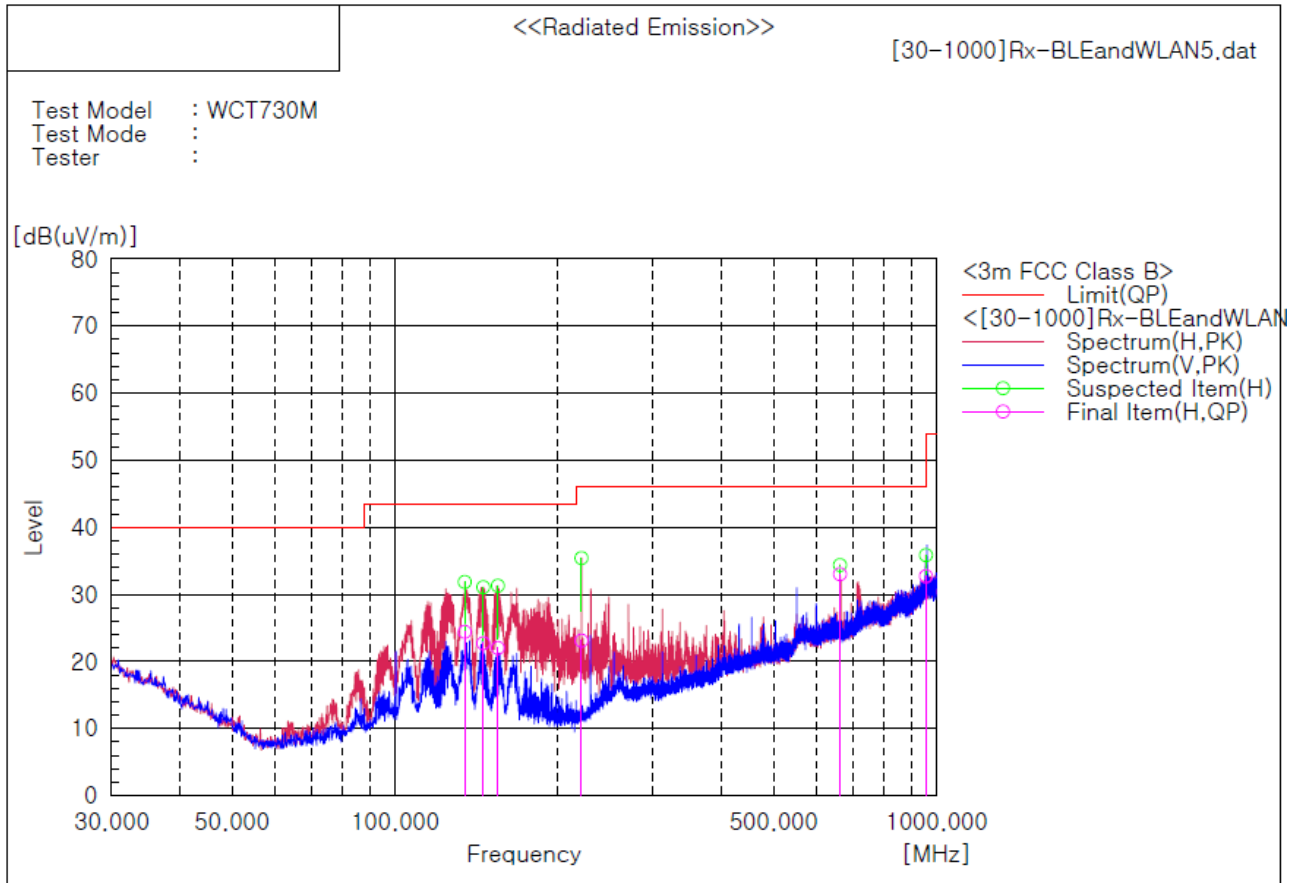
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain

Test mode : Receiver (simultaneous receptions BLE + NII))

The requirements are:

☒ Complies

Test Data



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	134.639	H	35.8	-11.4	24.4	43.5	19.1	209.0	8.0
2	145.673	H	34.4	-11.7	22.7	43.5	20.8	209.0	10.0
3	155.009	H	34.1	-12.1	22.0	43.5	21.5	209.0	5.0
4	221.090	H	35.9	-12.8	23.1	46.0	22.9	101.0	70.0
5	663.774	H	32.4	0.6	33.0	46.0	13.0	209.0	282.0
6	956.593	H	25.5	7.2	32.7	46.0	13.3	101.0	190.0

Remark :

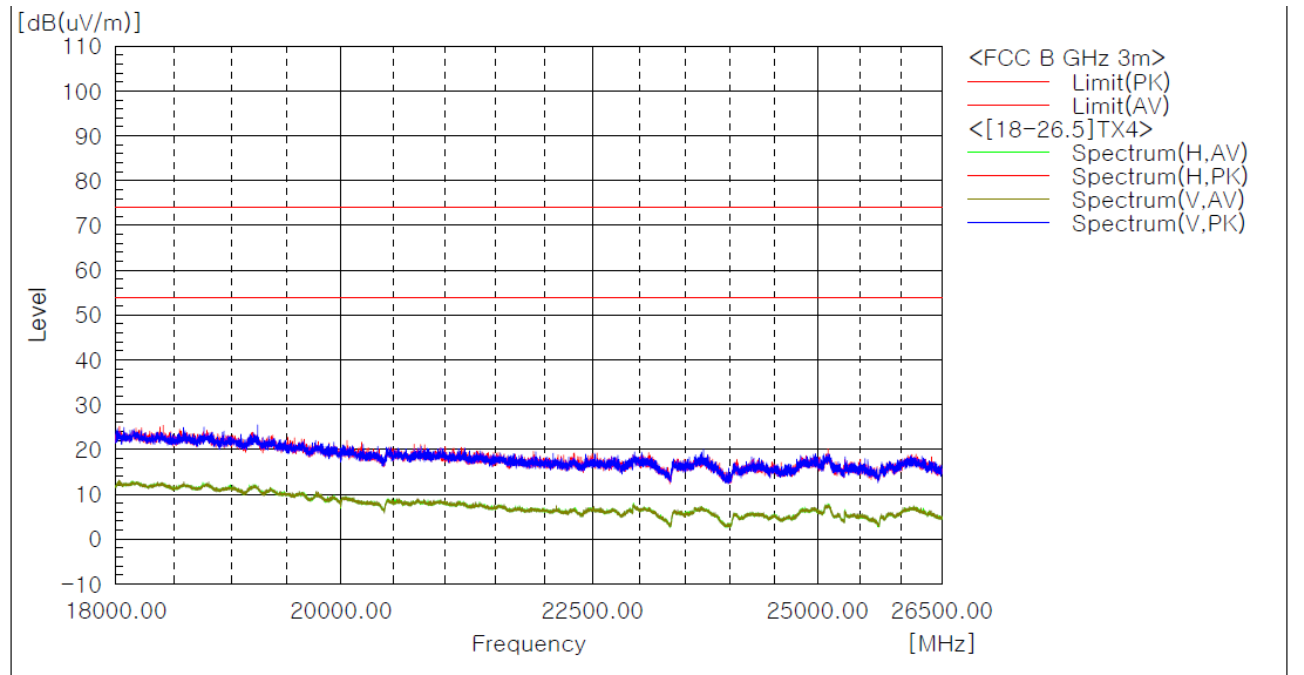
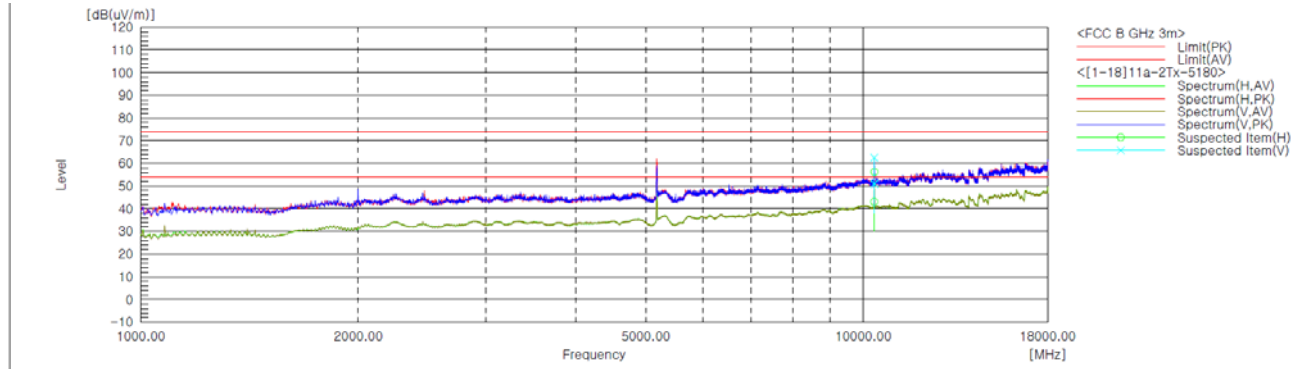
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain

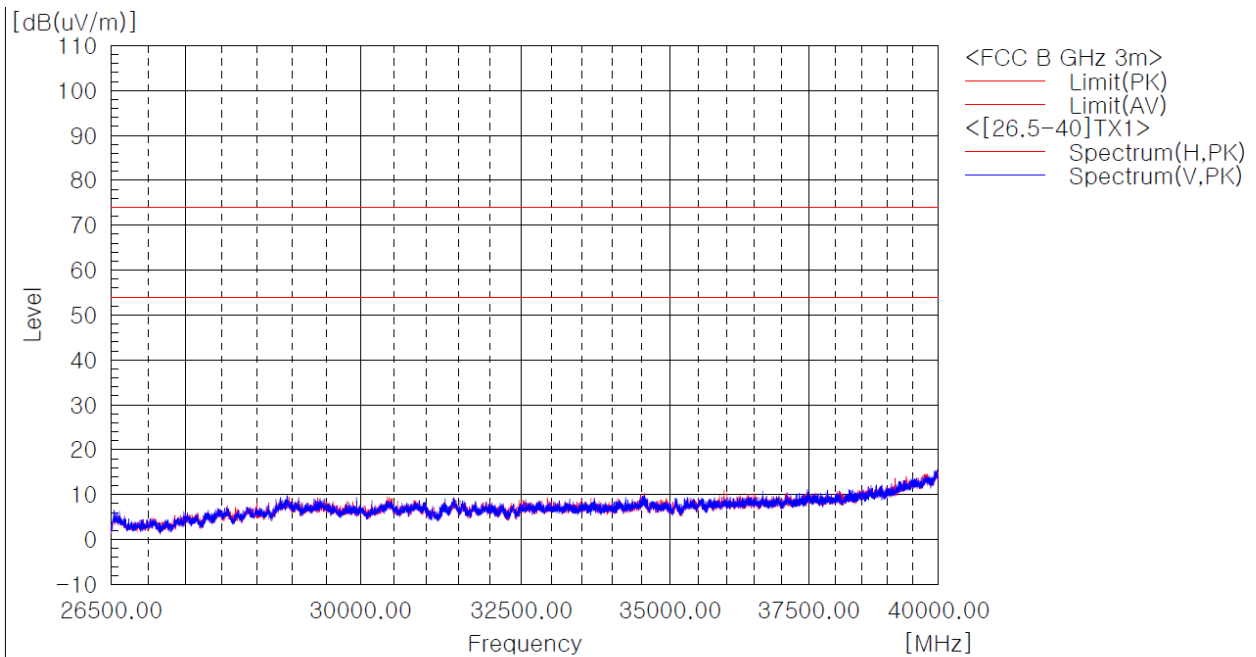
3) above 1 GHz

The requirements are:

☒ Complies

Test Data





Test mode : Transmitter, 802.11a

The requirements are:

☒ Complies

Test Data

Ch.36(5 180 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 358.19	H	-----	44.5	-----	54.0	-----	9.5
10 361.90	H	59.3	-----	74.0	-----	14.7	-----
10 362.40	V	-----	52.4	-----	54.0	-----	1.6
10 362.89	V	65.8	-----	74.0	-----	8.2	-----

Ch.40(5 200 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 402.68	H	54.0	-----	74.0	-----	20.0	-----
10 399.52	H	-----	41.4	-----	54.0	-----	12.6
10 402.51	V	62.4	-----	74.0	-----	11.6	-----
10 402.84	V	-----	49.5	-----	54.0	-----	4.5

Ch.48(5 240 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 478.49	H	55.6	-----	74.0	-----	18.4	-----
10 478.15	H	-----	42.3	-----	54.0	-----	11.7
10 482.48	V	61.8	-----	74.0	-----	12.2	-----
10 481.81	V	-----	51.1	-----	54.0	-----	2.9

Ch.52(5 260 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 521.71	H	55.5	-----	74.0	-----	18.5	-----
10 514.56	H	-----	41.7	-----	54.0	-----	12.3
10 521.88	V	62.6	-----	74.0	-----	11.4	-----
10 522.38	V	-----	50.8	-----	54.0	-----	3.2

Ch.60(5 300 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 602.01	H	56.9	-----	74.0	-----	17.1	-----
10 598.52	H	-----	42.0	-----	54.0	-----	12.0
10 601.84	V	63.7	-----	74.0	-----	10.3	-----
10 601.84	V	-----	52.2	-----	54.0	-----	1.8

Ch.64(5 320 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 636.93	V	66.8	-----	74.0	-----	7.2	-----
10 641.02	H	60.1	-----	74.0	-----	13.9	-----
10 642.06	V	-----	53.2	-----	54.0	-----	0.8
10 642.34	H	-----	44.7	-----	54.0	-----	9.3

Ch.100(5 500 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 000.87	H	62.2	-----	74.0	-----	11.8	-----
11 002.28	V	-----	53.2	-----	54.0	-----	0.8
11 002.31	V	67.9	-----	74.0	-----	6.1	-----
11 002.61	H	-----	44.2	-----	54.0	-----	9.8

Ch.120(5 600 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 201.51	H	57.8	-----	74.0	-----	16.2	-----
11 200.84	H	-----	43.0	-----	54.0	-----	11.0
11 197.85	V	64.2	-----	74.0	-----	9.8	-----
11 204.83	V	-----	51.0	-----	54.0	-----	3.0

Ch.144(5 720 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 438.91	H	55.0	-----	74.0	-----	19.0	-----
11 442.74	H	-----	42.8	-----	54.0	-----	11.2
11 443.57	V	58.8	-----	74.0	-----	15.2	-----
11 441.57	V	-----	47.1	-----	54.0	-----	6.9

Ch.149(5 745 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 485.52	H	59.2	-----	74.0	-----	14.8	-----
11 489.63	H	-----	44.5	-----	54.0	-----	9.5
11 492.15	V	65.2	-----	74.0	-----	8.8	-----
11 492.18	V	-----	51.7	-----	54.0	-----	2.3

Ch.157(5 785 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 571.25	H	53.7	-----	74.0	-----	20.3	-----
11 583.55	H	-----	41.9	-----	54.0	-----	12.1
11 570.92	V	57.9	-----	74.0	-----	16.1	-----
11 569.75	V	-----	46.1	-----	54.0	-----	7.9

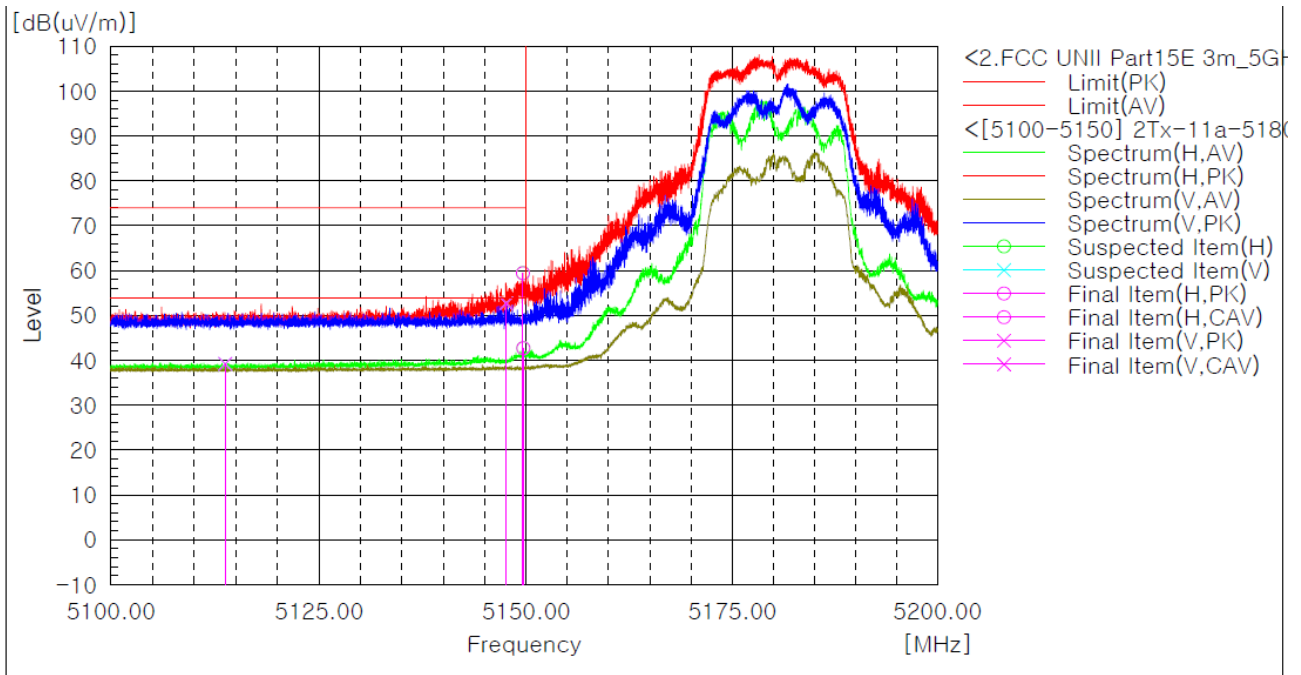
Ch.165(5 825 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 650.17	H	58.9	-----	74.0	-----	15.1	-----
11 651.80	V	-----	47.8	-----	54.0	-----	6.2
11 652.16	V	63.1	-----	74.0	-----	10.9	-----
11 679.51	H	-----	44.3	-----	54.0	-----	9.7

Remarks

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Correction factor = Antenna factor + Cable loss - Amp Gain

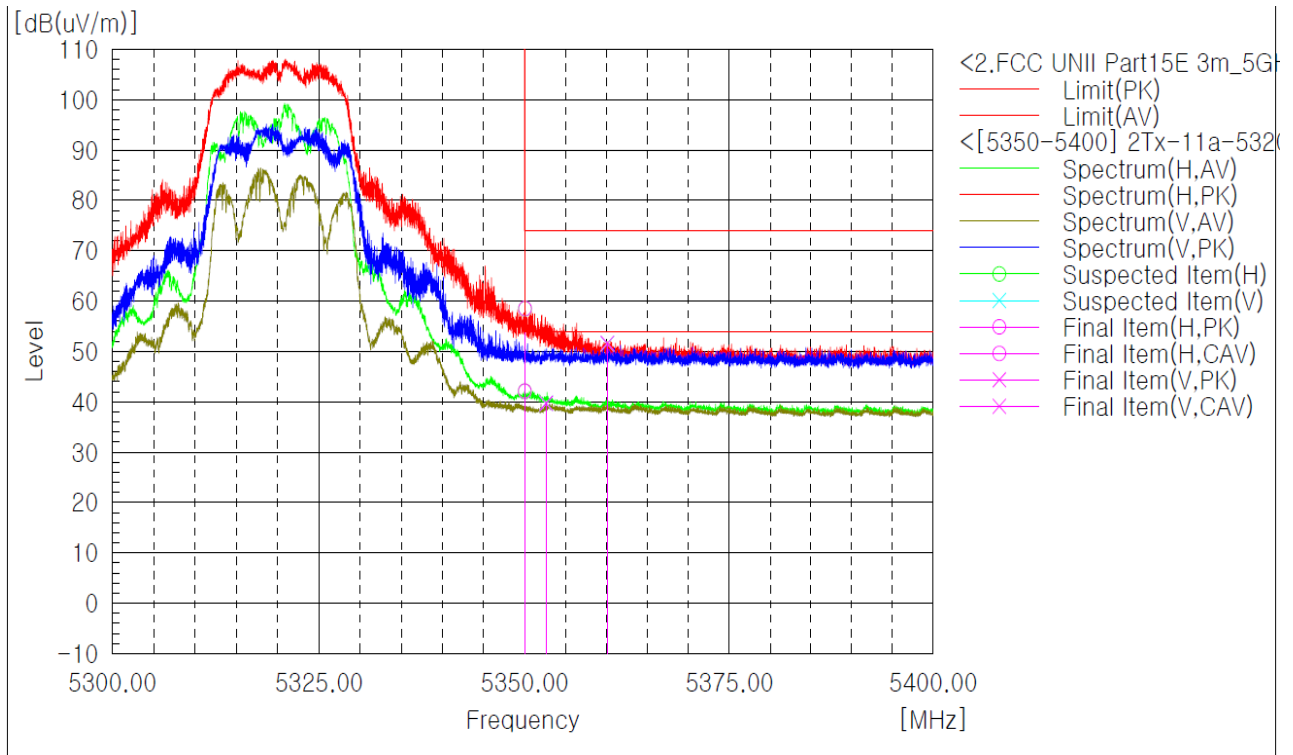
Worst Case Mode :	802.11a
Worst Case Transfer Rate :	6 Mbps
Distance of Measurements :	3 Meters
Operating Frequency :	5 180 MHz
Channel :	36



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 113.73	V	-----	39.2	-----	54.0	-----	14.8
5 147.61	V	52.7	-----	74.0	-----	21.3	-----
5 149.63	H	59.4	-----	74.0	-----	14.6	-----
5 149.68	H	-----	42.7	-----	54.0	-----	11.3

Radiated Restricted Band Edge Plot

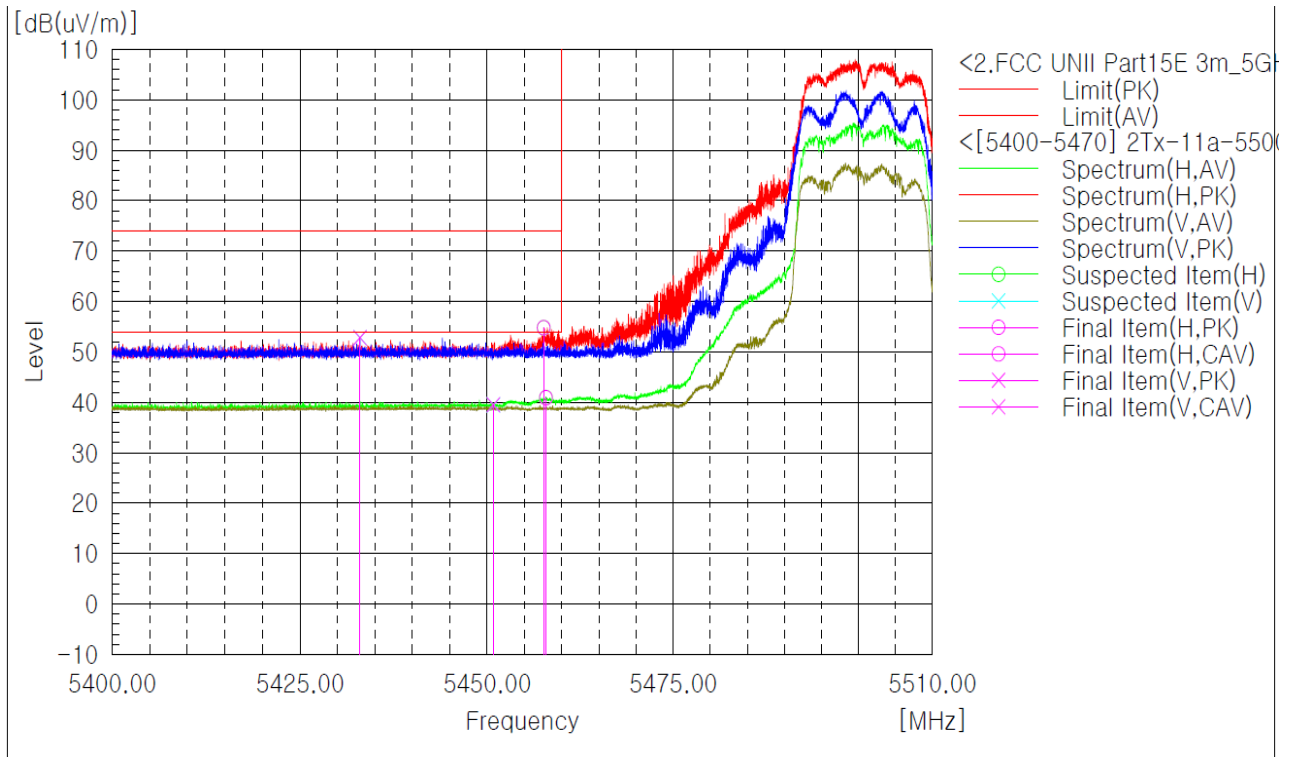
Worst Case Mode :	802.11a
Worst Case Transfer Rate :	6 Mbps
Distance of Measurements :	3 Meters
Operating Frequency :	5 320 MHz
Channel :	64



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 350.03	H	-----	42.1	-----	54.0	-----	11.9
5 350.06	H	58.5	-----	74.0	-----	15.5	-----
5 352.63	V	-----	39.7	-----	54.0	-----	14.3
5 360.09	V	51.6	-----	74.0	-----	22.4	-----

Radiated Restricted Band Edge Plot

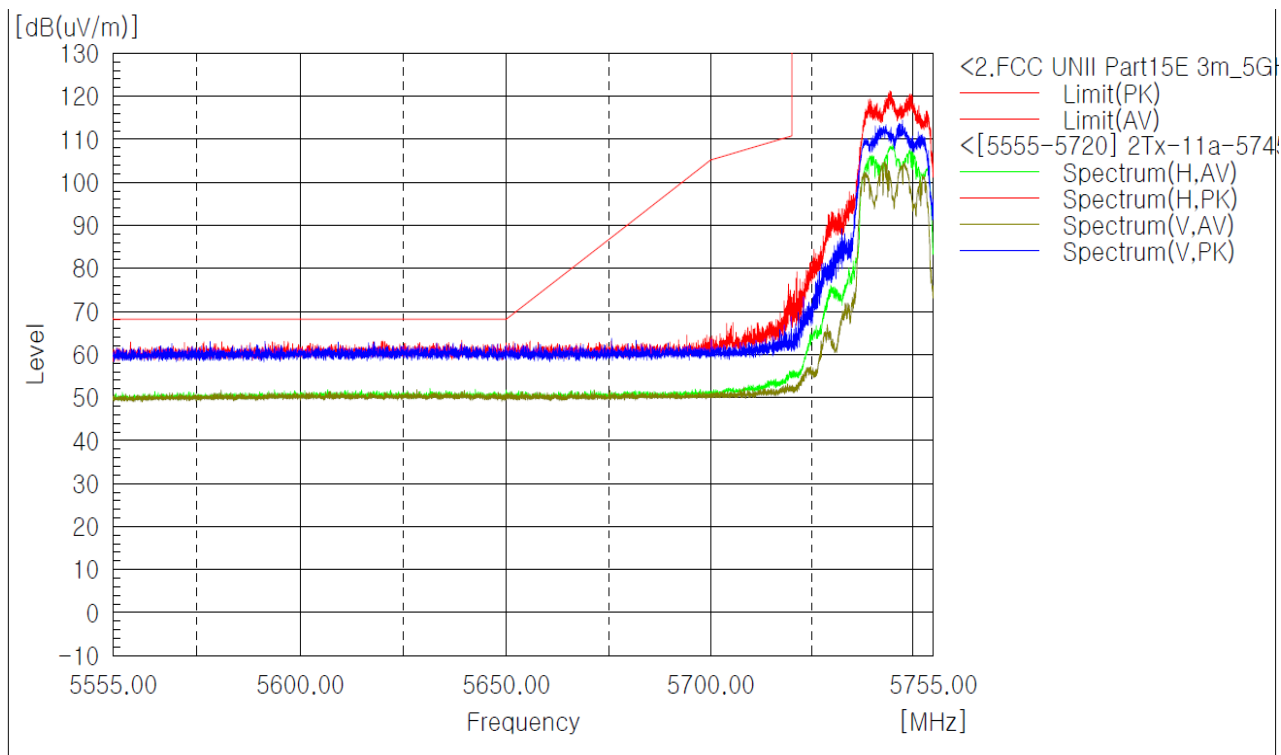
Worst Case Mode :	802.11a
Worst Case Transfer Rate :	6 Mbps
Distance of Measurements :	3 Meters
Operating Frequency :	5 500 MHz
Channel :	100



Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
5 350.03	H	-----	42.1	-----	54.0	-----	11.9
5 350.06	H	58.5	-----	74.0	-----	15.5	-----
5 352.63	V	-----	39.7	-----	54.0	-----	14.3
5 360.09	V	51.6	-----	74.0	-----	22.4	-----

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11a
Worst Case Transfer Rate :	6 Mbps
Distance of Measurements :	3 Meters
Operating Frequency :	5 745 MHz
Channel :	149

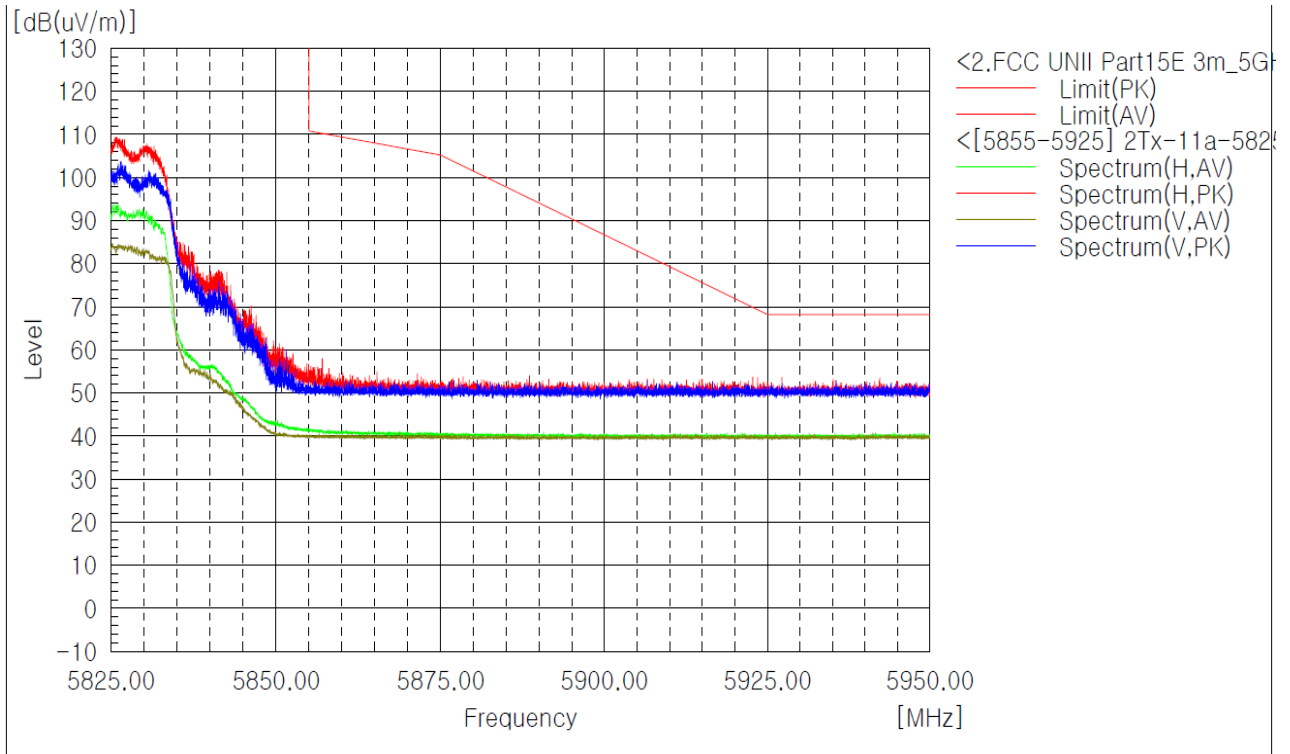


Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
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The emissions above 1 GHz were 20 dB lower than the limit.

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11a
Worst Case Transfer Rate :	6 Mbps
Distance of Measurements :	3 Meters
Operating Frequency :	5 825 MHz
Channel :	165



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
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The emissions above 1 GHz were 20 dB lower than the limit.

Radiated Restricted Band Edge Plot

Test mode : Transmitter, 802.11n_HT20

The requirements are:

☒ Complies

Test Data

Ch.36(5 180 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 360.83	H	57.1	-----	74.0	-----	16.9	-----
10 361.47	V	62.0	-----	74.0	-----	12.0	-----
10 361.57	V	-----	48.7	-----	54.0	-----	5.3
10 361.97	H	-----	44.4	-----	54.0	-----	9.6

Ch.40(5 200 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 406.33	H	54.4	-----	74.0	-----	19.6	-----
10 394.70	H	-----	41.1	-----	54.0	-----	12.9
10 398.69	V	59.9	-----	74.0	-----	14.1	-----
10 403.84	V	-----	48.2	-----	54.0	-----	5.8

Ch.48(5 240 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 478.32	H	54.0	-----	74.0	-----	20.0	-----
10 484.30	H	-----	42.0	-----	54.0	-----	12.0
10 475.99	V	61.2	-----	74.0	-----	12.8	-----
10 483.31	V	-----	48.8	-----	54.0	-----	5.2

Ch.52(5 260 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 521.54	H	55.6	-----	74.0	-----	18.4	-----
10 517.72	H	-----	41.5	-----	54.0	-----	12.5
10 522.21	V	61.8	-----	74.0	-----	12.2	-----
10 521.21	V	-----	49.5	-----	54.0	-----	4.5

Ch.60(5 300 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 600.85	H	54.7	-----	74.0	-----	19.3	-----
10 604.50	H	-----	41.4	-----	54.0	-----	12.6
10 603.84	V	61.7	-----	74.0	-----	12.3	-----
10 596.19	V	-----	50.0	-----	54.0	-----	4.0

Ch.64(5 320 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 641.26	V	-----	50.7	-----	54.0	-----	3.3
10 641.76	V	64.3	-----	74.0	-----	9.7	-----
10 641.80	H	-----	44.9	-----	54.0	-----	9.1
10 647.13	H	12.3	-----	74.0	-----	61.7	-----

Ch.100(5 500 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 001.77	H	-----	41.0	-----	54.0	-----	13.0
11 001.95	V	61.7	-----	74.0	-----	12.3	-----
11 002.07	V	-----	47.2	-----	54.0	-----	6.8
11 002.22	H	56.2	-----	74.0	-----	17.8	-----

Ch.120(5 600 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 207.83	H	56.2	-----	74.0	-----	17.8	-----
11 201.01	H	-----	42.6	-----	54.0	-----	11.4
11 203.34	V	61.1	-----	74.0	-----	12.9	-----
11 203.50	V	-----	49.1	-----	54.0	-----	4.9

Ch.144(5 720 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 442.57	H	54.9	-----	74.0	-----	19.1	-----
11 439.25	H	-----	42.3	-----	54.0	-----	11.7
11 443.07	V	60.1	-----	74.0	-----	13.9	-----
11 440.74	V	-----	46.8	-----	54.0	-----	7.2

Ch.149(5 745 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 491.64	H	-----	46.1	-----	54.0	-----	7.9
11 492.40	V	-----	49.4	-----	54.0	-----	4.6
11 492.46	H	59.1	-----	74.0	-----	14.9	-----
11 493.25	V	63.8	-----	74.0	-----	10.2	-----

Ch.157(5 785 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 565.43	H	53.8	-----	74.0	-----	20.2	-----
11 595.35	H	-----	42.0	-----	54.0	-----	12.0
11 572.08	V	57.3	-----	74.0	-----	16.7	-----
11 570.42	V	-----	45.4	-----	54.0	-----	8.6

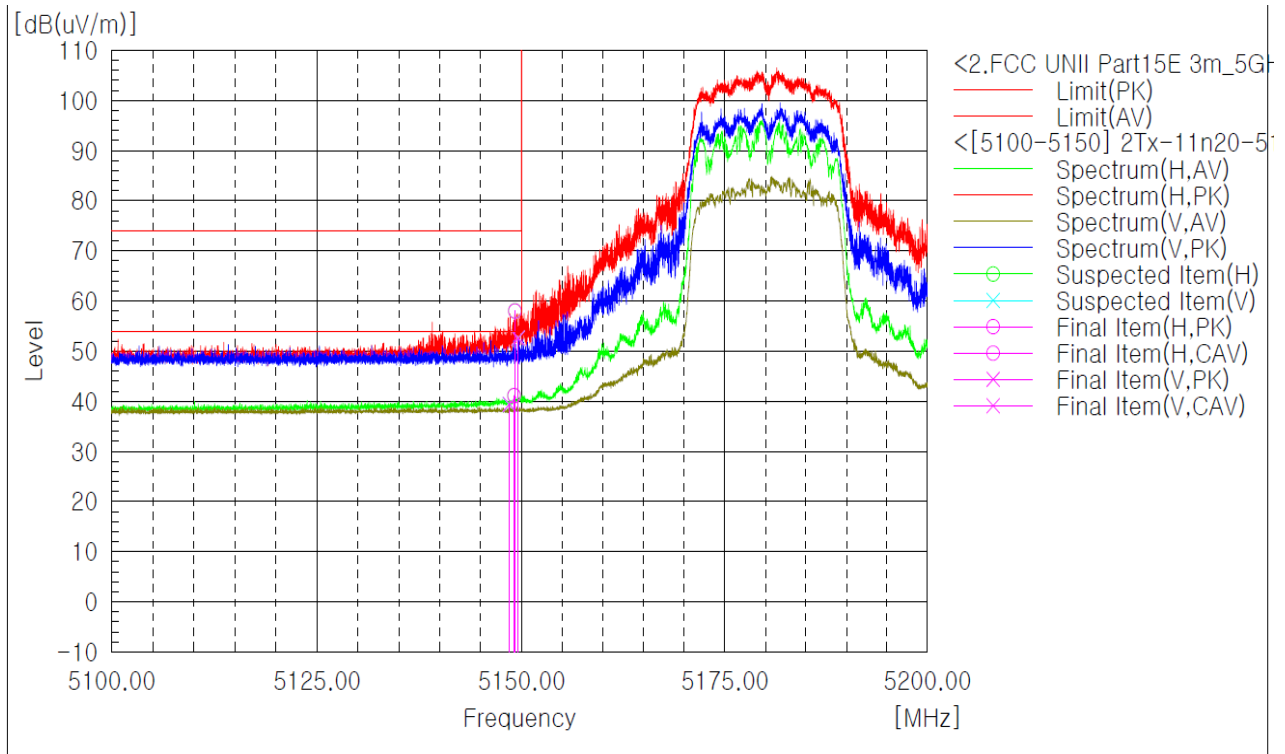
Ch.165(5 825 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 649.31	V	-----	48.8	-----	54.0	-----	5.2
11 652.71	V	62.5	-----	74.0	-----	11.5	-----
11 653.08	H	59.3	-----	74.0	-----	14.7	-----
11 660.87	H	-----	46.5	-----	54.0	-----	7.5

Remarks

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Correction factor = Antenna factor + Cable loss - Amp Gain

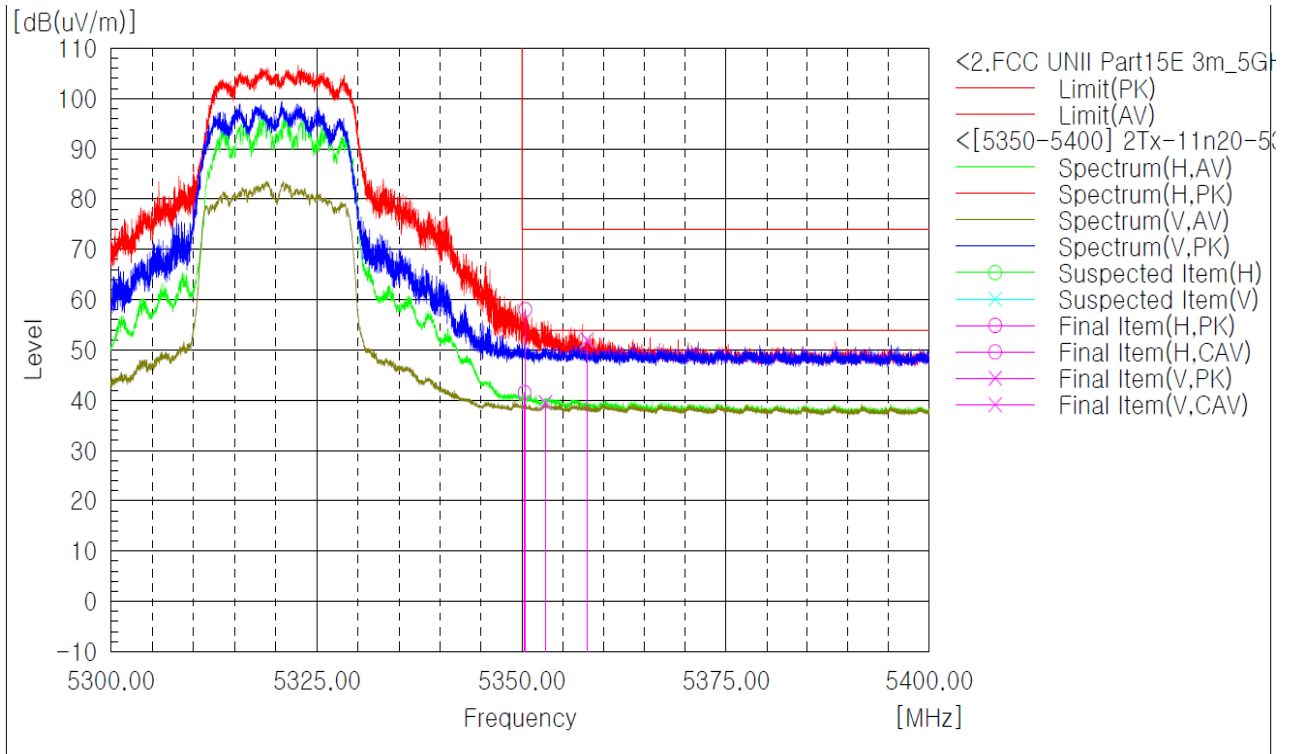
Worst Case Mode :	802.11n_HT20
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 180 MHz
Channel :	36



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 148.53	V	-----	39.4	-----	54.0	-----	14.6
5 149.10	H	-----	41.1	-----	54.0	-----	12.9
5 149.20	H	58.0	-----	74.0	-----	16.0	-----
5 149.59	V	52.6	-----	74.0	-----	21.4	-----

Radiated Restricted Band Edge Plot

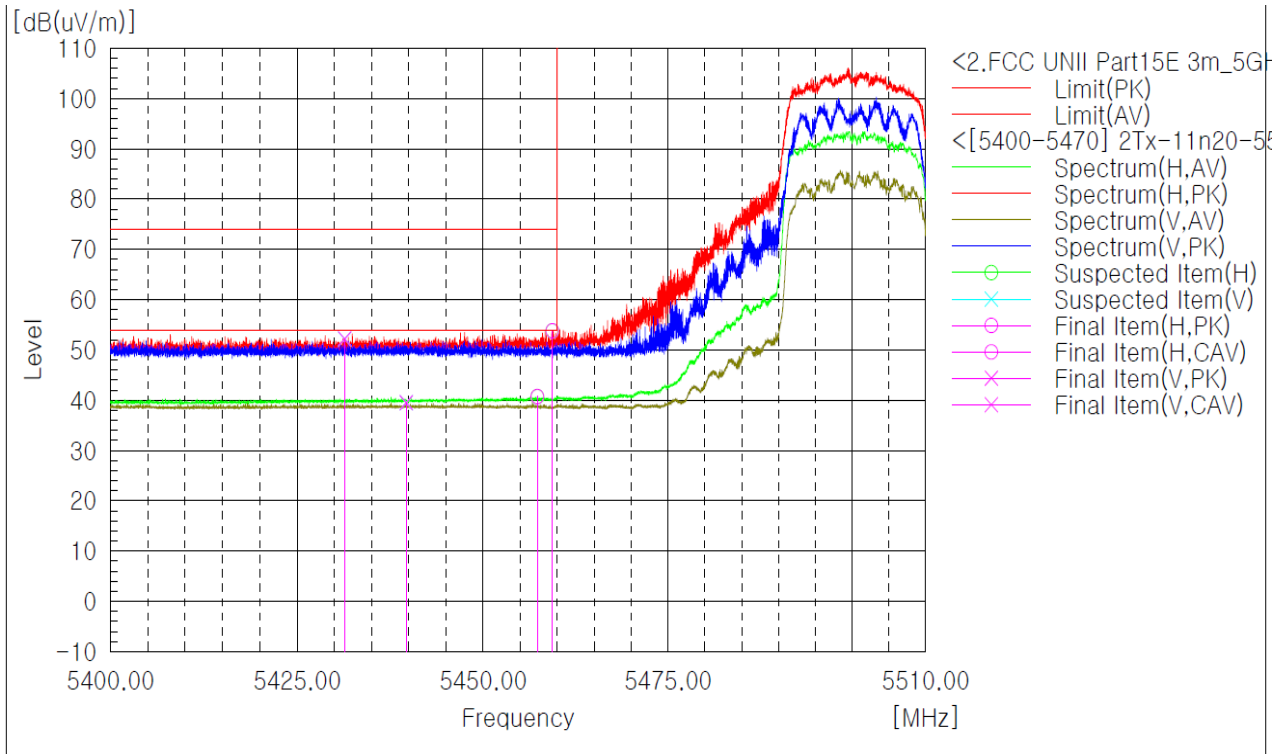
Worst Case Mode :	802.11n_HT20
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 320 MHz
Channel :	64



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 350.31	H	-----	41.5	-----	54.0	-----	12.5
5 350.41	H	58.0	-----	74.0	-----	16.0	-----
5 352.86	V	-----	39.5	-----	54.0	-----	14.5
5 357.95	V	52.0	-----	74.0	-----	22.0	-----

Radiated Restricted Band Edge Plot

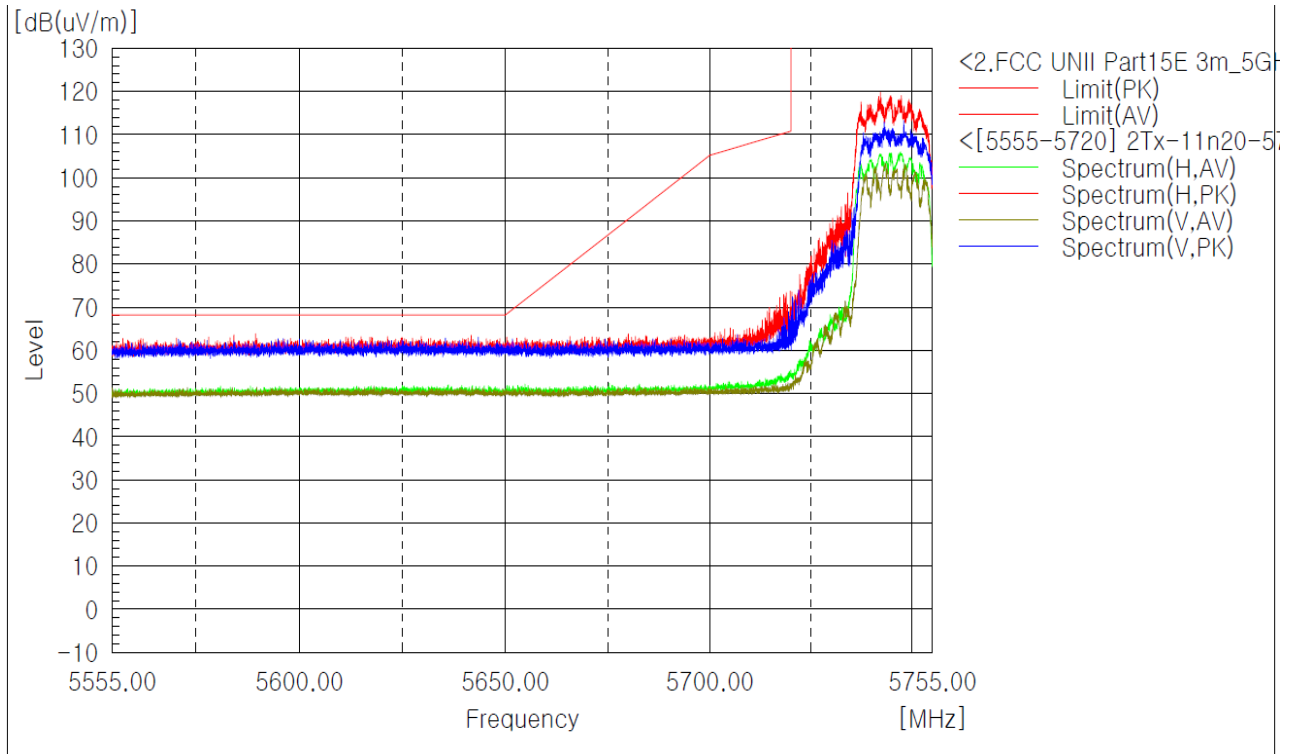
Worst Case Mode :	802.11n_HT20
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 500 MHz
Channel :	100



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 431.39	V	52.2	-----	74.0	-----	21.8	-----
5 439.66	V	-----	39.5	-----	54.0	-----	14.5
5 457.34	H	-----	40.7	-----	54.0	-----	13.3
5 459.36	H	53.8	-----	74.0	-----	20.2	-----

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11n_HT20
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 745 MHz
Channel :	149

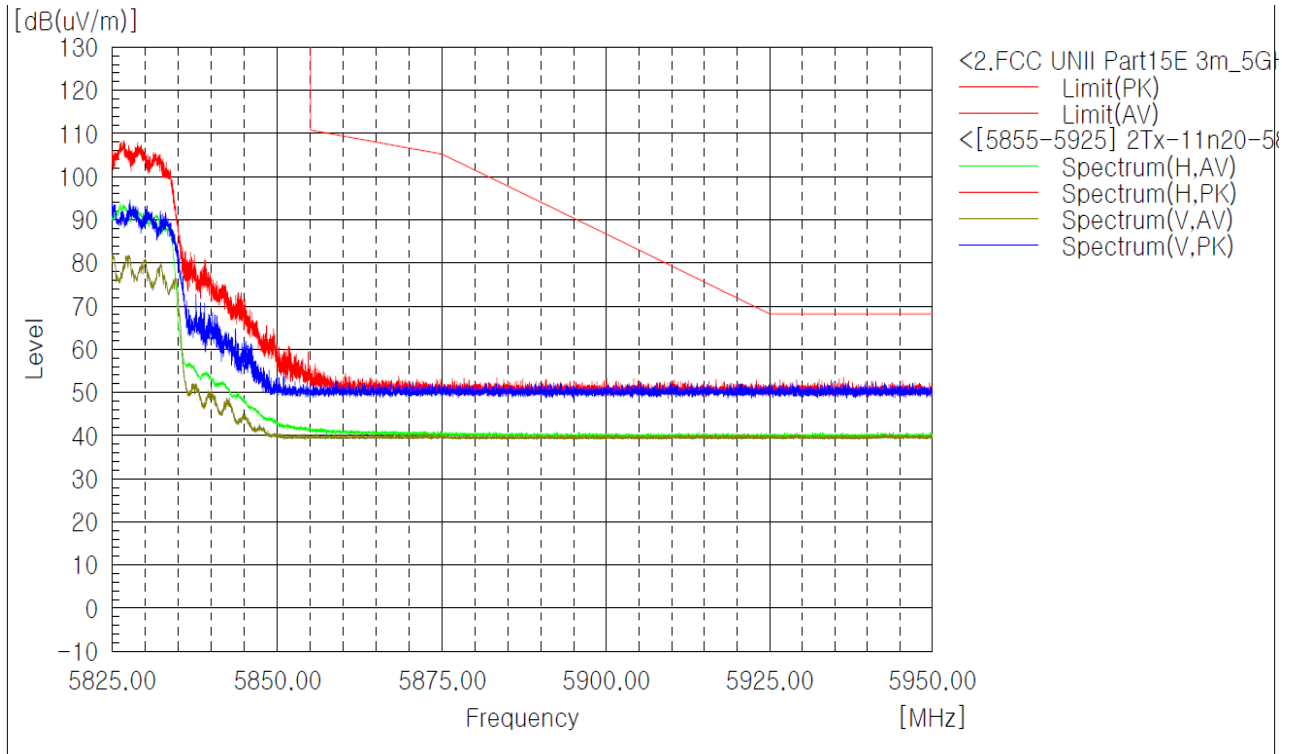


Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
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The emissions above 1 GHz were 20 dB lower than the limit.

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11n_HT20
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 825 MHz
Channel :	165



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
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The emissions above 1 GHz were 20 dB lower than the limit.

Radiated Restricted Band Edge Plot

Test mode : Transmitter, 802.11ac_VHT20

The requirements are:

☒ Complies

Test Data

Ch.36(5 180 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 352.97	H	52.8	-----	74.0	-----	21.2	-----
10 374.58	H	-----	40.9	-----	54.0	-----	13.1
10 363.77	V	58.3	-----	74.0	-----	15.7	-----
10 361.61	V	-----	47.0	-----	54.0	-----	7.0

Ch.40(5 200 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 399.68	H	53.0	-----	74.0	-----	21.0	-----
10 405.00	H	-----	41.1	-----	54.0	-----	12.9
10 400.02	V	59.3	-----	74.0	-----	14.7	-----
10 402.34	V	-----	48.4	-----	54.0	-----	5.6

Ch.48(5 240 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 484.97	H	53.7	-----	74.0	-----	20.3	-----
10 477.32	H	-----	41.8	-----	54.0	-----	12.2
10 480.32	V	60.7	-----	74.0	-----	13.3	-----
10 481.98	V	-----	49.7	-----	54.0	-----	4.3

Ch.52(5 260 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 515.89	H	56.2	-----	74.0	-----	17.8	-----
10 539.67	H	-----	41.2	-----	54.0	-----	12.8
10 517.39	V	61.5	-----	74.0	-----	12.5	-----
10 520.55	V	-----	49.5	-----	54.0	-----	4.5

Ch.60(5 300 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 602.01	H	54.8	-----	74.0	-----	19.2	-----
10 602.18	H	-----	41.4	-----	54.0	-----	12.6
10 600.85	V	61.0	-----	74.0	-----	13.0	-----
10 602.18	V	-----	50.4	-----	54.0	-----	3.6

Ch.64(5 320 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 631.96	H	-----	44.8	-----	54.0	-----	9.2
10 639.71	V	62.8	-----	74.0	-----	11.2	-----
10 640.69	V	-----	49.8	-----	54.0	-----	4.2
10 648.07	H	57.8	-----	74.0	-----	16.2	-----

Ch.100(5 500 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 999.35	H	57.3	-----	74.0	-----	16.7	-----
10 998.18	H	-----	42.1	-----	54.0	-----	11.9
11 001.01	V	61.8	-----	74.0	-----	12.2	-----
11 001.84	V	-----	51.0	-----	54.0	-----	3.0

Ch.120(5 600 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 199.84	H	56.9	-----	74.0	-----	17.1	-----
11 202.67	H	-----	42.7	-----	54.0	-----	11.3
11 201.51	V	62.2	-----	74.0	-----	11.8	-----
11 200.51	V	-----	48.9	-----	54.0	-----	5.1

Ch.144(5 720 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 441.91	H	54.1	-----	74.0	-----	19.9	-----
11 442.24	H	-----	42.4	-----	54.0	-----	11.6
11 439.58	V	57.1	-----	74.0	-----	16.9	-----
11 439.25	V	-----	45.8	-----	54.0	-----	8.2

Ch.149(5 745 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 489.53	H	54.3	-----	74.0	-----	19.7	-----
11 491.29	H	-----	40.7	-----	54.0	-----	13.3
11 492.50	V	-----	45.1	-----	54.0	-----	8.9
11 495.27	V	59.1	-----	74.0	-----	14.9	-----

Ch.157(5 785 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 576.90	H	54.7	-----	74.0	-----	19.3	-----
11 591.70	H	-----	41.9	-----	54.0	-----	12.1
11 569.25	V	56.8	-----	74.0	-----	17.2	-----
11 569.58	V	-----	44.9	-----	54.0	-----	9.1

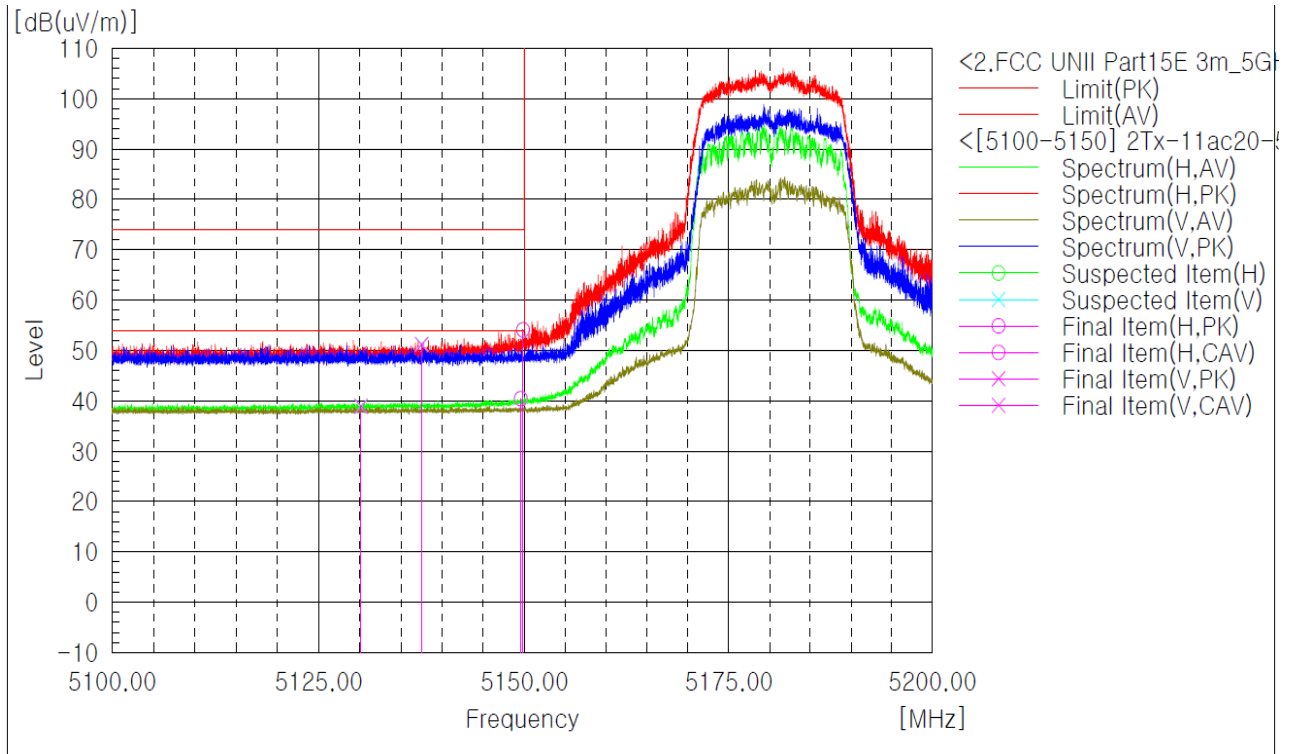
Ch.165(5 825 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 650.65	V	-----	43.3	-----	54.0	-----	10.7
11 651.56	H	-----	40.7	-----	54.0	-----	13.3
11 652.55	V	57.4	-----	74.0	-----	16.6	-----
11 652.97	H	54.0	-----	74.0	-----	20.0	-----

Remarks

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Correction factor = Antenna factor + Cable loss - Amp Gain

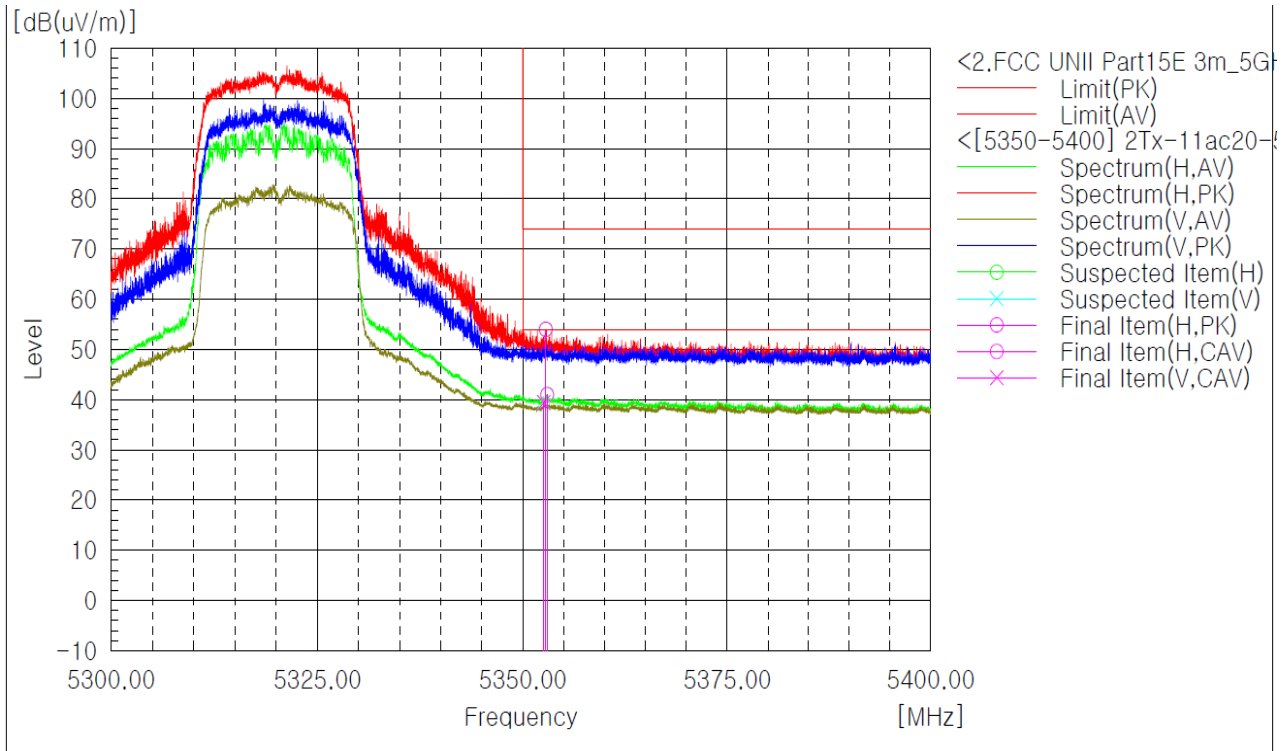
Worst Case Mode :	802.11ac_VHT20
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 180 MHz
Channel :	36



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 130.15	V	-----	38.9	-----	54.0	-----	15.1
5 137.51	V	51.2	-----	74.0	-----	22.8	-----
5 149.59	H	-----	40.4	-----	54.0	-----	13.6
5 149.86	H	54.1	-----	74.0	-----	19.9	-----

Radiated Restricted Band Edge Plot

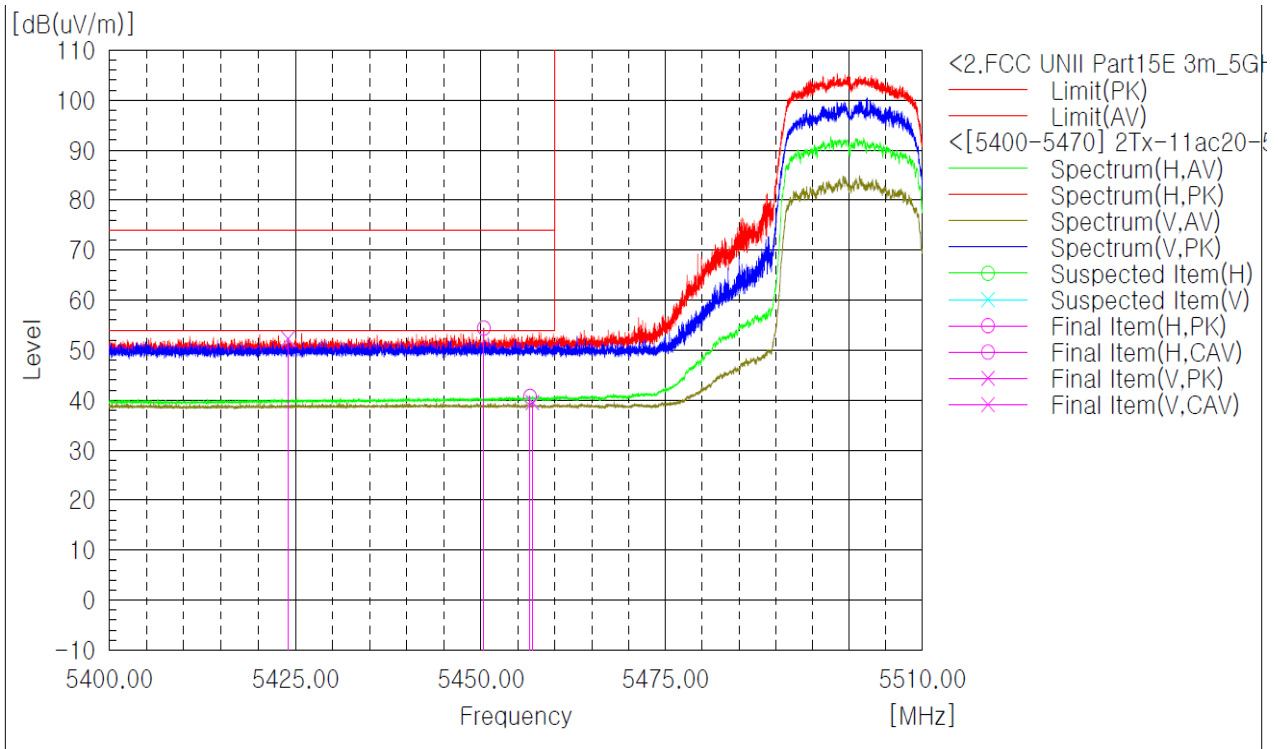
Worst Case Mode :	802.11ac_VHT20
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 320 MHz
Channel :	64



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 352.56	V	-----	41.0	-----	54.0	-----	13.0
5 352.83	H	54.0	-----	74.0	-----	20.0	-----
5 352.99	H	51.0	-----	74.0	-----	23.0	-----
5 390.18	V	-----	39.5	-----	54.0	-----	14.5

Radiated Restricted Band Edge Plot

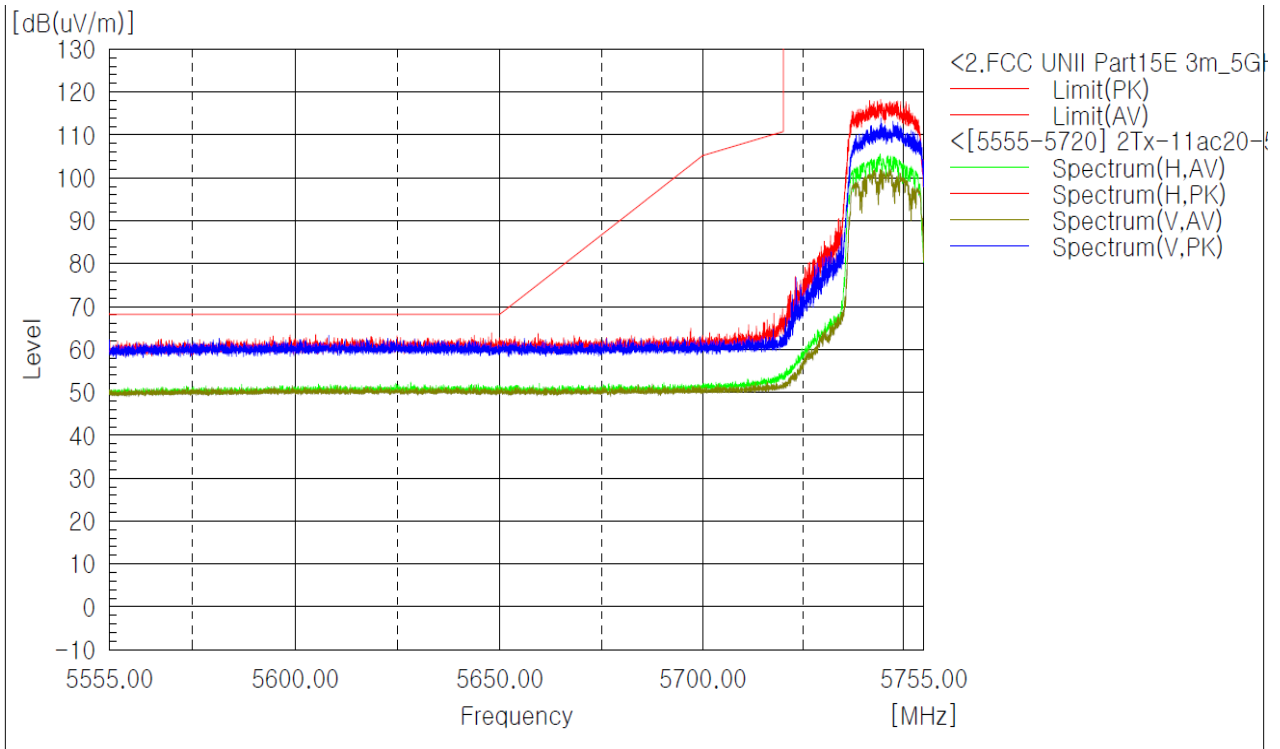
Worst Case Mode :	802.11ac_VHT20
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 500 MHz
Channel :	100



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 423.99	V	52.3	-----	74.0	-----	21.7	-----
5 450.42	H	54.4	-----	74.0	-----	19.6	-----
5 456.65	H	-----	40.7	-----	54.0	-----	13.3
5 456.97	V	-----	39.5	-----	54.0	-----	14.5

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11ac_VHT20
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 745 MHz
Channel :	149

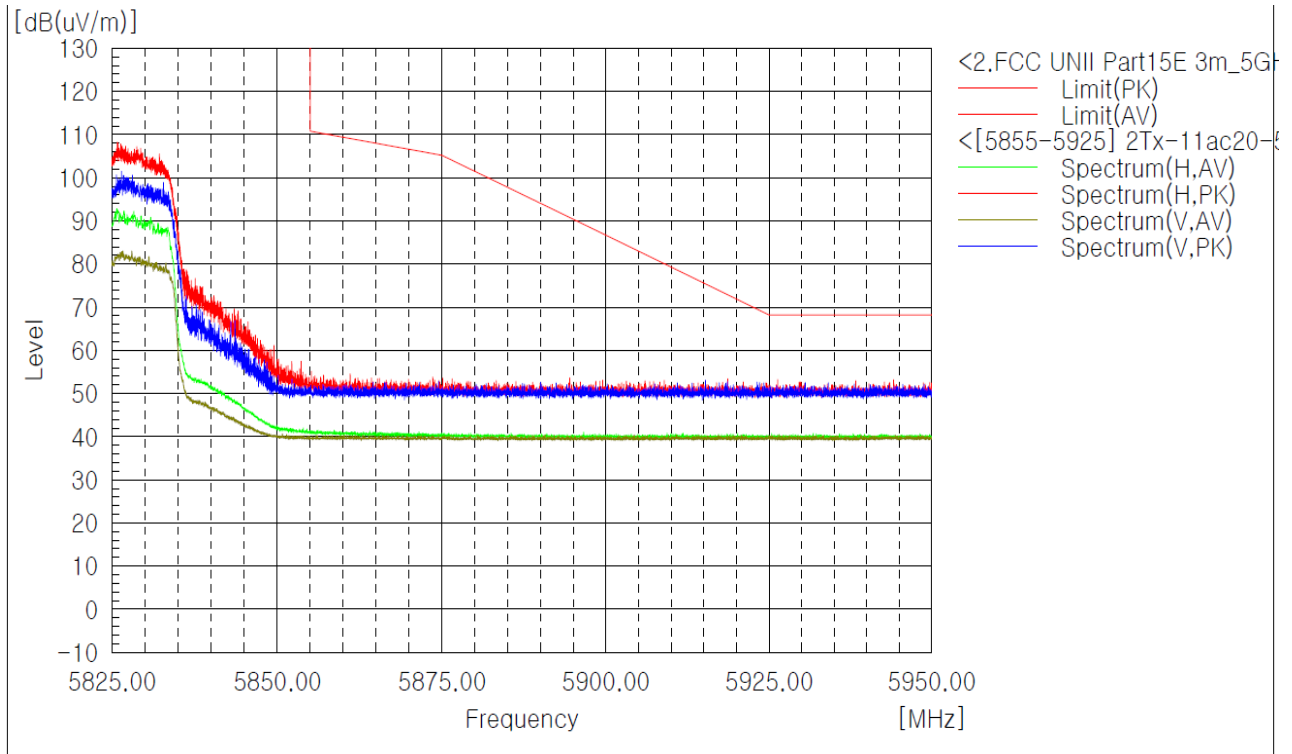


Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
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The emissions above 1 GHz were 20 dB lower than the limit.

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11ac_VHT20
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 825 MHz
Channel :	165



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
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The emissions above 1 GHz were 20 dB lower than the limit.

Radiated Restricted Band Edge Plot

Test mode : Transmitter, 802.11n_HT40

The requirements are:

☒ Complies

Test Data

Ch.38(5 190 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 378.90	V	-----	40.7	-----	54.0	-----	13.3
10 381.30	H	-----	39.4	-----	54.0	-----	14.6
10 381.58	H	53.5	-----	74.0	-----	20.5	-----
10 386.86	V	54.4	-----	74.0	-----	19.6	-----

Ch.46(5 230 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 461.36	H	52.8	-----	74.0	-----	21.2	-----
10 472.17	H	-----	41.9	-----	54.0	-----	12.1
10 466.35	V	57.6	-----	74.0	-----	16.4	-----
10 461.20	V	-----	46.2	-----	54.0	-----	7.8

Ch.54(5 270 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 540.17	H	53.6	-----	74.0	-----	20.4	-----
10 500.60	H	-----	41.5	-----	54.0	-----	12.5
10 541.83	V	58.8	-----	74.0	-----	15.2	-----
10 541.50	V	-----	47.0	-----	54.0	-----	7.0

Ch.62(5 310 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 620.48	H	-----	38.9	-----	54.0	-----	15.1
10 620.53	H	52.8	-----	74.0	-----	21.2	-----
10 621.98	V	-----	44.5	-----	54.0	-----	9.5
10 622.11	V	58.2	-----	74.0	-----	15.8	-----

Ch.102(5 510 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 018.09	V	56.4	-----	74.0	-----	17.6	-----
11 020.41	H	-----	40.2	-----	54.0	-----	13.8
11 021.50	H	54.2	-----	74.0	-----	19.8	-----
11 021.54	V	-----	44.4	-----	54.0	-----	9.6

Ch.118(5 590 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 180.06	H	55.2	-----	74.0	-----	18.8	-----
11 211.65	H	-----	42.6	-----	54.0	-----	11.4
11 182.55	V	57.8	-----	74.0	-----	16.2	-----
11 181.06	V	-----	46.4	-----	54.0	-----	7.6

Ch.142(5 710 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 415.38	V	-----	42.2	-----	54.0	-----	11.8
11 415.38	H	-----	39.2	-----	54.0	-----	14.8
11 418.10	V	57.1	-----	74.0	-----	16.9	-----
11 421.28	H	53.3	-----	74.0	-----	20.7	-----

Ch.151(5 755 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 482.80	H	52.7	-----	74.0	-----	21.3	-----
11 511.90	H	-----	42.0	-----	54.0	-----	12.0
11 511.07	V	54.6	-----	74.0	-----	19.4	-----
11 515.22	V	-----	44.3	-----	54.0	-----	9.7

Ch.159(5 795 MHz)

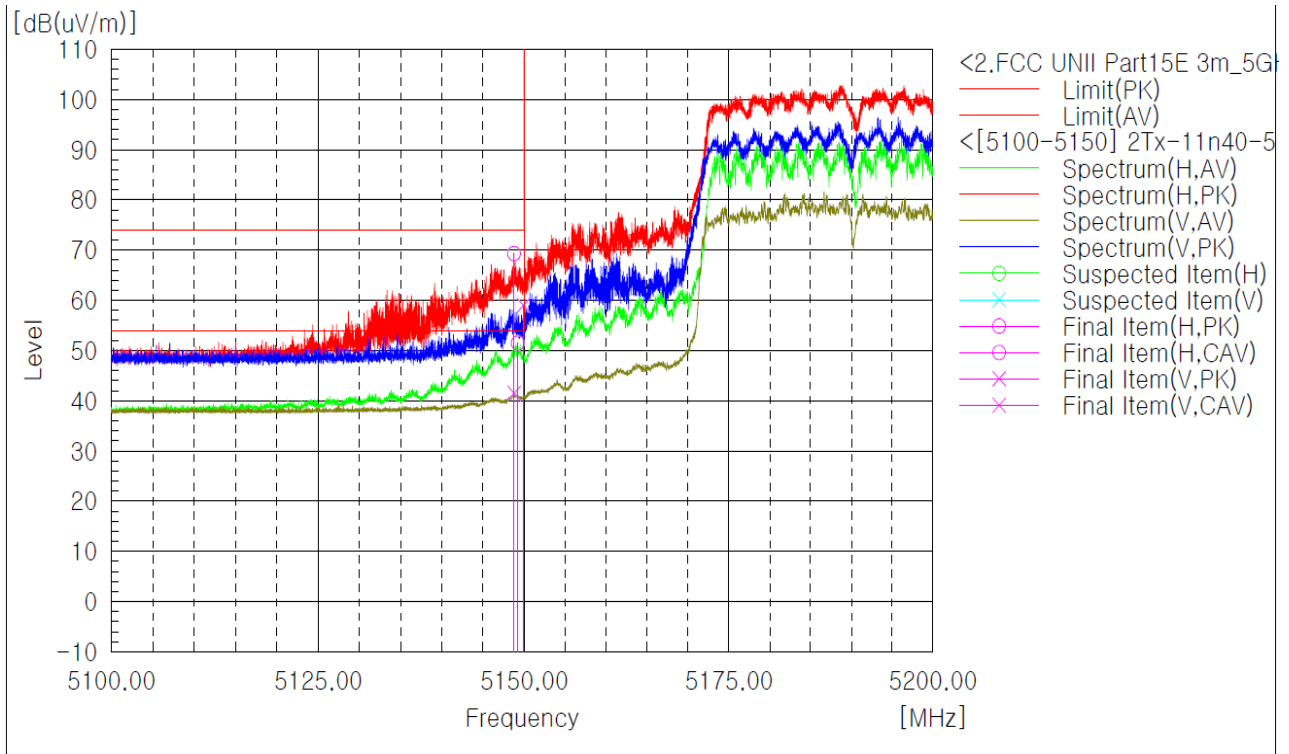
Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 585.05	H	53.2	-----	74.0	-----	20.8	-----
11 642.07	H	-----	42.7	-----	54.0	-----	11.3
11 591.20	V	54.8	-----	74.0	-----	19.2	-----
11 597.51	V	-----	43.4	-----	54.0	-----	10.6

 CTK Co., Ltd. The Prime Leader of Global Regulatory Certification	CTK Co., Ltd. (Ho-dong), 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea Tel: +82-31-339-9970 Fax: +82-31-624-9501	Report No.: CTK-2019-04999 Page (147) / (173) Pages	
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Remarks

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Correction factor = Antenna factor + Cable loss - Amp Gain

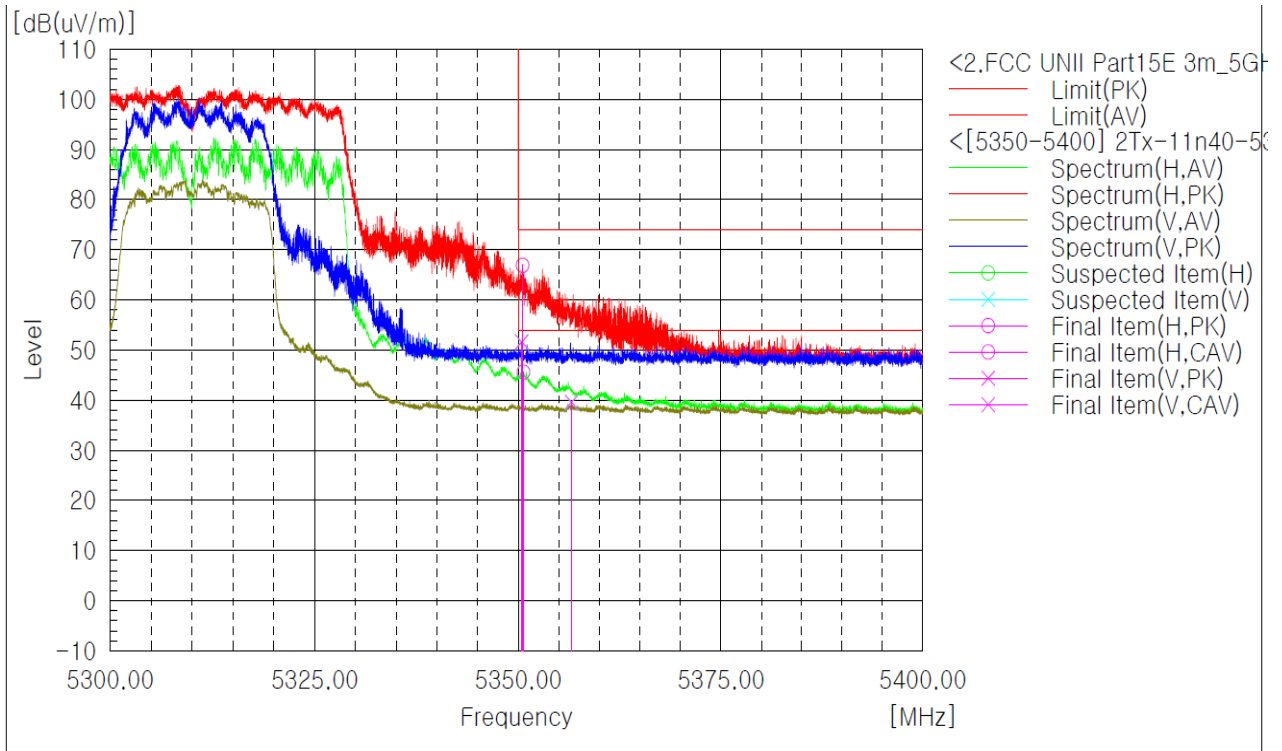
Worst Case Mode :	802.11n_HT40
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 190 MHz
Channel :	38



Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
5 148.79	H	69.3	-----	74.0	-----	4.7	-----
5 148.80	V	-----	41.5	-----	54.0	-----	12.5
5 149.24	H	-----	51.5	-----	54.0	-----	2.5
5 149.94	V	59.0	-----	74.0	-----	15.0	-----

Radiated Restricted Band Edge Plot

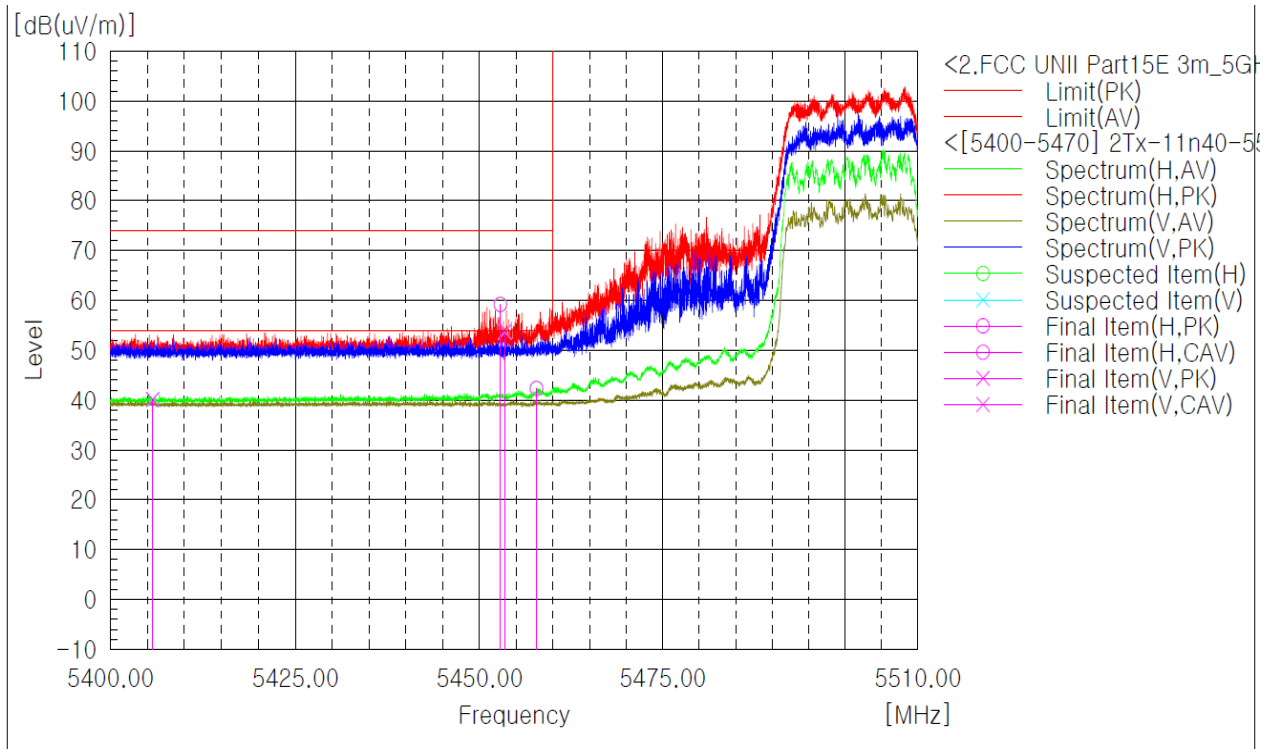
Worst Case Mode :	802.11n_HT40
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 310 MHz
Channel :	62



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 350.41	V	51.6	-----	74.0	-----	22.4	-----
5 350.54	H	66.9	-----	74.0	-----	7.1	-----
5 350.65	H	-----	45.6	-----	54.0	-----	8.4
5 356.55	V	-----	39.6	-----	54.0	-----	14.4

Radiated Restricted Band Edge Plot

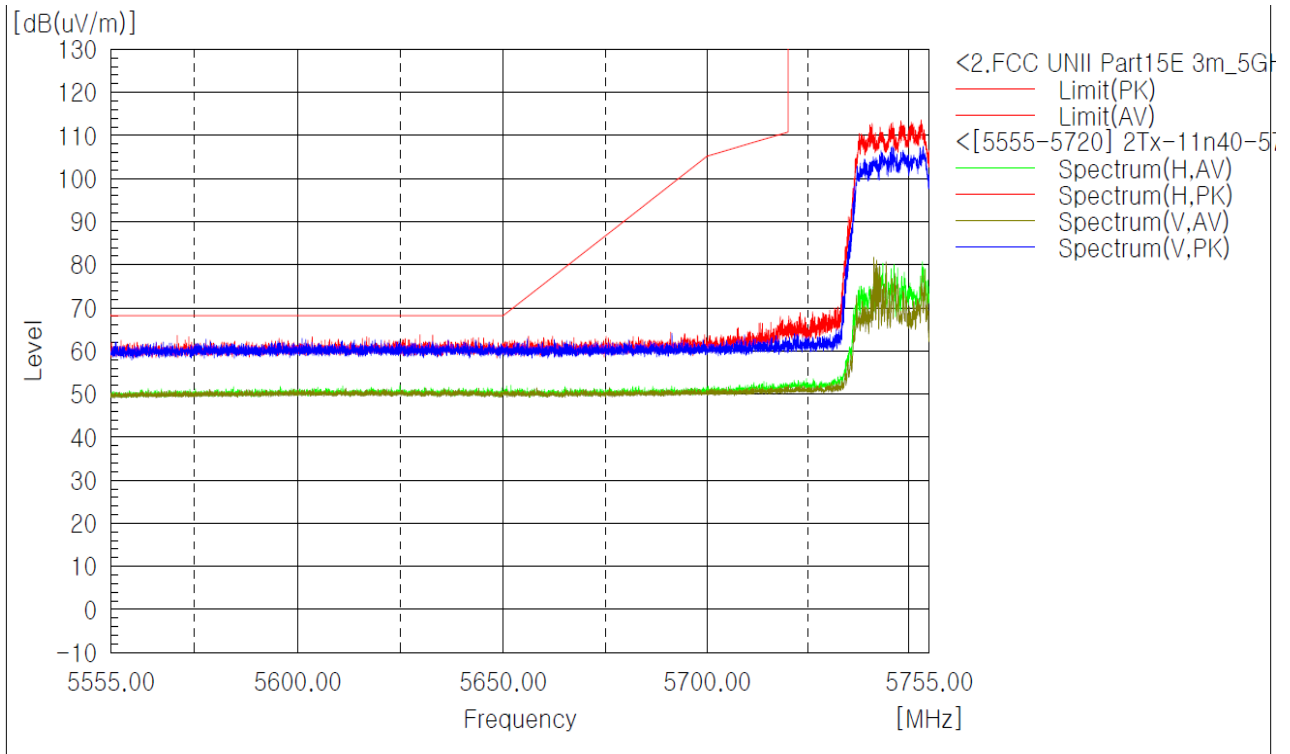
Worst Case Mode :	802.11n_HT40
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 510 MHz
Channel :	102



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 405.71	V	-----	40.1	-----	54.0	-----	13.9
5 452.86	H	59.2	-----	74.0	-----	14.8	-----
5 453.45	V	53.7	-----	74.0	-----	20.3	-----
5 457.78	H	-----	42.3	-----	54.0	-----	11.7

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11n_HT40
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 755 MHz
Channel :	151

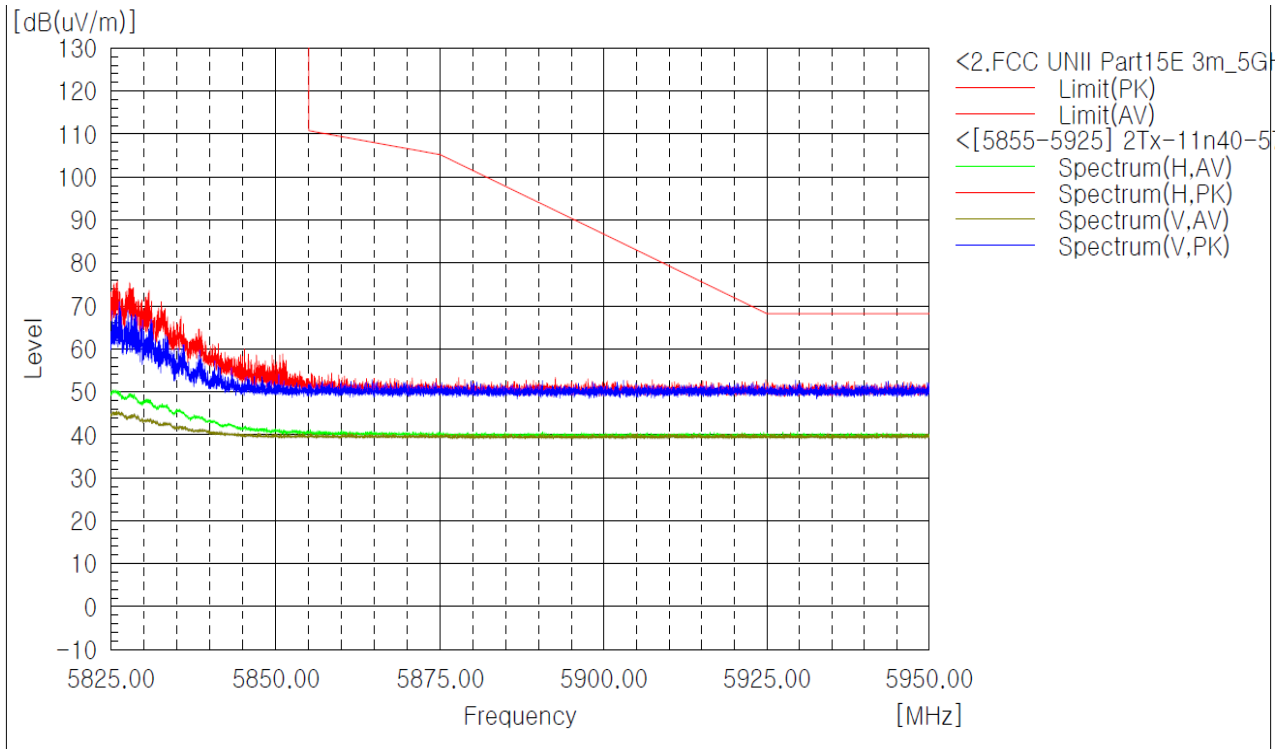


Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
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The emissions above 1 GHz were 20 dB lower than the limit.

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11n_HT40
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 795 MHz
Channel :	159



Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
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The emissions above 1 GHz were 20 dB lower than the limit.

Radiated Restricted Band Edge Plot

Test mode : Transmitter, 802.11ac_VHT40

The requirements are:

☒ Complies

Test Data

Ch.38(5 190 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 373.75	H	52.7	-----	74.0	-----	21.3	-----
10 389.21	H	-----	40.7	-----	54.0	-----	13.3
10 381.40	V	55.3	-----	74.0	-----	18.7	-----
10 371.09	V	-----	44.4	-----	54.0	-----	9.6

Ch.46(5 230 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 456.21	H	53.9	-----	74.0	-----	20.1	-----
10 472.17	H	-----	41.6	-----	54.0	-----	12.4
10 460.53	V	56.8	-----	74.0	-----	17.2	-----
10 461.70	V	-----	46.2	-----	54.0	-----	7.8

Ch.54(5 270 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 535.01	H	52.7	-----	74.0	-----	21.3	-----
10 551.97	H	-----	41.3	-----	54.0	-----	12.7
10 543.32	V	58.4	-----	74.0	-----	15.6	-----
10 537.50	V	-----	45.9	-----	54.0	-----	8.1

Ch.62(5 310 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 623.62	H	53.1	-----	74.0	-----	20.9	-----
10 643.91	H	-----	42.3	-----	54.0	-----	11.7
10 617.47	V	59.8	-----	74.0	-----	14.2	-----
10 621.96	V	-----	47.1	-----	54.0	-----	6.9

Ch.102(5 510 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 009.32	H	55.5	-----	74.0	-----	18.5	-----
11 041.41	H	-----	42.7	-----	54.0	-----	11.3
11 019.63	V	59.2	-----	74.0	-----	14.8	-----
11 012.32	V	-----	47.7	-----	54.0	-----	6.3

Ch.118(5 590 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 188.37	H	55.1	-----	74.0	-----	18.9	-----
11 197.68	H	-----	42.2	-----	54.0	-----	11.8
11 179.56	V	58.0	-----	74.0	-----	16.0	-----
11 179.89	V	-----	46.6	-----	54.0	-----	7.4

Ch.142(5 710 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 419.46	H	53.7	-----	74.0	-----	20.3	-----
11 458.03	H	-----	41.9	-----	54.0	-----	12.1
11 420.46	V	55.8	-----	74.0	-----	18.2	-----
11 432.26	V	-----	44.1	-----	54.0	-----	9.9

Ch.151(5 755 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 517.22	H	54.1	-----	74.0	-----	19.9	-----
11 472.66	H	-----	42.5	-----	54.0	-----	11.5
11 507.74	V	54.5	-----	74.0	-----	19.5	-----
11 504.08	V	-----	43.5	-----	54.0	-----	10.5

Ch.159(5 795 MHz)

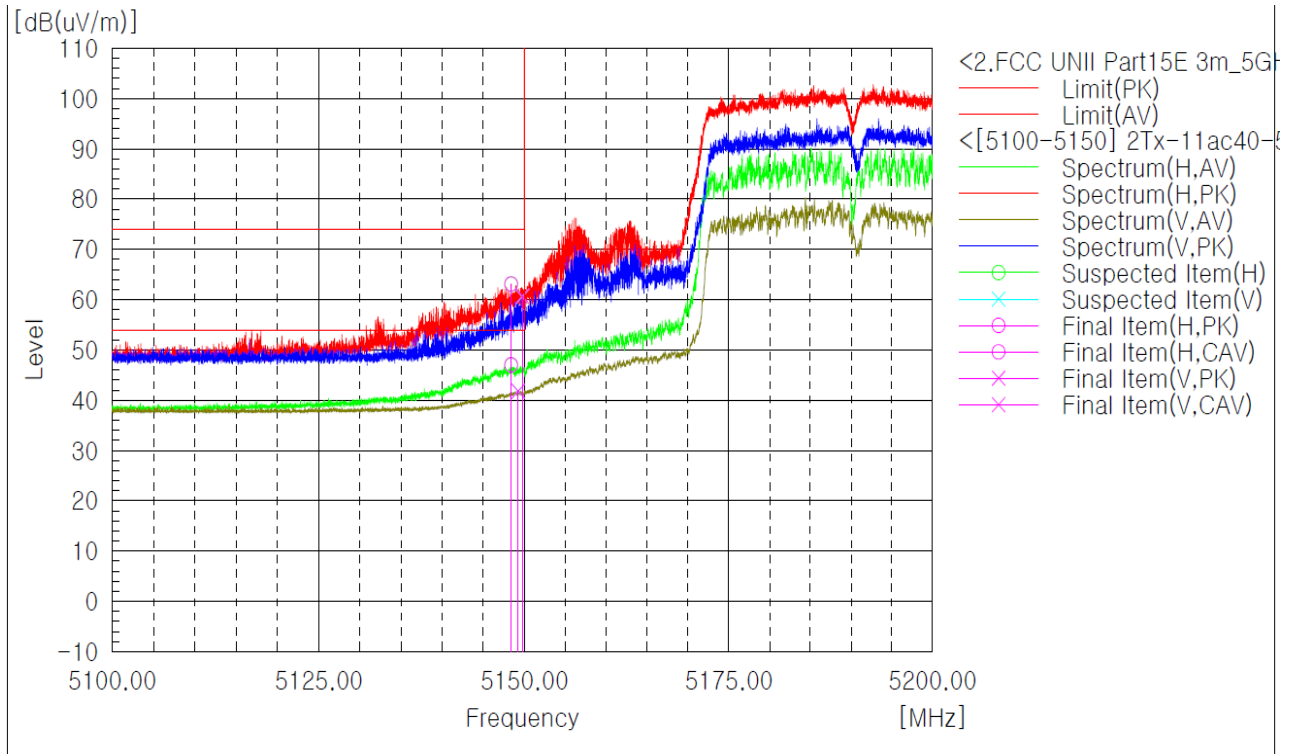
Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 592.03	H	52.6	-----	74.0	-----	21.4	-----
11 632.09	H	-----	41.9	-----	54.0	-----	12.1
11 589.04	V	54.9	-----	74.0	-----	19.1	-----
11 587.54	V	-----	42.9	-----	54.0	-----	11.1

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Remarks

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Correction factor = Antenna factor + Cable loss - Amp Gain

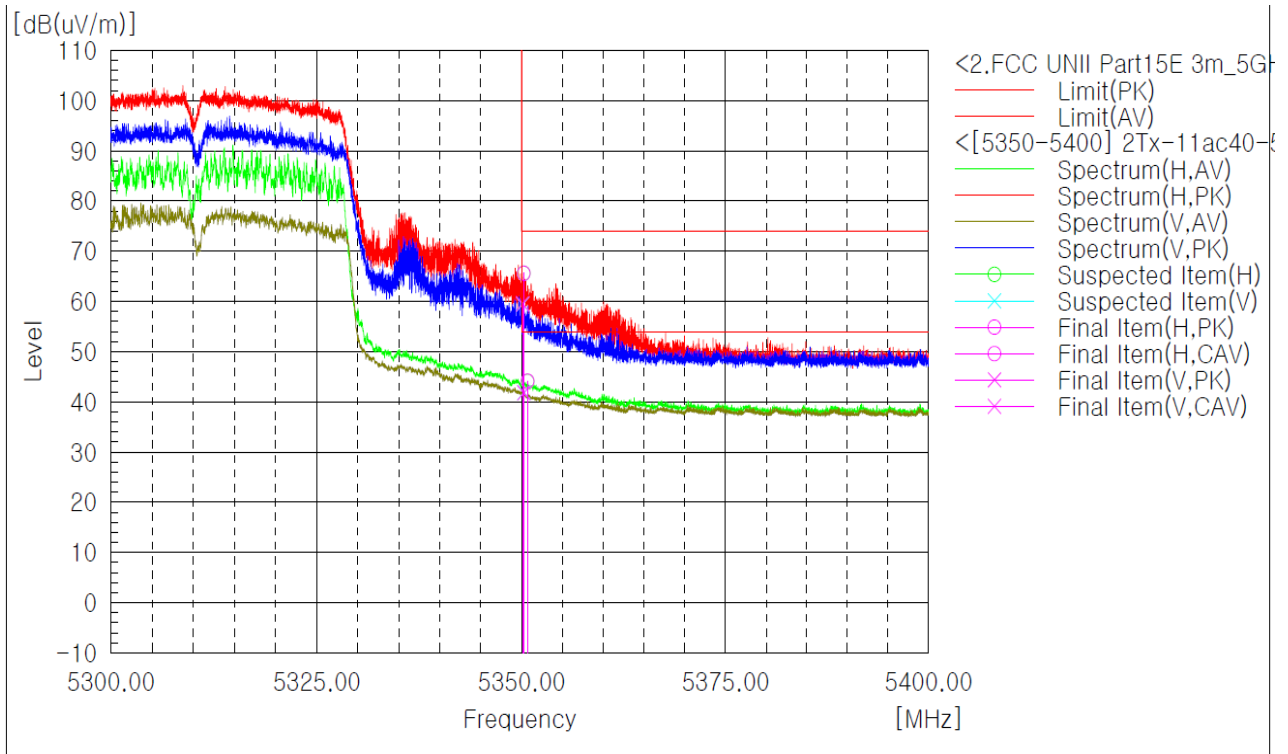
Worst Case Mode :	802.11ac_VHT40
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 190 MHz
Channel :	38



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 148.40	H	63.1	-----	74.0	-----	10.9	-----
5 148.41	H	-----	47.0	-----	54.0	-----	7.0
5 149.75	V	60.7	-----	74.0	-----	13.3	-----
5 149.25	V	-----	41.8	-----	54.0	-----	12.2

Radiated Restricted Band Edge Plot

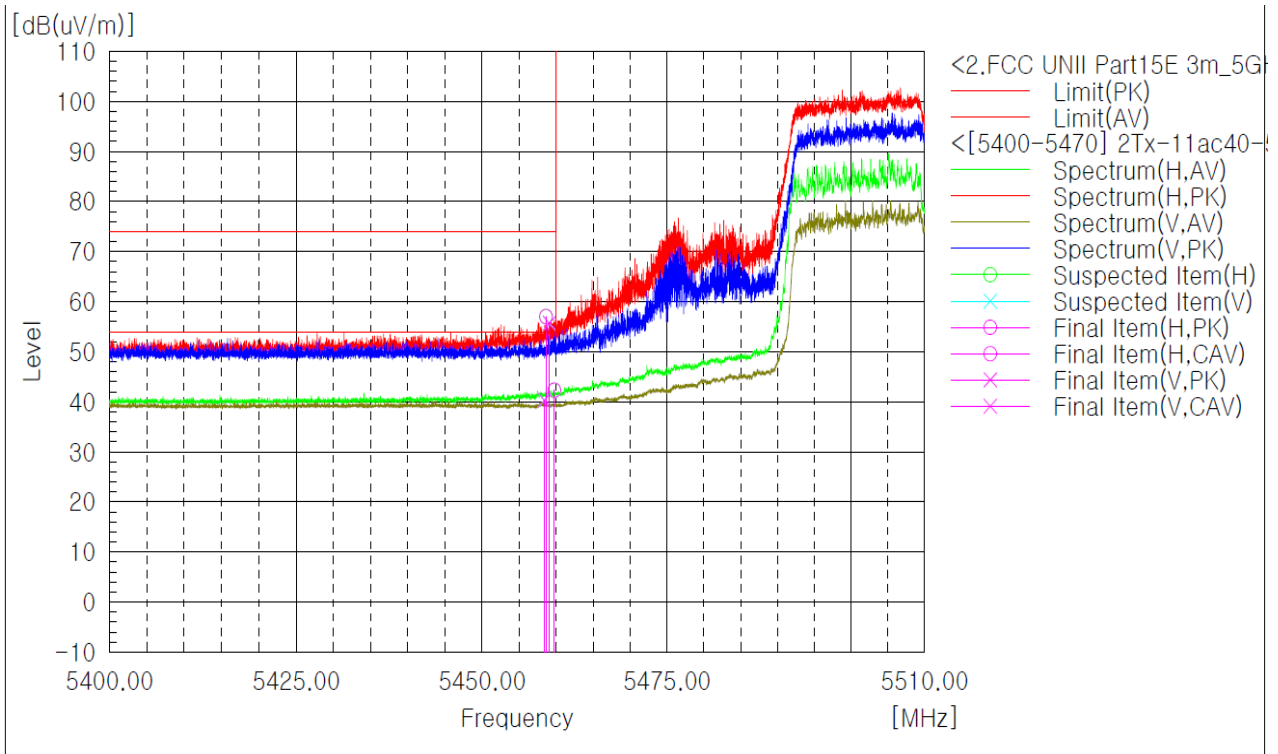
Worst Case Mode :	802.11ac_VHT40
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 310 MHz
Channel :	62



Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
5 350.13	V	59.5	-----	74.0	-----	14.5	-----
5 350.26	H	65.6	-----	74.0	-----	8.4	-----
5 350.29	V	-----	41.8	-----	54.0	-----	12.2
5 350.75	H	-----	44.1	-----	54.0	-----	9.9

Radiated Restricted Band Edge Plot

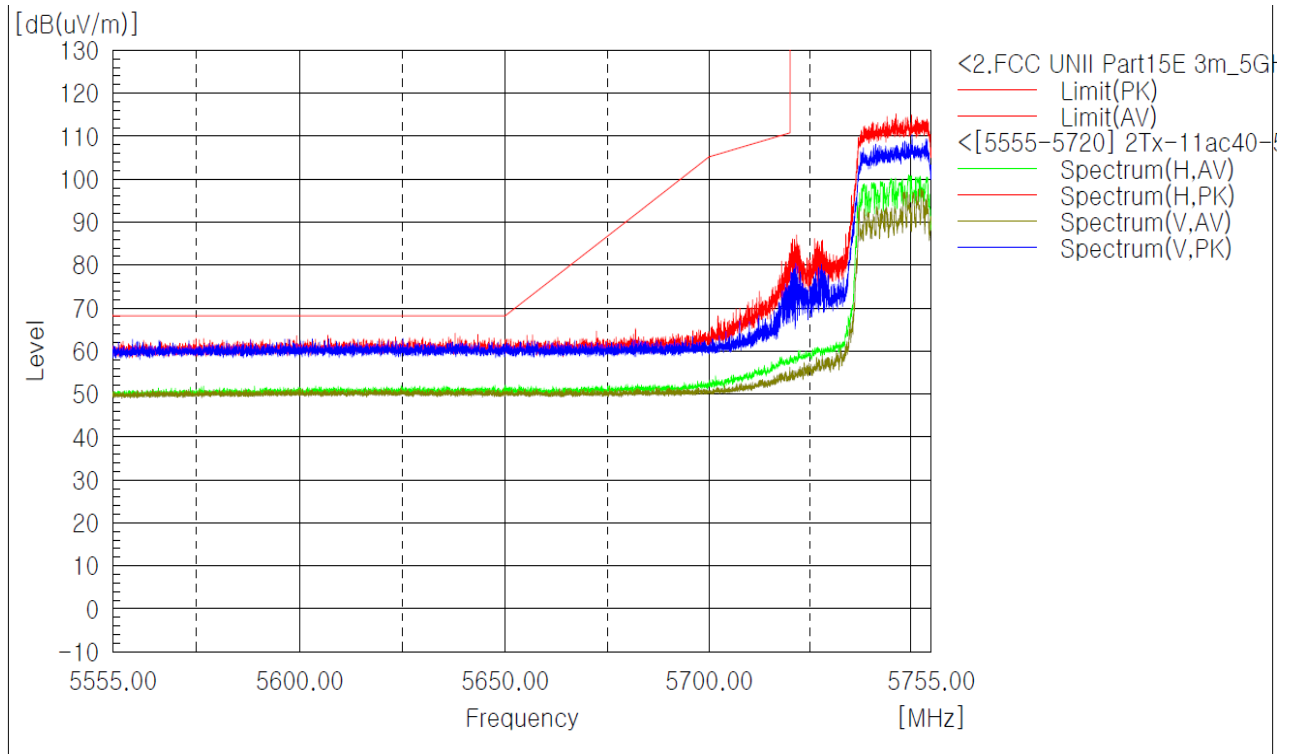
Worst Case Mode :	802.11ac_VHT40
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 510 MHz
Channel :	102



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 458.41	V	-----	40.3	-----	54.0	-----	13.7
5 458.64	H	57.0	-----	74.0	-----	17.0	-----
5 459.11	V	55.7	-----	74.0	-----	18.3	-----
5 459.77	H	-----	42.3	-----	54.0	-----	11.7

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11ac_VHT40
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 755 MHz
Channel :	151

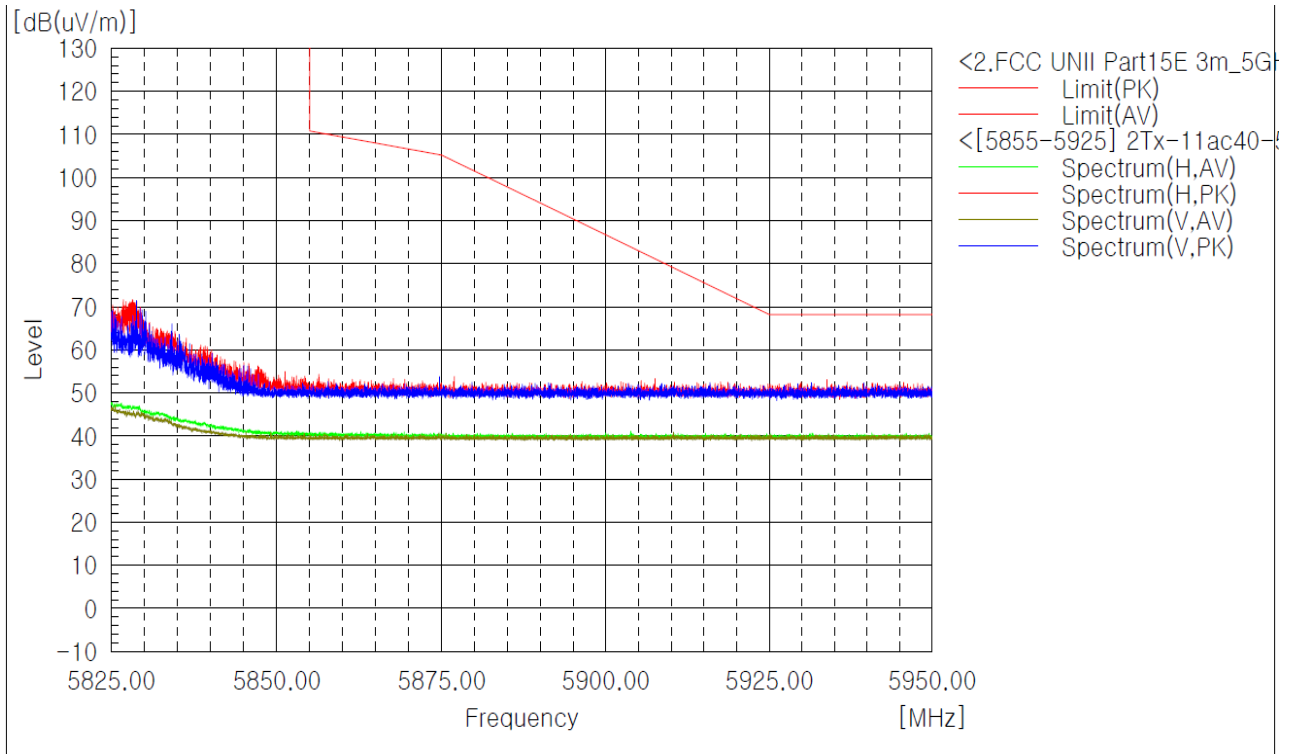


Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
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The emissions above 1 GHz were 20 dB lower than the limit.

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11ac_VHT40
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 795 MHz
Channel :	159



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
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The emissions above 1 GHz were 20 dB lower than the limit.

Radiated Restricted Band Edge Plot

Test mode : Transmitter, 802.11ac_VHT80

The requirements are:

☒ Complies

Test Data

Ch.42(5 210 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 469.51	H	52.4	-----	74.0	-----	21.6	-----
10 460.20	H	-----	41.6	-----	54.0	-----	12.4
10 440.58	V	55.3	-----	74.0	-----	18.7	-----
10 448.73	V	-----	42.5	-----	54.0	-----	11.5

Ch.58(5 290 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
10 498.10	H	53.2	-----	74.0	-----	20.8	-----
10 628.44	H	-----	41.4	-----	54.0	-----	12.6
10 601.51	V	56.4	-----	74.0	-----	17.6	-----
10 597.19	V	-----	43.5	-----	54.0	-----	10.5

Ch.106(5 530 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
11 109.07	H	54.1	-----	74.0	-----	19.9	-----
11 054.54	H	-----	42.3	-----	54.0	-----	11.7
11 078.32	V	57.4	-----	74.0	-----	16.6	-----
11 061.36	V	-----	44.7	-----	54.0	-----	9.3

Ch.138(5 690 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
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The emissions above 1 GHz were 20 dB lower than the limit.

Ch.155(5 775 MHz)

Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
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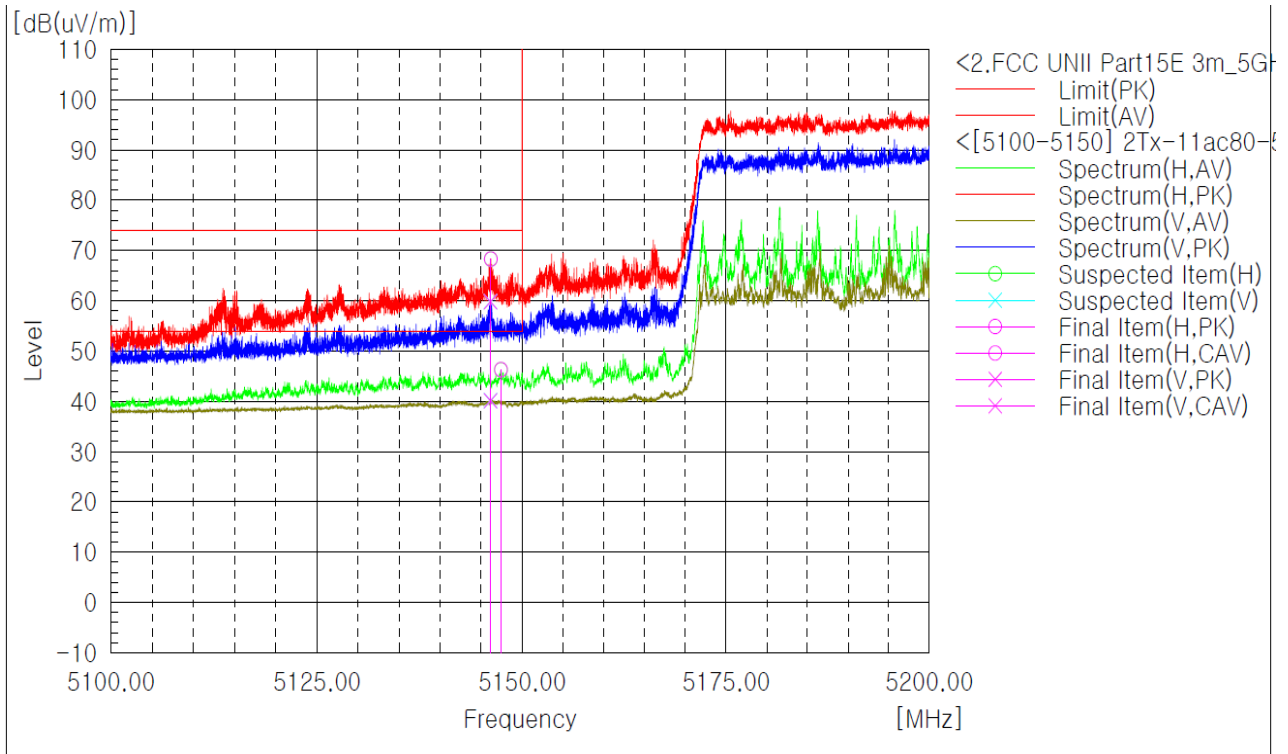
The emissions above 1 GHz were 20 dB lower than the limit.

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Remarks

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Correction factor = Antenna factor + Cable loss - Amp Gain

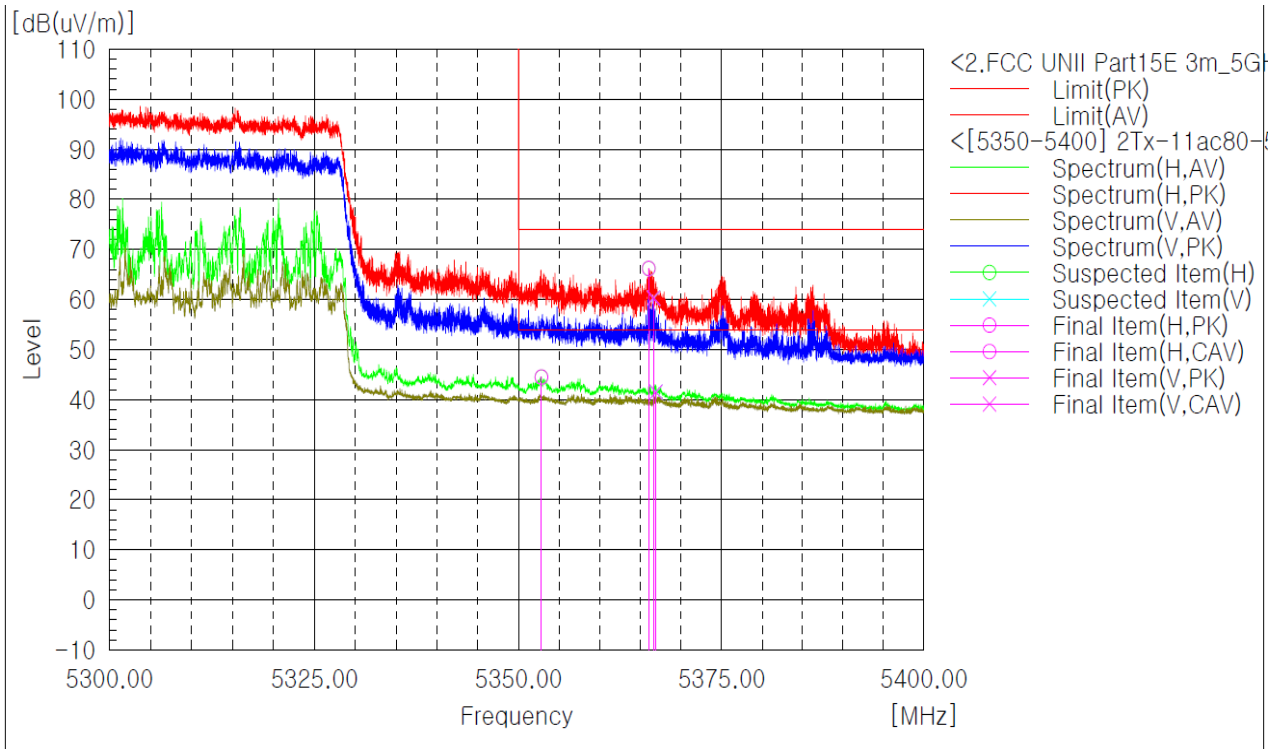
Worst Case Mode :	802.11ac_VHT80
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 210 MHz
Channel :	42



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 146.20	H	68.3	-----	74.0	-----	5.7	-----
5 147.43	H	-----	46.3	-----	54.0	-----	7.7
5 146.15	V	59.8	-----	74.0	-----	14.2	-----
5 146.15	V	-----	40.1	-----	54.0	-----	13.9

Radiated Restricted Band Edge Plot

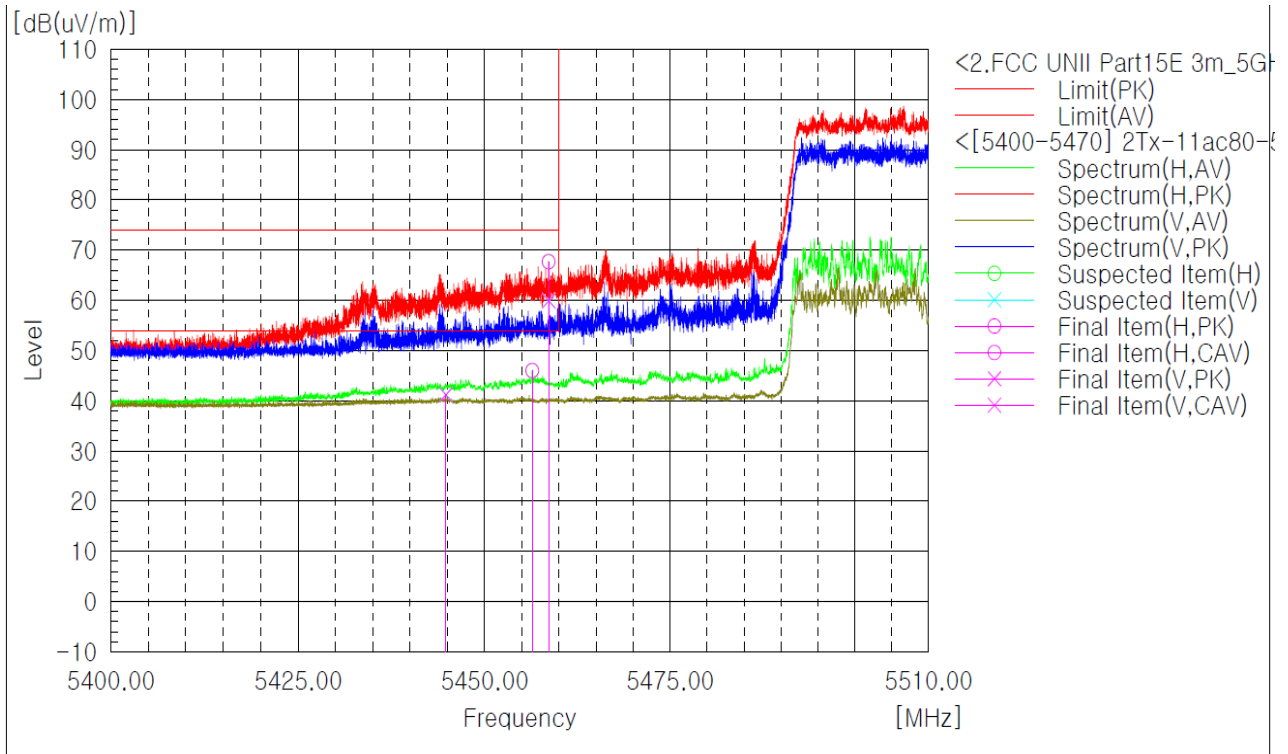
Worst Case Mode :	802.11ac_VHT80
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 290 MHz
Channel :	58



Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
5 352.83	H	-----	44.5	-----	54.0	-----	9.5
5 366.03	H	66.2	-----	74.0	-----	7.8	-----
5 366.59	V	60.3	-----	74.0	-----	13.7	-----
5 366.90	V	-----	41.5	-----	54.0	-----	12.5

Radiated Restricted Band Edge Plot

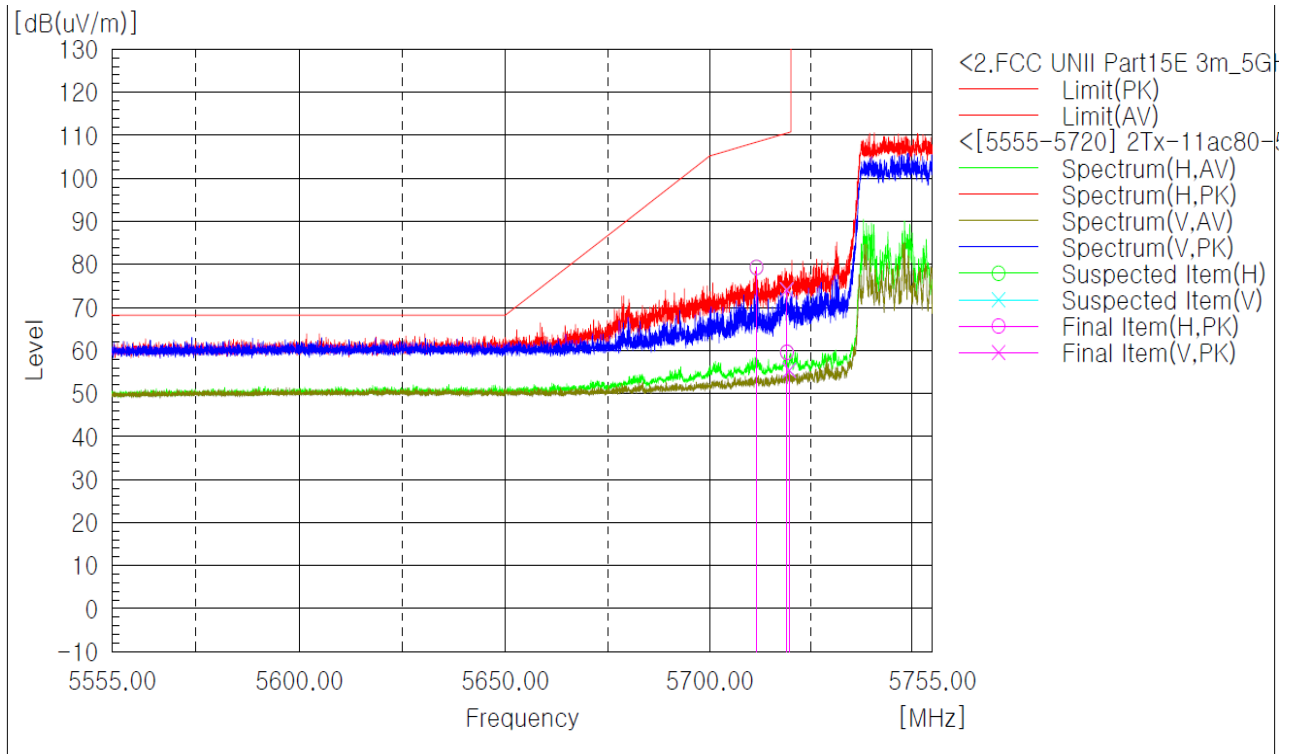
Worst Case Mode :	802.11ac_VHT80
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 530 MHz
Channel :	106



Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
5 444.81	V	-----	41.2	-----	54.0	-----	12.8
5 456.42	H	-----	46.0	-----	54.0	-----	8.0
5 458.62	H	67.7	-----	74.0	-----	6.3	-----
5 458.64	V	59.9	-----	74.0	-----	14.1	-----

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11ac_VHT80
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 775 MHz
Channel :	155

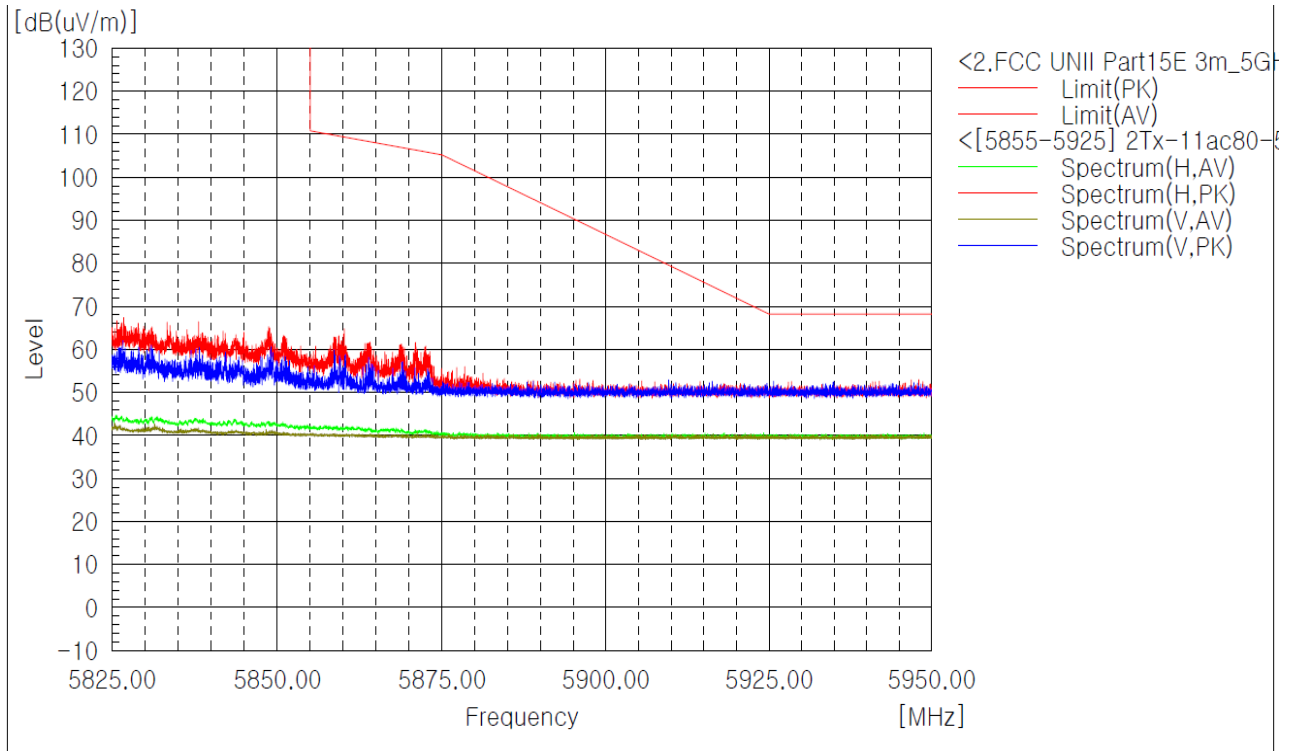


Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
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The emissions above 1 GHz were 20 dB lower than the limit.

Radiated Restricted Band Edge Plot

Worst Case Mode :	802.11ac_VHT80
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 775 MHz
Channel :	155

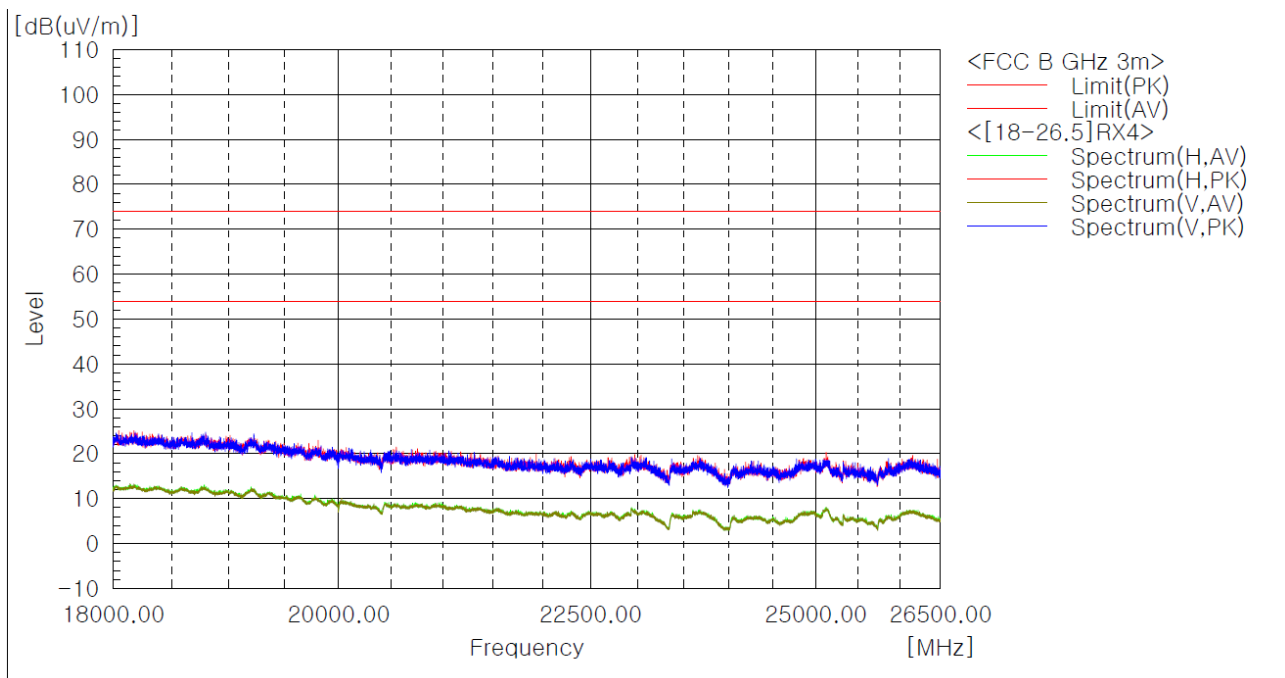
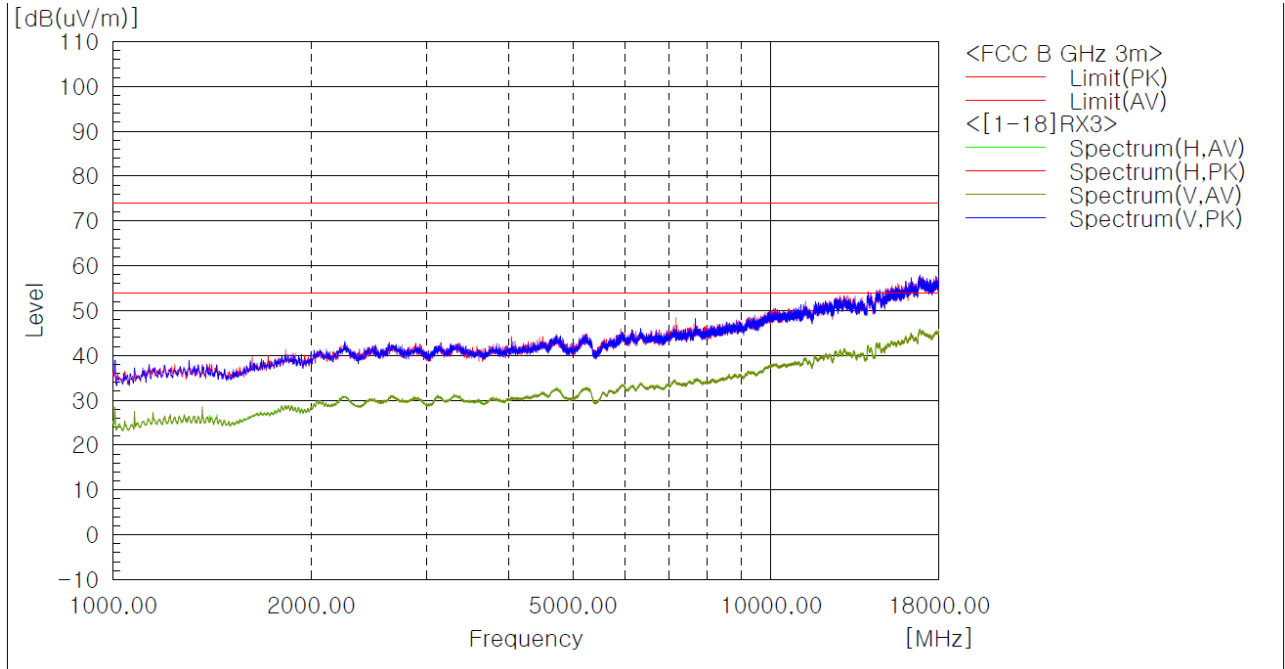


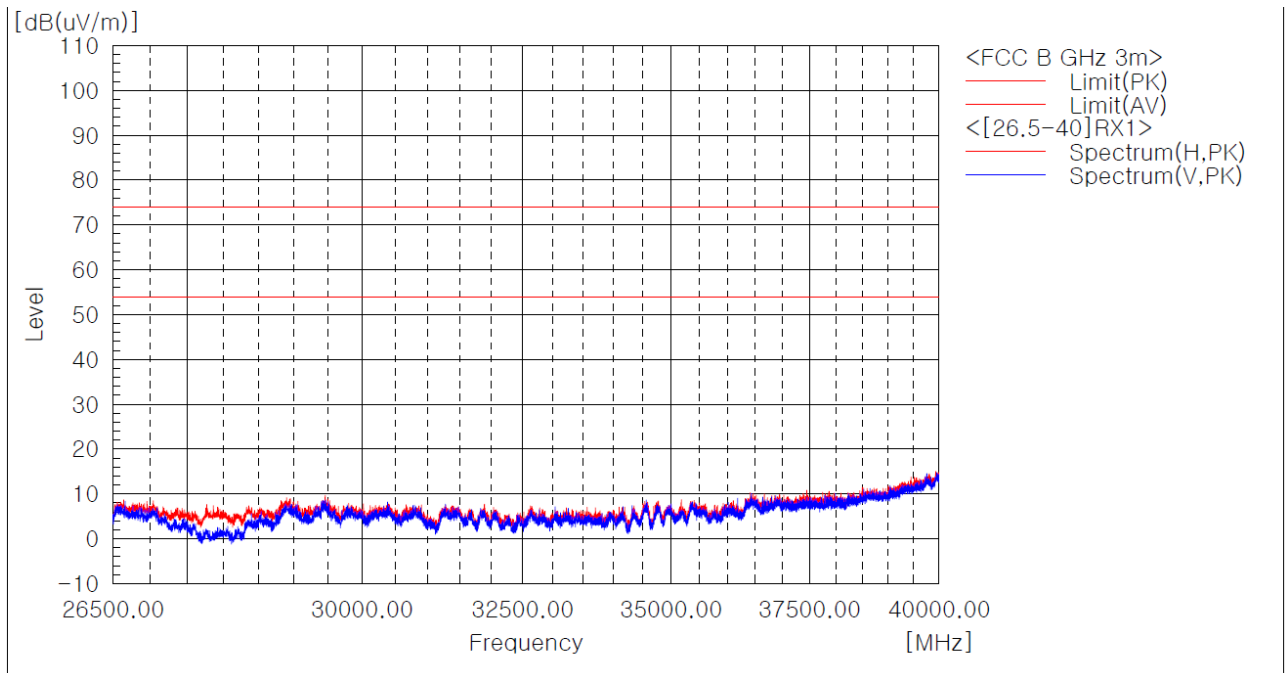
Frequency [MHz]	(P)	Level PK [dB(uV / m)]	Level AV [dB(uV / m)]	Limit PK [dB(uV / m)]	Limit AV [dB(uV / m)]	Margin PK [dB]	Margin AV [dB]
--------------------	-----	--------------------------	--------------------------	--------------------------	--------------------------	-------------------	-------------------

The emissions above 1 GHz were 20 dB lower than the limit.

Radiated Restricted Band Edge Plot

Test mode : Receiver (Worst Case)





Frequency [MHz]	(P)	Level PK [dB(uV/m)]	Level AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]
--------------------	-----	------------------------	------------------------	------------------------	------------------------	-------------------	-------------------

The emissions above 1 GHz were 20 dB lower than the limit.

Remarks

1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Correction factor = Antenna factor + Cable loss - Amp Gain

4.7 AC Conducted Emissions

Test Location

Shielded Room

Frequency Range of Measurement

150 kHz to 30 MHz

Instrument Settings

IF Band Width: 9 kHz

Test Procedures

The EUT was placed on a non-metallic table 0.8m above the metallic, grounded floor and 0.4m from the reference ground plane wall. The distance to other metallic surfaces was at least 0.8m.

Amplitude measurements were performed with a quasi-peak detector and an average detector.

Limit

- 15.207(a)

Frequency (MHz)	Conducted Limit (dBuV)	
	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.

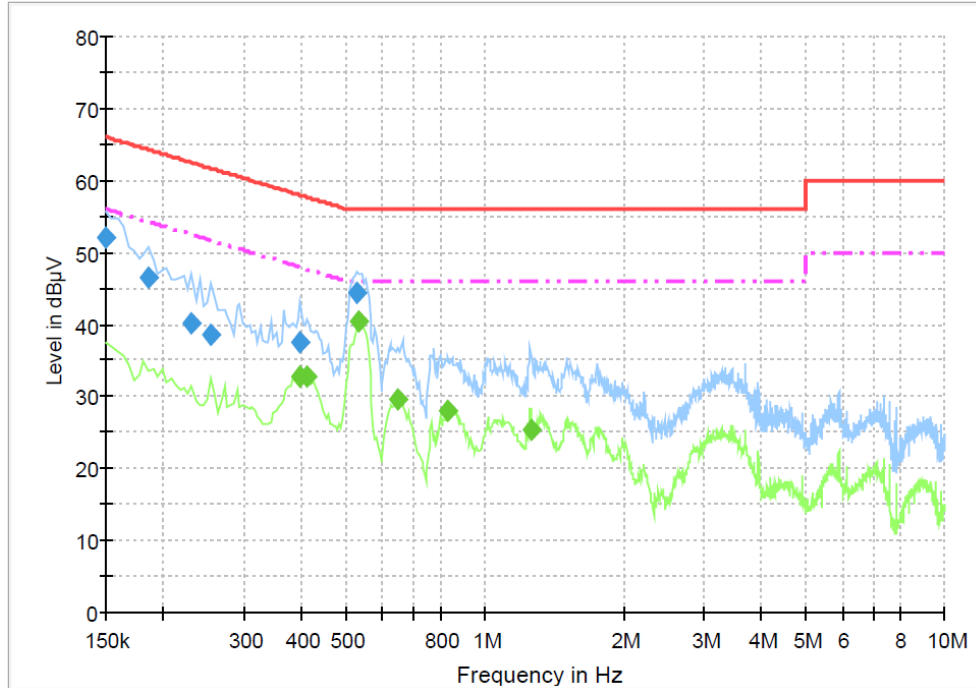
Test Results

The requirements are:

☒ Complies

Test Data

[LINE]
3CE_Class B_L1



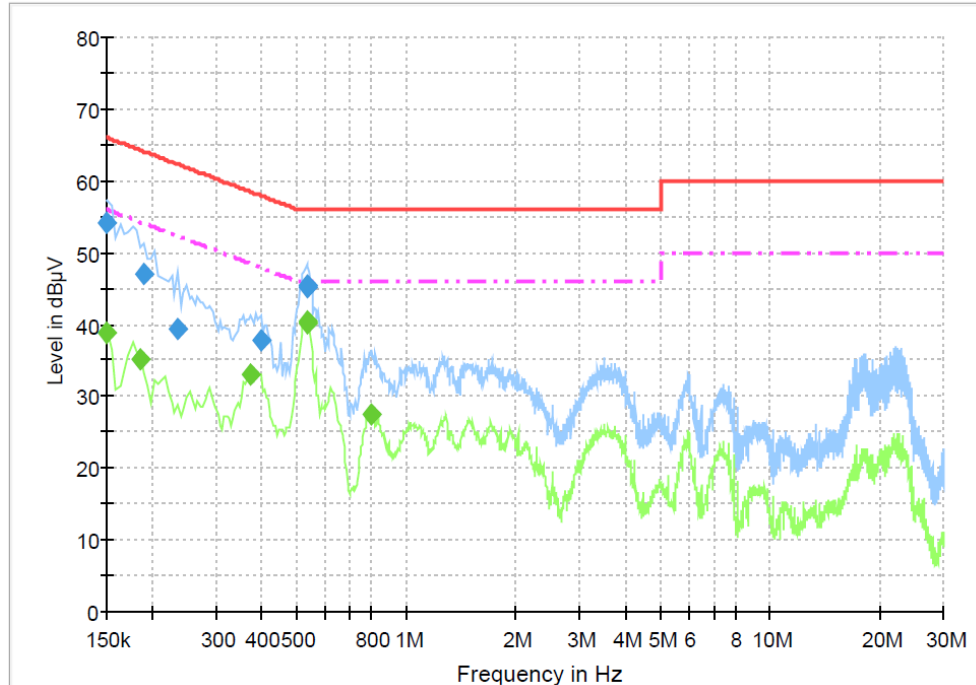
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	51.9	1000.0	9.000	On	L1	9.8	14.1	66.0
0.186000	46.4	1000.0	9.000	On	L1	10.0	17.8	64.2
0.231000	40.1	1000.0	9.000	On	L1	9.8	22.3	62.4
0.253500	38.6	1000.0	9.000	On	L1	9.7	23.1	61.6
0.397500	37.6	1000.0	9.000	On	L1	10.0	20.3	57.9
0.528000	44.3	1000.0	9.000	On	L1	10.0	11.7	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.397500	32.9	1000.0	9.000	On	L1	10.0	15.1	47.9
0.411000	32.8	1000.0	9.000	On	L1	10.0	14.9	47.6
0.532500	40.3	1000.0	9.000	On	L1	10.0	5.7	46.0
0.645000	29.5	1000.0	9.000	On	L1	10.0	16.5	46.0
0.829500	27.9	1000.0	9.000	On	L1	9.9	18.1	46.0
1.261500	25.4	1000.0	9.000	On	L1	9.9	20.6	46.0

[NEUTRAL]
3CE_Class B_N



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	54.2	1000.0	9.000	On	N	9.8	11.8	66.0
0.190500	47.1	1000.0	9.000	On	N	10.0	16.9	64.0
0.235500	39.3	1000.0	9.000	On	N	9.8	22.9	62.3
0.397500	37.8	1000.0	9.000	On	N	10.0	20.1	57.9
0.532500	45.3	1000.0	9.000	On	N	10.0	10.7	56.0
0.537000	45.2	1000.0	9.000	On	N	10.0	10.8	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	38.8	1000.0	9.000	On	N	9.8	17.2	56.0
0.186000	35.0	1000.0	9.000	On	N	10.0	19.2	54.2
0.375000	33.0	1000.0	9.000	On	N	10.0	15.4	48.4
0.532500	40.4	1000.0	9.000	On	N	10.0	5.6	46.0
0.537000	40.2	1000.0	9.000	On	N	10.0	5.8	46.0
0.798000	27.5	1000.0	9.000	On	N	9.9	18.5	46.0

APPENDIX A – Test Equipment Used For Tests

	Name of Equipment	Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date
1	Signal Analyzer	Agilent	N9020A	MY48011598	2019-10-16	2020-10-16
2	Signal Analyzer	Agilent	N9020A	MY50200512	2019-04-23	2020-04-23
3	Signal Generator	Rohde & Schwarz	SMB100A	175528	2019-10-16	2020-10-16
4	EMI Test Receiver	Rohde & Schwarz	ESCI7	100814	2019-10-22	2020-10-22
5	Bilog Antenna	Schaffner	CBL6111C	2551	2018-05-10	2020-05-10
6	Active Loop Antenna	SCHWARZBECK	FMZB 1513	1513-126	2018-05-27	2020-05-27
7	6dB Attenuator	R&S	DNF	272.4110.50-2	2019-10-25	2020-10-25
8	AMPLIFIER	SONOMA	310	291721	2019-01-28	2020-01-28
9	EMI Test Receiver	Rohde & Schwarz	ESU40	100336	2019-01-29	2020-01-29
10	Preamplifier	Agilent	8449B	3008A02011	2019-11-25	2020-11-25
11	Signal Conditioning Unit	Rohde & Schwarz	SCU-40	10023	2019-10-16	2020-10-16
12	Horn Antenna	ETS-Lindgren	3117	00154525	2019-09-25	2021-09-25
13	Horn Antenna	ETS-Lindgren	3116	00062916	2019-04-22	2021-04-22
14	Band Reject Filter	Micro Tronics	BRM50716	G264	2019-07-05	2020-07-05
15	LISN	Rohde & Schwarz	ENV216	101235	2019-01-29	2020-01-29
16	Temp&Humi Chamber	ESPEC CORP.	SH-242	93008423	2019-09-10	2020-09-10

	Cable	Manufacturer	Model No.	Serial No.	Check Date
1	RF Cable	Canare Corporation	L-5D2W	N/A	2018-12-19
2	RF Cable	Junkosha Inc.	MWX221	1510S087	2019-11-20
3	RF Cable	Junkosha Inc.	MWX221	1510S085	2019-11-20
4	RF Cable	HUBER+SUHNER	SUCOFLEX 102	MY073/2	2018-12-19
5	RF Cable	HUBER+SUHNER	SUCOFLEX 102	MY4728/2	2018-12-19
6	RF Cable	HUBER+SUHNER	SUCOFLEX 104	MY27558/4	2018-12-19
7	RF Cable	HUBER+SUHNER	SUCOFLEX 104	N/A	2019-08-10
8	RF Cable	HUBER+SUHNER	SUCOFLEX 104	MY27573/4	2019-08-10
9	RF Cable	HUBER+SUHNER	SUCOFLEX 106	N/A	2019-08-10