

**CTK Co., Ltd.**

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Report No.:
CTK-2025-02084
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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
ANSI C63.10-2013 - Section 12.7
RSS-247 - 6.2.1.2, 6.2.4.3
RSS-Gen - Section 7.3, 8.9, 8.10

- 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 1 m 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 3 m 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
c) Detector = Peak
d) Sweep time = auto
e) Trace mode = max hold

- 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)

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- 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
802.11a	2.40 dB
802.11n_HT20	2.52 dB
802.11n_HT40	4.11 dB
802.11ac_VHT20	2.54 dB
802.11ac_VHT40	4.12 dB
802.11ac_VHT80	6.18 dB

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Limit

1. UNII 1 : All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
2. UNII 3 : All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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

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

4. Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.

- 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.

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5. FCC Part 15 § 15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	MHz	MHz	GHz
0.09-0.11	8.37626-8.38675	73-74.6	399.9-410	2690-2900	10.6-12.7
¹ 0.495-0.505	8.41425-8.41475	74.8-75.2	608-614	3260-3267	13.25-13.4
2.1735-2.1905	12.29-12.293	108-121.94	960-1240	3332-3339	14.47-14.5
4.125-4.128	12.51975-12.52025	123-138	1300-1427	3345.8-3358	15.35-16.2
4.17725-4.17775	12.57675-12.57725	149.9-150.05	1435-1626.5	3600-4400	17.7-21.4
4.20725-4.20775	13.36-13.41	156.52475-156.52525	1645.5-1646.5	4500-5150	22.01-23.12
6.215-6.218	16.42-16.423	156.7-156.9	1660-1710	5350-5460	23.6-24
6.26775-6.26825	16.69475-16.69525	162.0125-167.17	1718.8-1722.2	7250-7750	31.2-31.8
6.31175-6.31225	16.80425-16.80475	167.72-173.2	2200-2300	8025-8500	36.43-36.5
8.291-8.294	25.5-25.67	240-285	2310-2390	9000-9200	² Above 38.6
8.362-8.366	37.5-38.25	322-335.4	2483.5-2500	9300-9500	

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

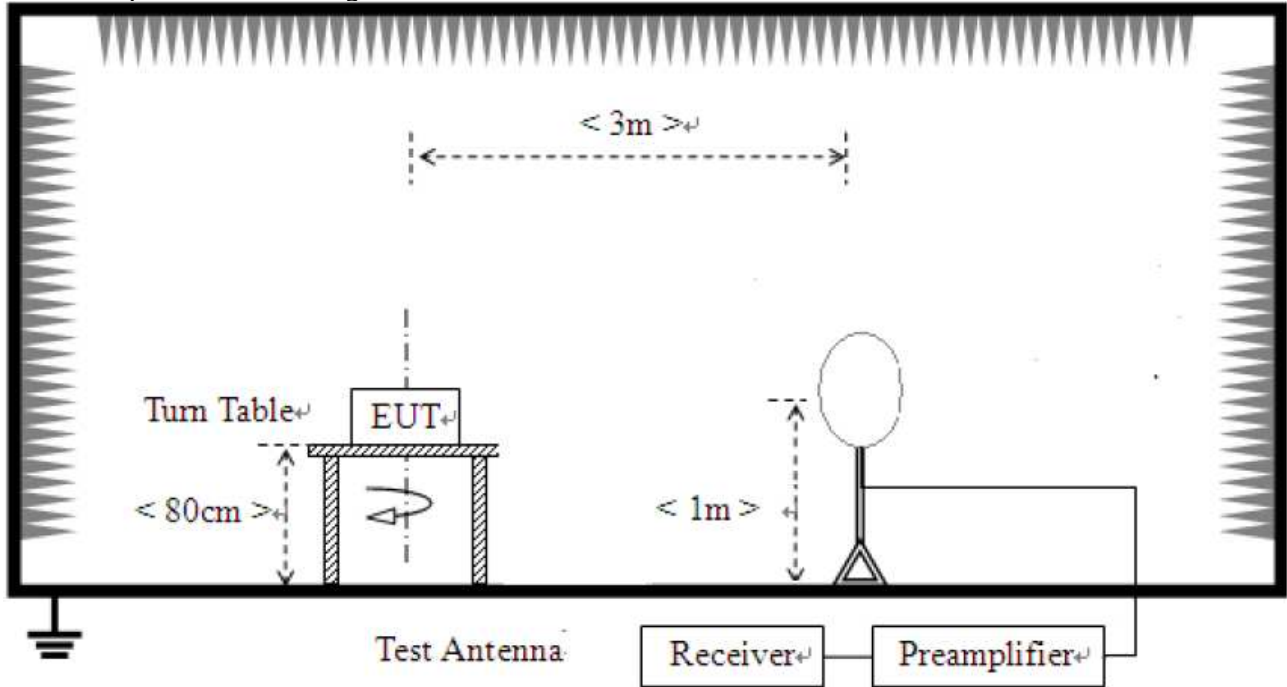
§ 15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

Note :

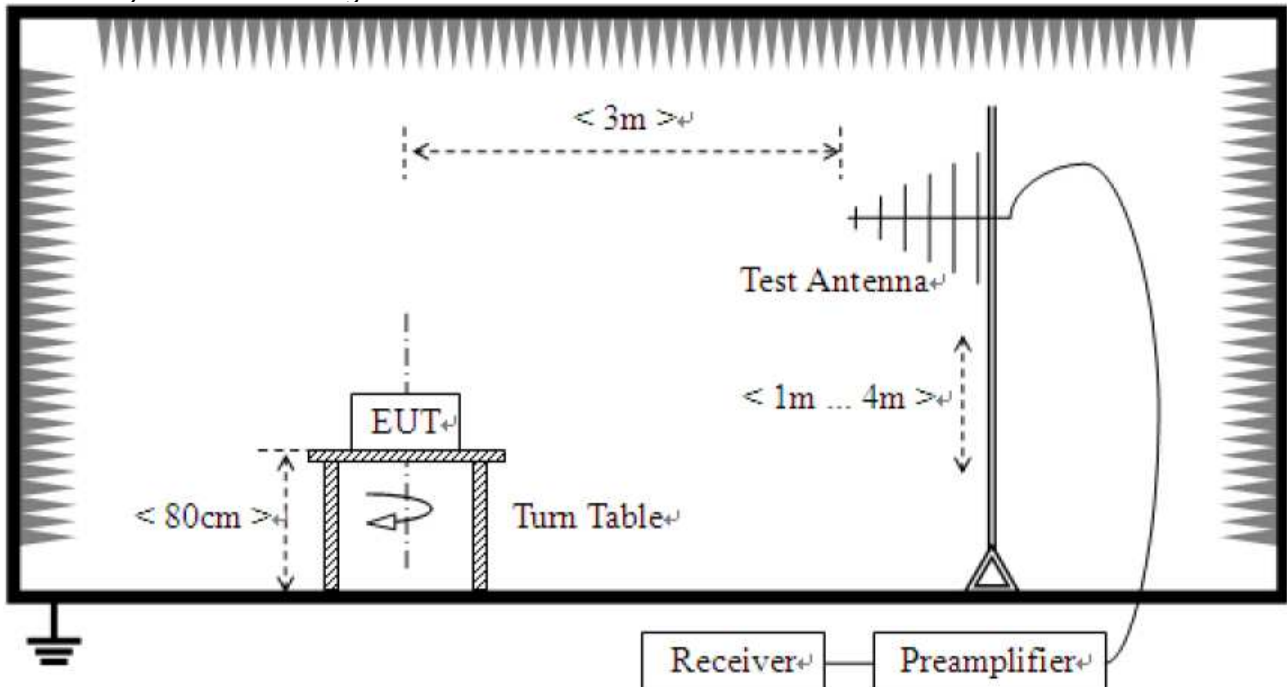
- 1) For above 1 GHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
- 2) For above 1 GHz, limit field strength of harmonics : 54 dBuV/m@3m (AV) and 74 dBuV/m@3m (PK)

Test Setup:

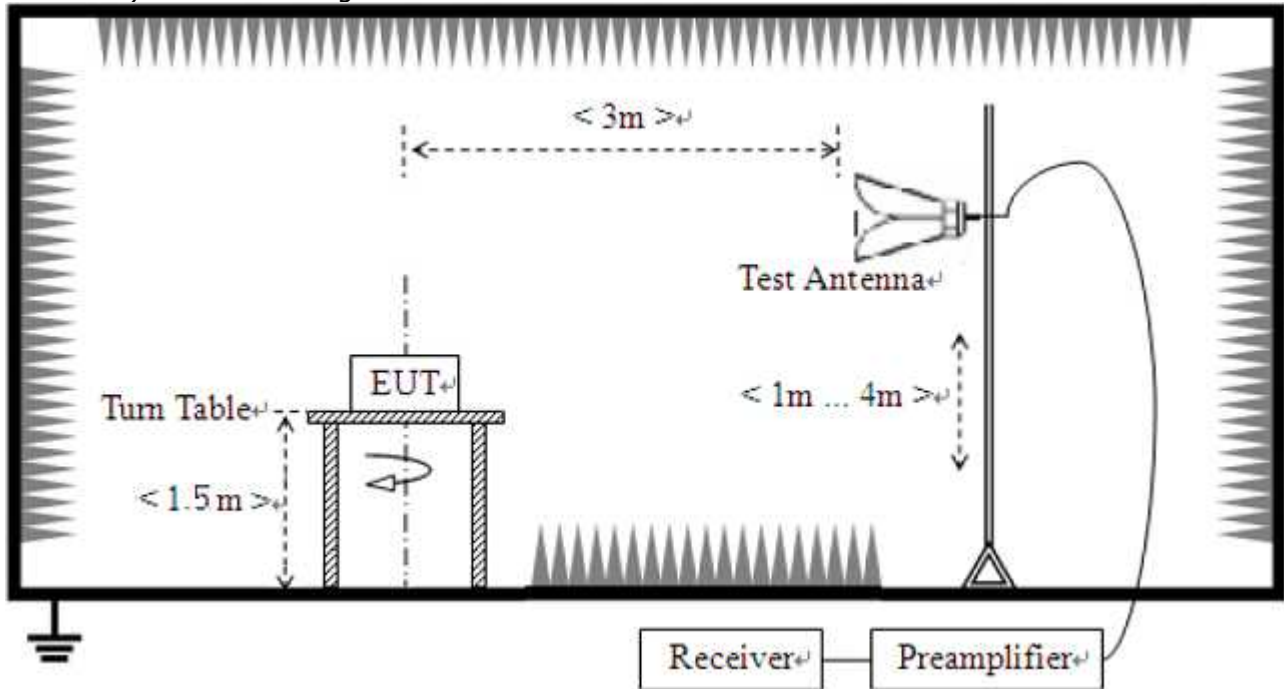
- 1) For field strength of emissions from 9 kHz to 30 MHz



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



3) For field strength of emissions above 1 GHz





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Test Results

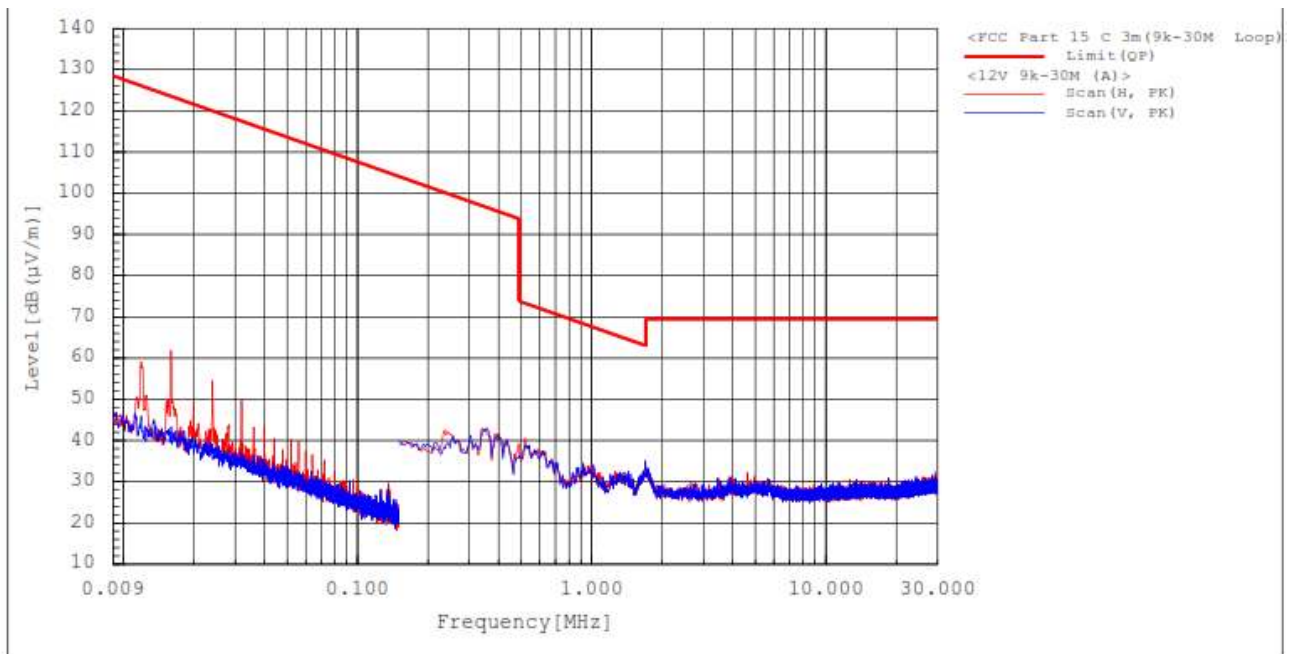
1) 9 kHz to 30 MHz

Test mode : Transmitter 802.11 a_ UNII 1_Lowest Channel (Worst Case)

The requirements are:

☒ Complies

Test Data



Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Level [dB(uV/m)]	Limit [dB(uV/m)]	Margin [dB]
-----------------	-----	----------------	---------------	------------------	------------------	-------------

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 lie-down 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
4. This data is the Peak(PK) value.



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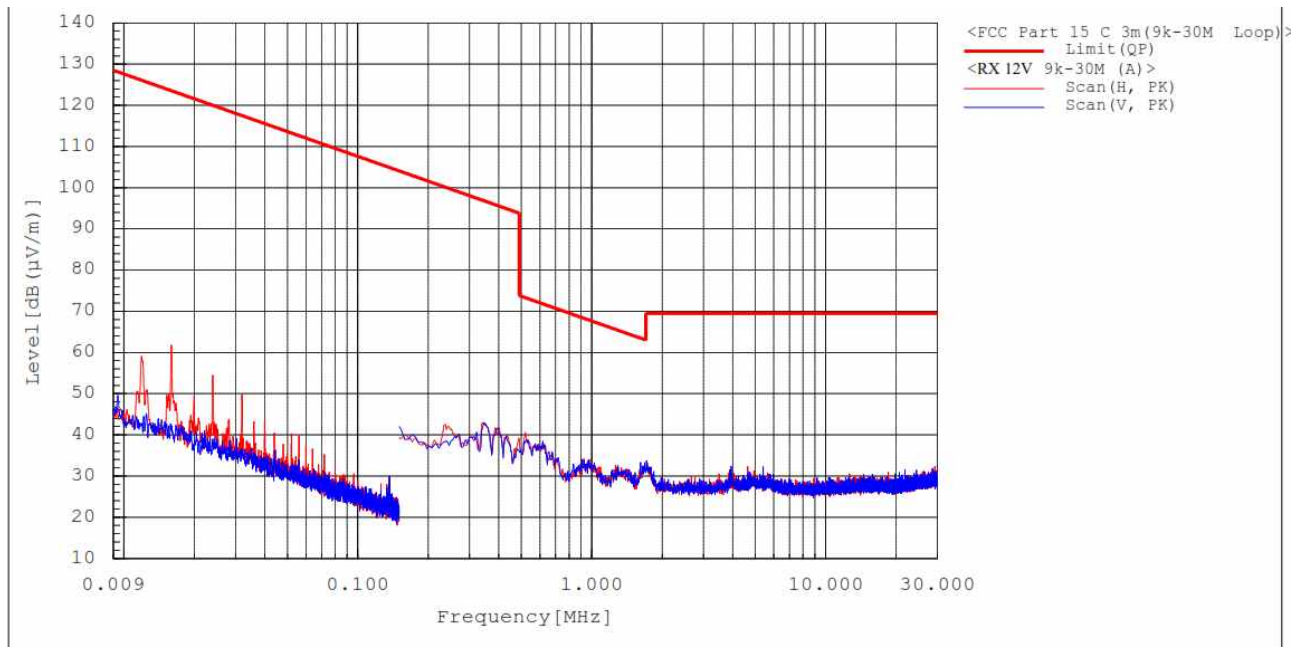
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Test mode : Receiver 802.11 a_ UNII 1_Lowest Channel (Worst Case)

The requirements are:

☒ Complies

Test Data



Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Level [dB(uV/m)]	Limit [dB(uV/m)]	Margin [dB]
-----------------	-----	----------------	---------------	------------------	------------------	-------------

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 lie-down 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
4. This data is the Peak(PK) value.



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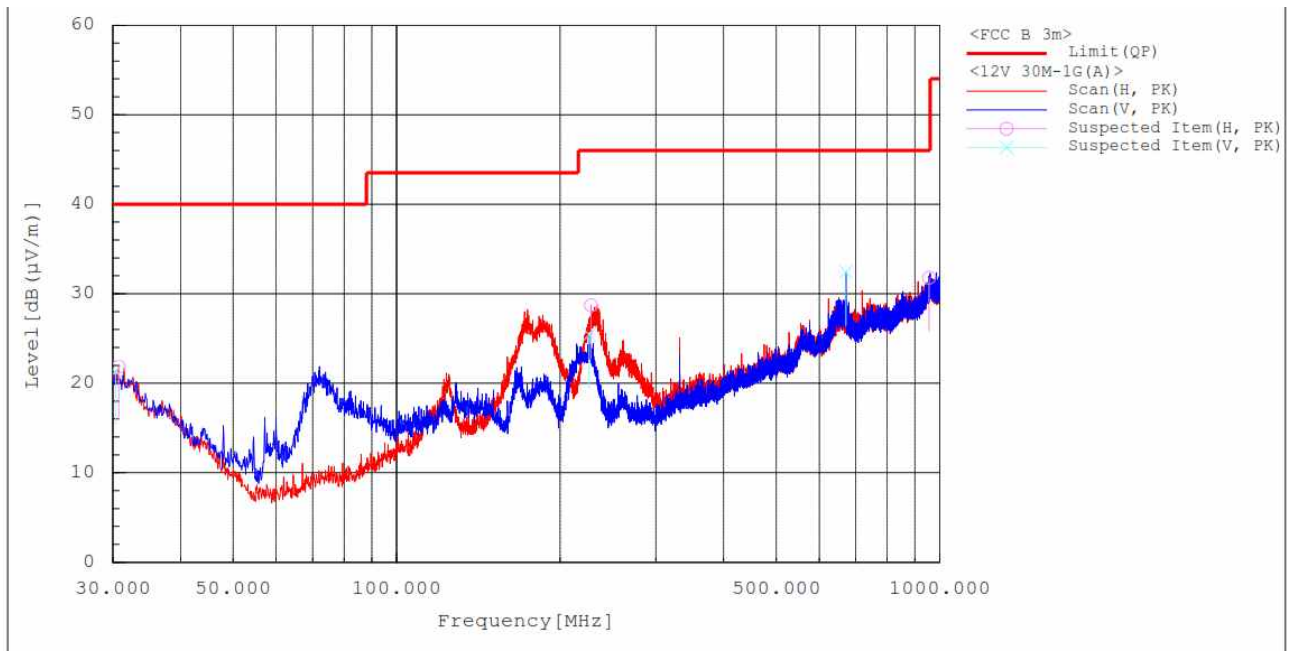
2) 30 MHz to 1 GHz

Test mode : Transmitter 802.11 a_ UNII 1_Lowest Channel (Worst Case)

The requirements are:

☒ Complies

Test Data



Spectrum Selection

No.	Frequency	Pol	Reading	c.f	Result	Limit	Margin	Height	Angle
	[MHz]		PK		PK	QP	QP-PK		
			[dB (μV)]	[dB (1/m)]	[dB (μV/m)]	[dB (μV/m)]	[dB]	[cm]	[deg]
1	30.388	V	27.8	-6.4	21.4	40.0	18.6	300.0	289.2
2	30.776	H	28.5	-6.6	21.9	40.0	18.1	99.9	0.0
3	226.231	V	39.2	-13.8	25.4	46.0	20.6	99.9	77.9
4	227.977	H	42.5	-13.8	28.7	46.0	17.3	99.9	356.1
5	672.043	V	33.1	-0.7	32.4	46.0	13.6	99.9	236.2
6	956.253	H	25.9	5.9	31.8	46.0	14.2	300.1	6.0

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 lie-down positon(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.



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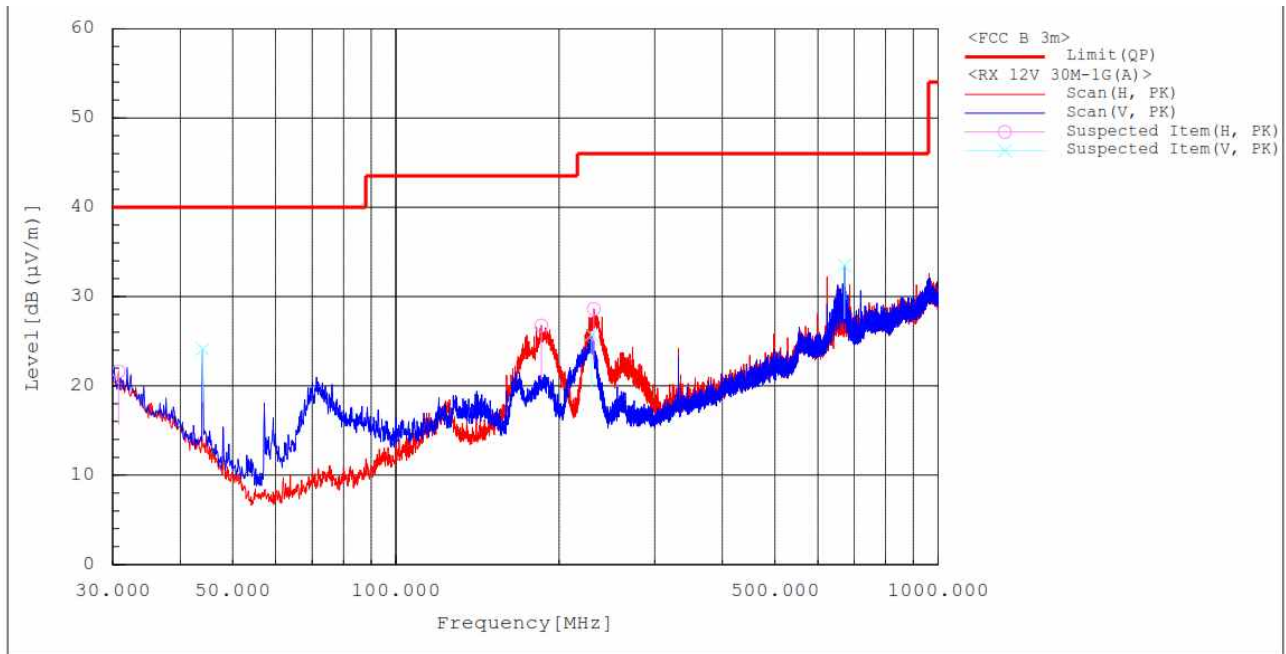
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Test mode : Receiver 802.11 a_ UNII 1_Lowest Channel (Worst Case)

The requirements are:

☒ Complies

Test Data



Spectrum Selection

No.	Frequency	Pol	Reading	c.f	Result	Limit	Margin	Height	Angle
	[MHz]		PK		PK	QP	QP-PK		
			[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[cm]	[deg]
1	30.776	H	28.2	-6.6	21.6	40.0	18.4	199.9	0.0
2	43.968	V	37.8	-13.7	24.1	40.0	15.9	200.1	0.1
3	185.491	H	41.8	-15.0	26.8	43.5	16.7	199.9	0.0
4	229.432	V	39.4	-13.7	25.7	46.0	20.3	100.0	17.8
5	231.760	H	41.9	-13.3	28.6	46.0	17.4	100.0	3.6
6	672.043	V	34.2	-0.7	33.5	46.0	12.5	100.0	1.0

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 lie-down positon(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.



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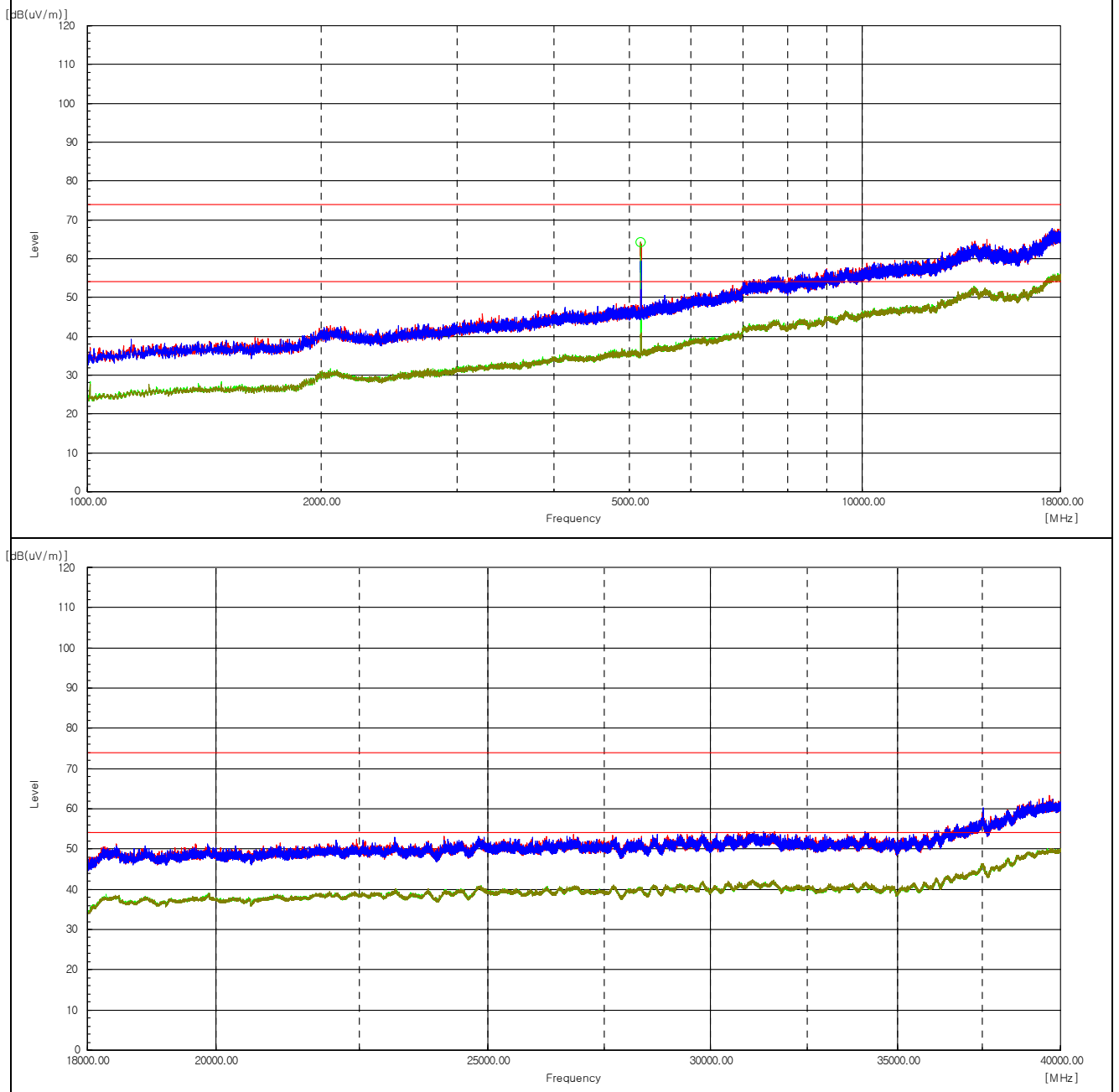
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3) above 1 GHz

The requirements are:

☒ Complies

Test Data



Remark : The mark on the graph is the fundamental frequency.



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Test mode : Transmitter, 802.11a

The requirements are:

☒ Complies

Test Data

Ch.36(5 180 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No peak Found

Ch.44(5 220 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No peak Found

Ch.48(5 240 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
--------------------	-----	-------------------	------------------	------------------------------	------------------------	------------------------	------------------------	------------------------	----------------------	----------------------	------

No peak Found

Ch.149(5 745 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
--------------------	-----	-------------------	------------------	------------------------------	------------------------	------------------------	------------------------	------------------------	----------------------	----------------------	------

No peak Found

Ch.157(5 785 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
--------------------	-----	-------------------	------------------	------------------------------	------------------------	------------------------	------------------------	------------------------	----------------------	----------------------	------

No peak Found

Ch.165(5 825 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No peak Found



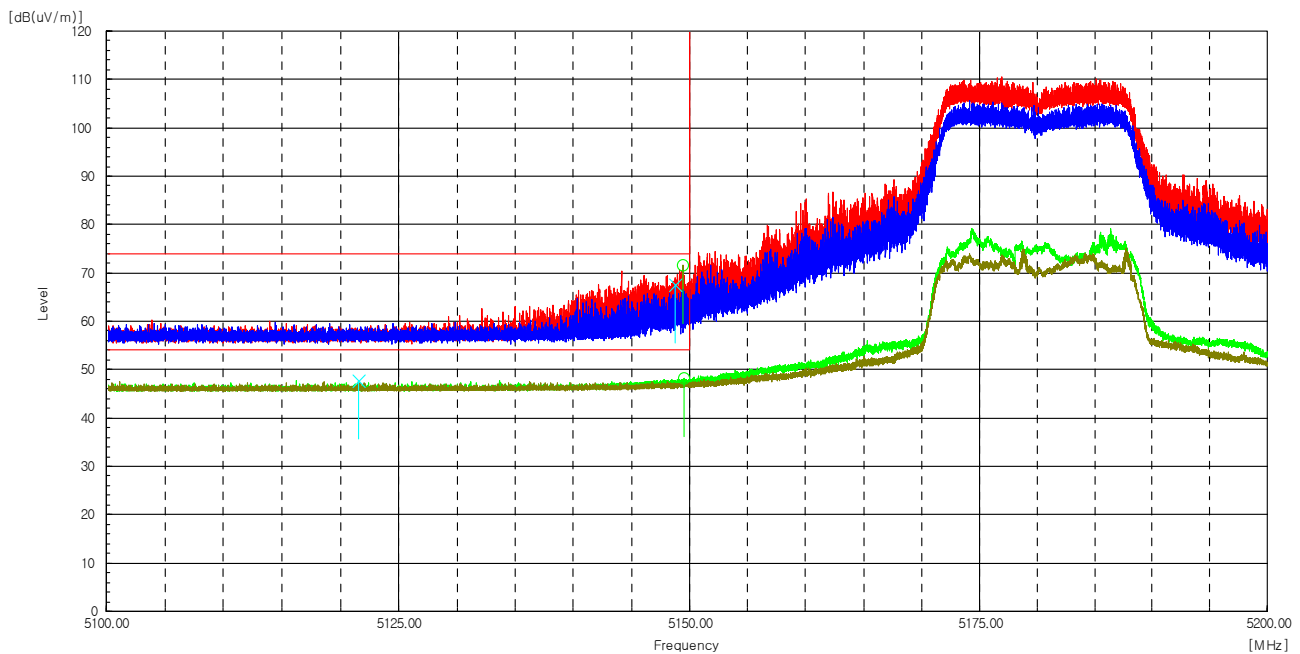
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Worst Case Mode :	802.11a
Worst Case Transfer Rate :	6 Mbps
Distance of Measurements :	3 Meters
Operating Frequency :	5 180 MHz
Channel :	36

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 121.51	V	43.8	3.8	2.40	-----	50.0	-----	54.0	-----	4.0	Average
5 148.79	V	63.7	3.8	-----	67.5	-----	74.0	-----	6.5	-----	Peak
5 149.41	H	67.7	3.8	-----	71.5	-----	74.0	-----	2.5	-----	Peak
5 149.54	H	44.4	3.8	2.40	-----	50.6	-----	54.0	-----	3.4	Average



Radiated Restricted Band Edge Plot



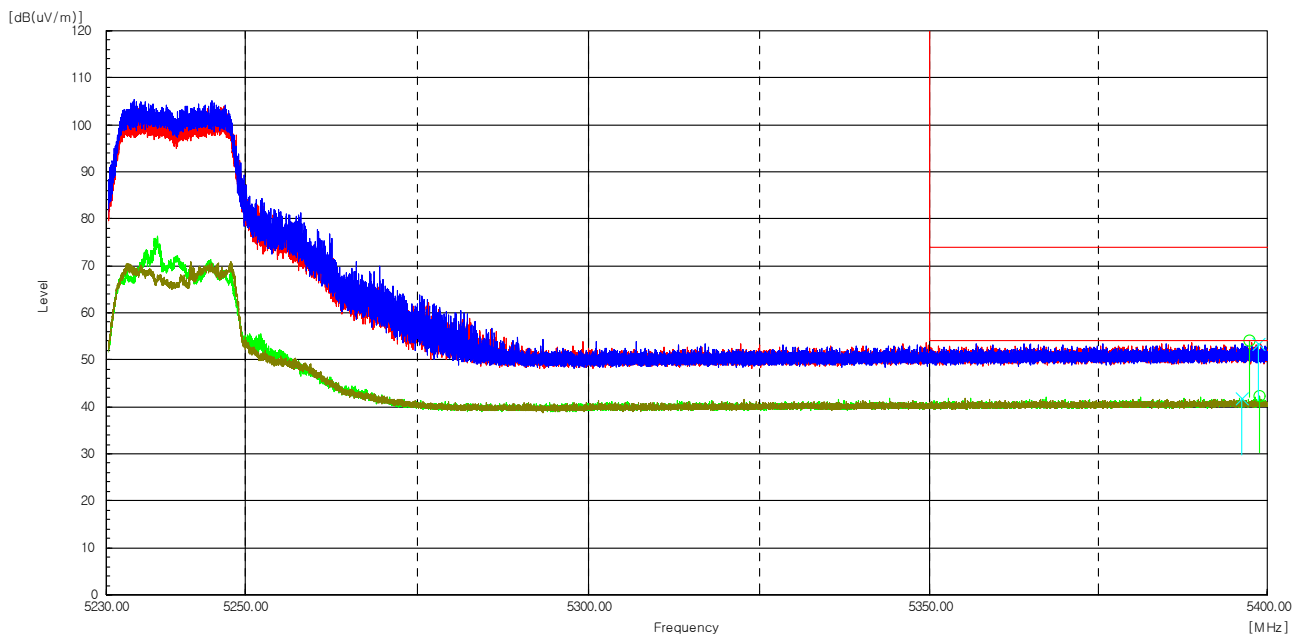
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Worst Case Mode :	802.11a
Worst Case Transfer Rate :	6 Mbps
Distance of Measurements :	3 Meters
Operating Frequency :	5 240 MHz
Channel :	48

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 396.14	V	37.3	4.6	2.40	-----	44.3	-----	54.0	-----	9.7	Average
5 397.37	H	49.4	4.6	-----	54.0	-----	74.0	-----	20.0	-----	Peak
5 398.65	V	48.8	4.6	-----	53.4	-----	74.0	-----	20.6	-----	Peak
5 398.93	H	37.7	4.6	2.40	-----	44.7	-----	54.0	-----	9.3	Average



Radiated Restricted Band Edge Plot



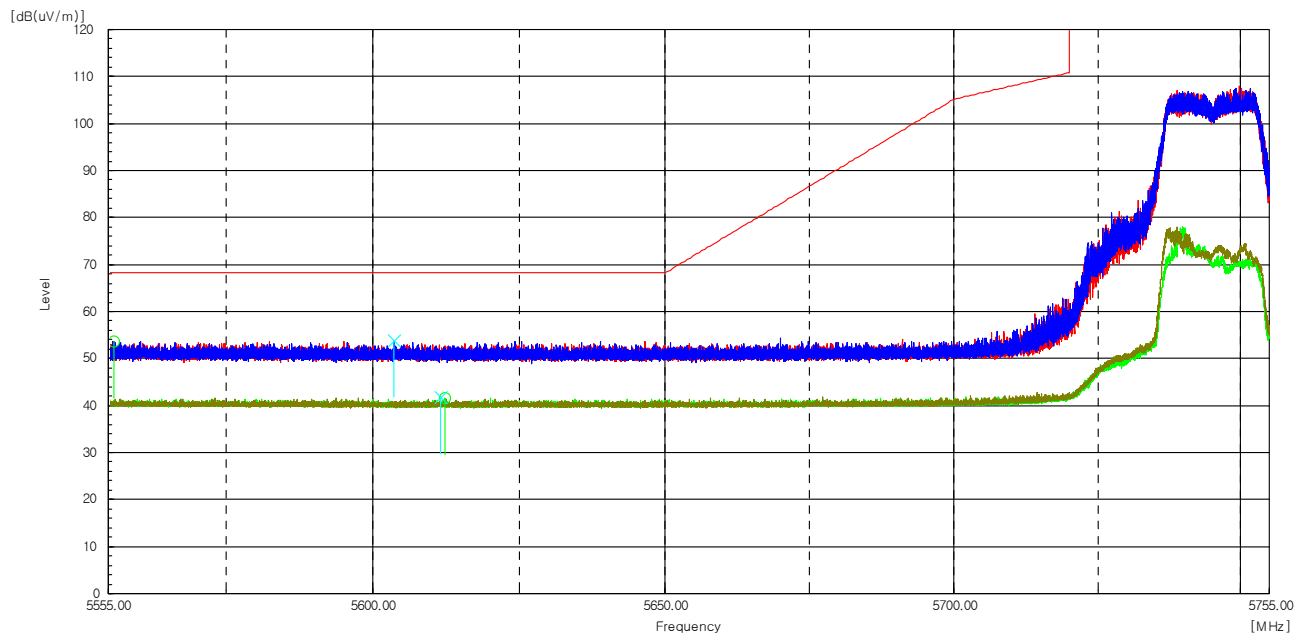
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Worst Case Mode :	802.11a
Worst Case Transfer Rate :	6 Mbps
Distance of Measurements :	3 Meters
Operating Frequency :	5 745 MHz
Channel :	149

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 555.90	H	48.5	5.2	-----	53.7	-----	68.2	-----	14.5	-----	Peak
5 603.57	V	48.6	5.2	-----	53.8	-----	68.2	-----	14.4	-----	Peak



Radiated Restricted Band Edge Plot



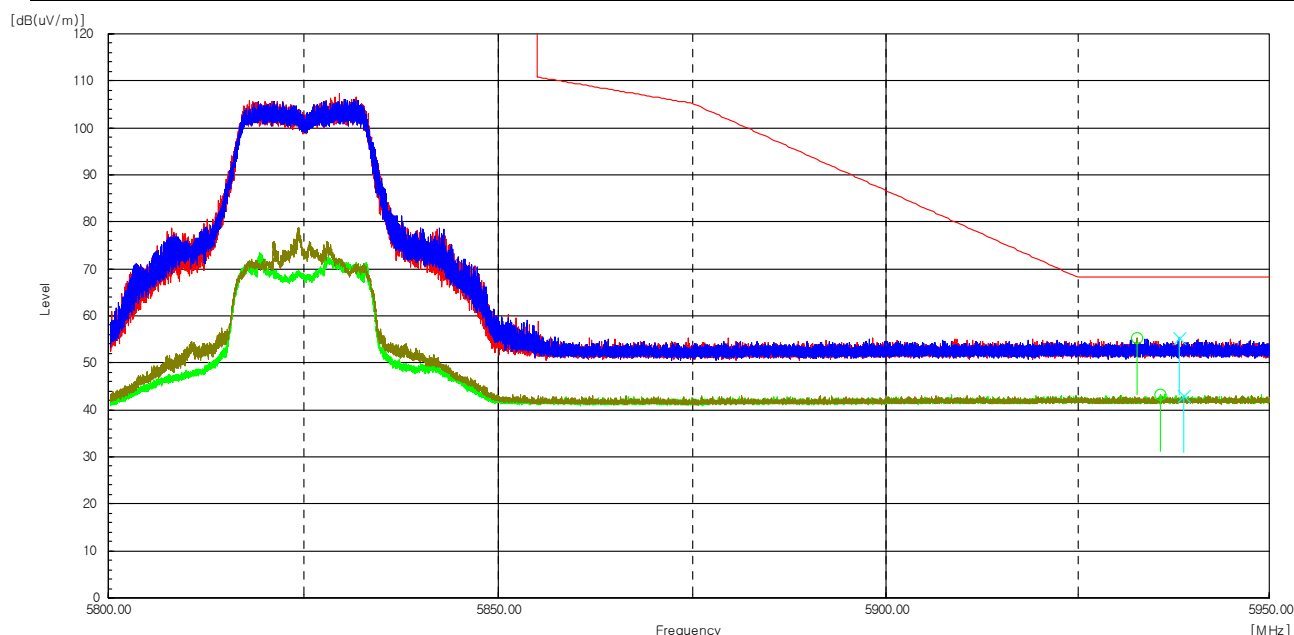
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Worst Case Mode :	802.11a
Worst Case Transfer Rate :	6 Mbps
Distance of Measurements :	3 Meters
Operating Frequency :	5 825 MHz
Channel :	165

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 932.71	H	49.0	6.3	-----	55.3	-----	68.2	-----	12.9	-----	Peak
5 938.22	V	48.9	6.3	-----	55.2	-----	68.2	-----	13.0	-----	Peak



Radiated Restricted Band Edge Plot

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 lie-down position(Y axis) and the worst case was recorded.
2. Peak Result = Reading + c.f(Correction factor)
Average Result = Reading + c.f(Correction factor) + Duty Cycle Factor
3. Correction factor = Antenna factor + Cable loss - Amp Gain
4. The 18 GHz end had no signal detected. As can be seen from the conducted spurious emission test, no signal was detected in the section.



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Test mode : Transmitter, 802.11n_HT20

The requirements are:

☒ Complies

Test Data

Ch.36(5 180 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No peak Found

Ch.44(5 220 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No peak Found

Ch.48(5 240 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No peak Found

Ch.149(5 745 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No peak Found

Ch.157(5 785 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No peak Found

Ch.165(5 825 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No peak Found



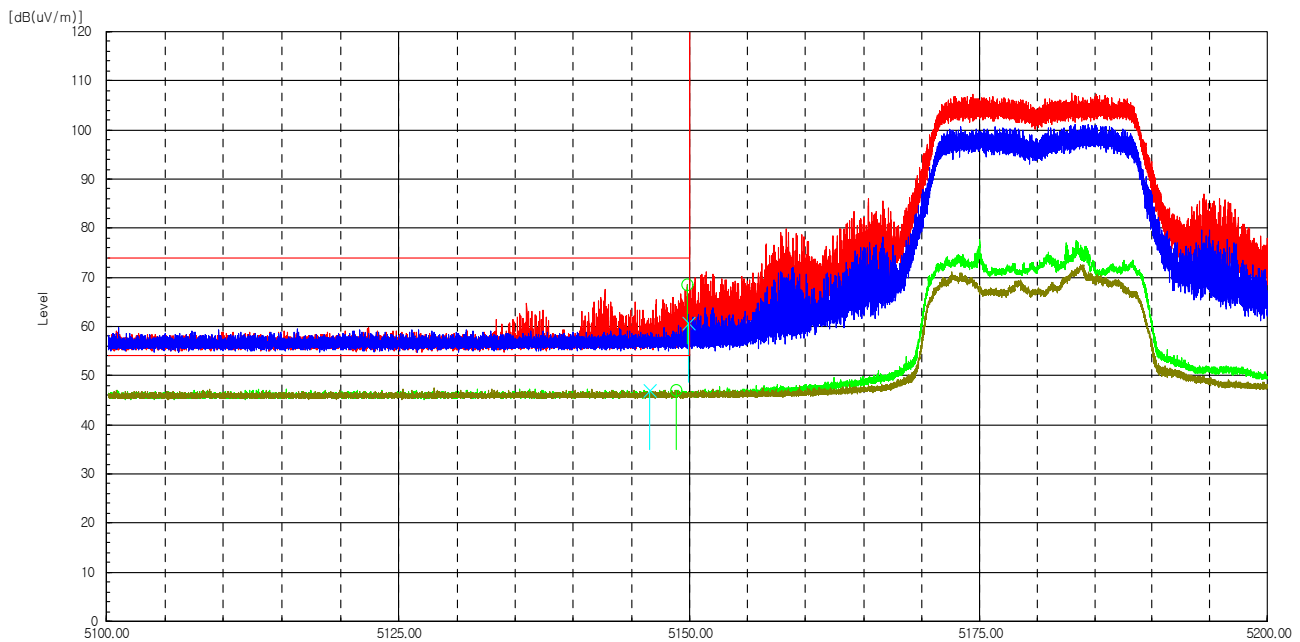
CTK Co., Ltd.

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Report No.:
CTK-2025-02084
Page (59) / (87) Pages

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)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 146.55	V	43.3	3.8	2.52	-----	49.6	-----	54.0	-----	4.4	Average
5 148.84	H	43.3	3.8	2.52	-----	49.6	-----	54.0	-----	4.4	Average
5 149.80	H	64.7	3.8	-----	68.5	-----	74.0	-----	5.5	-----	Peak
5 149.86	V	56.9	3.8	-----	60.7	-----	74.0	-----	13.3	-----	Peak



Radiated Restricted Band Edge Plot



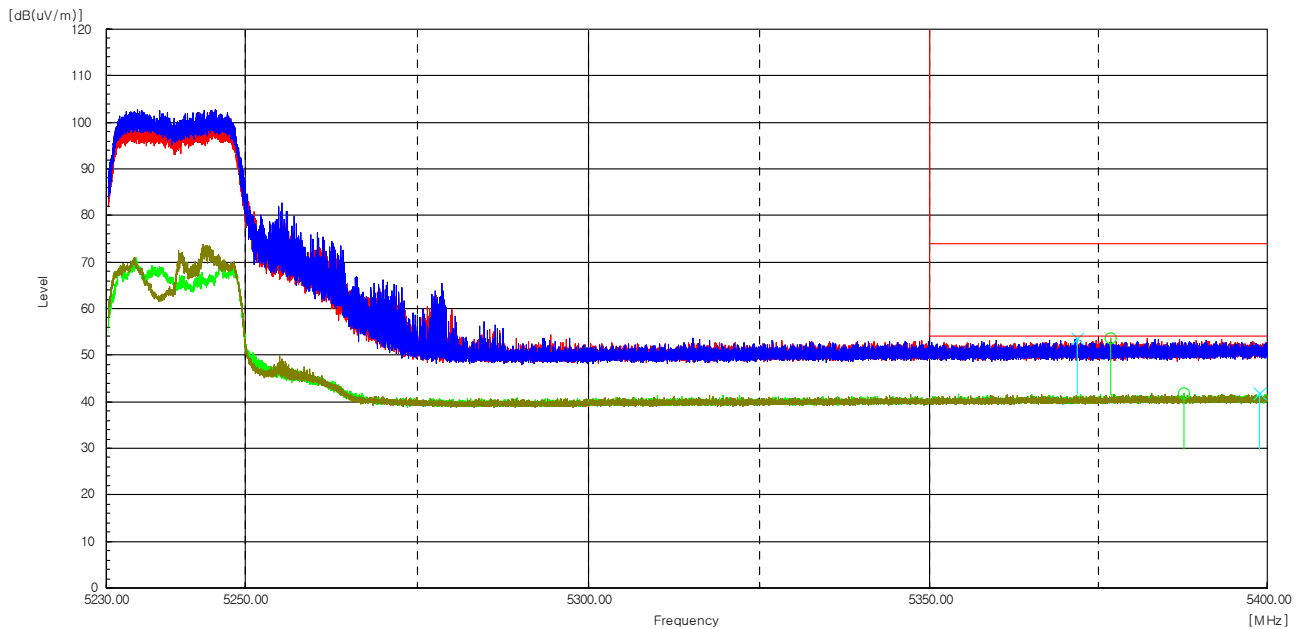
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Report No.:
CTK-2025-02084
Page (60) / (87) Pages

Worst Case Mode :	802.11n_HT20
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 240 MHz
Channel :	48

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 371.77	V	49.1	4.4	-----	53.5	-----	74.0	-----	20.5	-----	Peak
5 376.79	H	49.3	4.4	-----	53.7	-----	74.0	-----	20.3	-----	Peak
5 387.69	H	37.2	4.5	2.52	-----	44.2	-----	54.0	-----	9.8	Average
5 398.89	V	37.1	4.6	2.52	-----	44.2	-----	54.0	-----	9.8	Average



Radiated Restricted Band Edge Plot



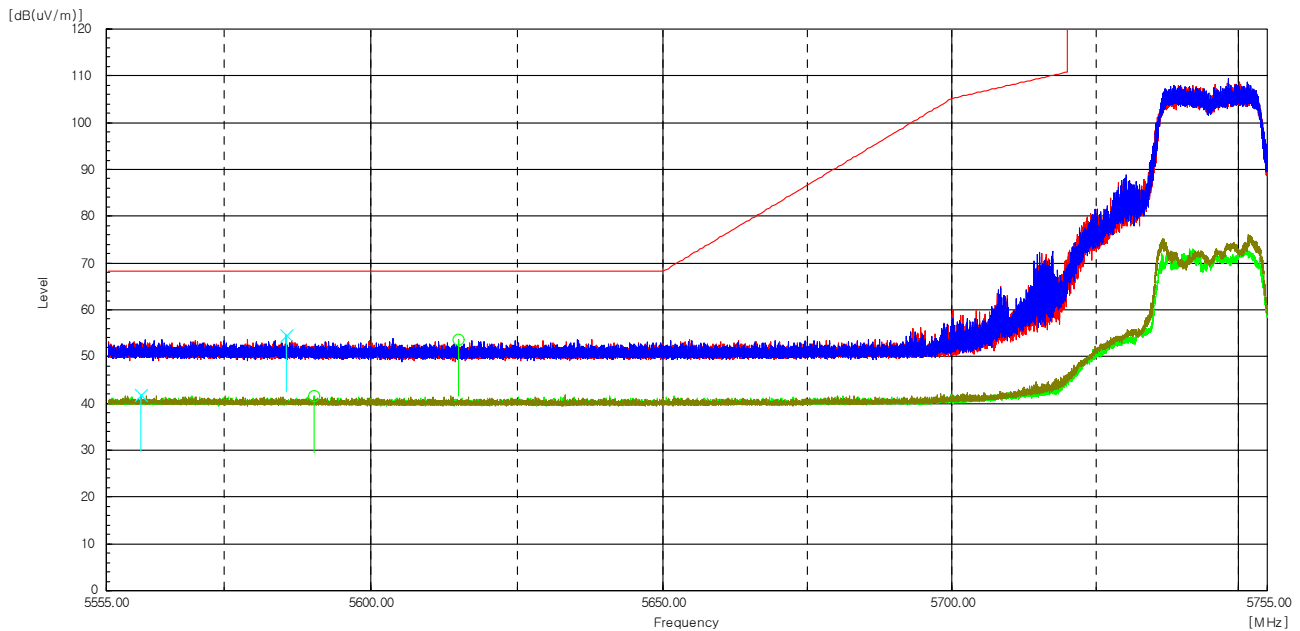
CTK Co., Ltd.

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Report No.:
CTK-2025-02084
Page (61) / (87) Pages

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)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 585.46	V	49.3	5.2	-----	54.5	-----	68.2	-----	13.7	-----	Peak
5 614.99	H	48.5	5.2	-----	53.7	-----	68.2	-----	14.5	-----	Peak



Radiated Restricted Band Edge Plot



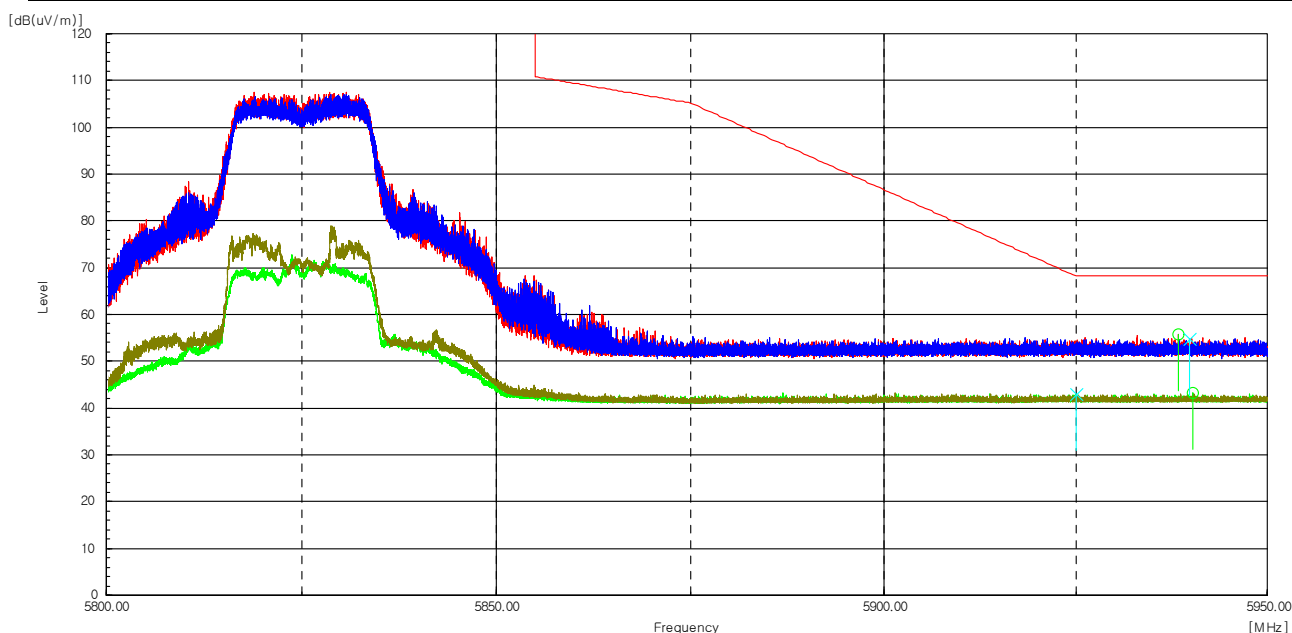
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Report No.:
CTK-2025-02084
Page (62) / (87) Pages

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)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 938.37	H	49.3	6.3	-----	55.6	-----	68.2	-----	12.6	-----	Peak
5 939.78	V	48.3	6.4	-----	54.7	-----	68.2	-----	13.5	-----	Peak



Radiated Restricted Band Edge Plot

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 lie-down position(Y axis) and the worst case was recorded.
2. Peak Result = Reading + c.f(Correction factor)
Average Result = Reading + c.f(Correction factor) + Duty Cycle Factor
3. Correction factor = Antenna factor + Cable loss - Amp Gain
4. The 18 GHz end had no signal detected. As can be seen from the conducted spurious emission test, no signal was detected in the section.



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Report No.:
CTK-2025-02084
Page (63) / (87) Pages

Test mode : Transmitter, 802.11ac_VHT20

The requirements are:

☒ Complies

Test Data

Ch.36(5 180 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No Peak Found

Ch.44(5 220 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No Peak Found

Ch.48(5 240 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
--------------------	-----	-------------------	------------------	------------------------------	------------------------	------------------------	------------------------	------------------------	----------------------	----------------------	------

No Peak Found

Ch.149(5 745 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No Peak Found

Ch.157(5 785 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No Peak Found

Ch.165(5 825 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No Peak Found



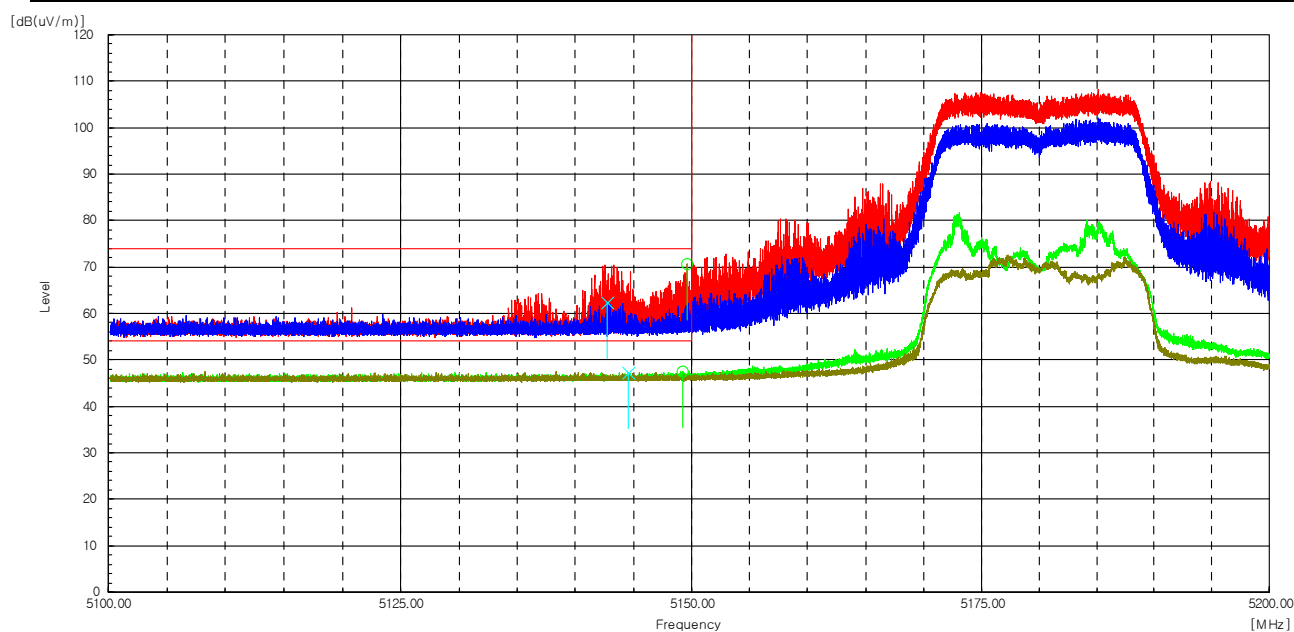
CTK Co., Ltd.

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Report No.:
CTK-2025-02084
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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)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 142.75	V	58.6	3.8	-----	62.4	-----	74.0	-----	11.6	-----	Peak
5 144.51	V	43.4	3.8	2.54	-----	49.7	-----	54.0	-----	4.3	Average
5 149.23	H	43.7	3.8	2.54	-----	50.0	-----	54.0	-----	4.0	Average
5 149.60	H	66.7	3.8	-----	70.5	-----	74.0	-----	3.5	-----	Peak



Radiated Restricted Band Edge Plot



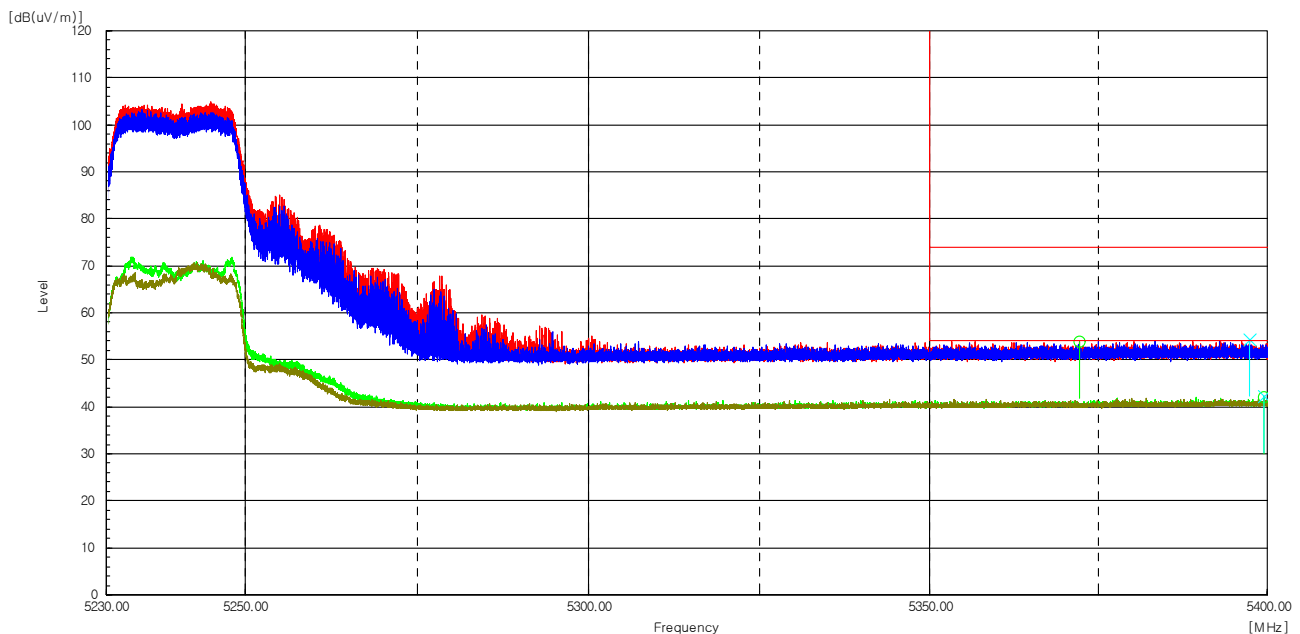
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Report No.:
CTK-2025-02084
Page (65) / (87) Pages

Worst Case Mode :	802.11ac_VHT20
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 240 MHz
Channel :	48

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 372.06	H	49.6	4.4	-----	54.0	-----	74.0	-----	20.0	-----	Peak
5 397.35	V	49.8	4.6	-----	54.4	-----	74.0	-----	19.6	-----	Peak
5 399.48	H	37.4	4.6	2.54	-----	44.5	-----	54.0	-----	9.5	Average
5 399.57	V	37.6	4.6	2.54	-----	44.7	-----	54.0	-----	9.3	Average



Radiated Restricted Band Edge Plot



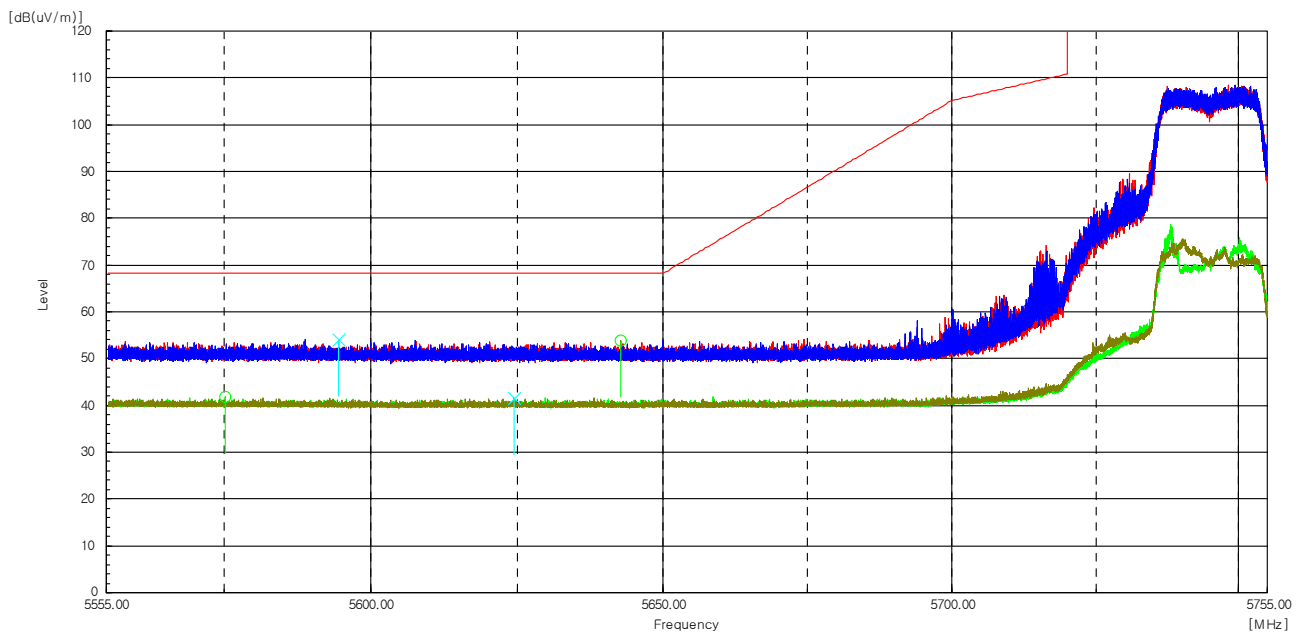
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Report No.:
CTK-2025-02084
Page (66) / (87) Pages

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)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 594.41	V	48.8	5.2	-----	54.0	-----	68.2	-----	14.2	-----	Peak
5 642.72	H	48.7	5.2	-----	53.9	-----	68.2	-----	14.3	-----	Peak



Radiated Restricted Band Edge Plot



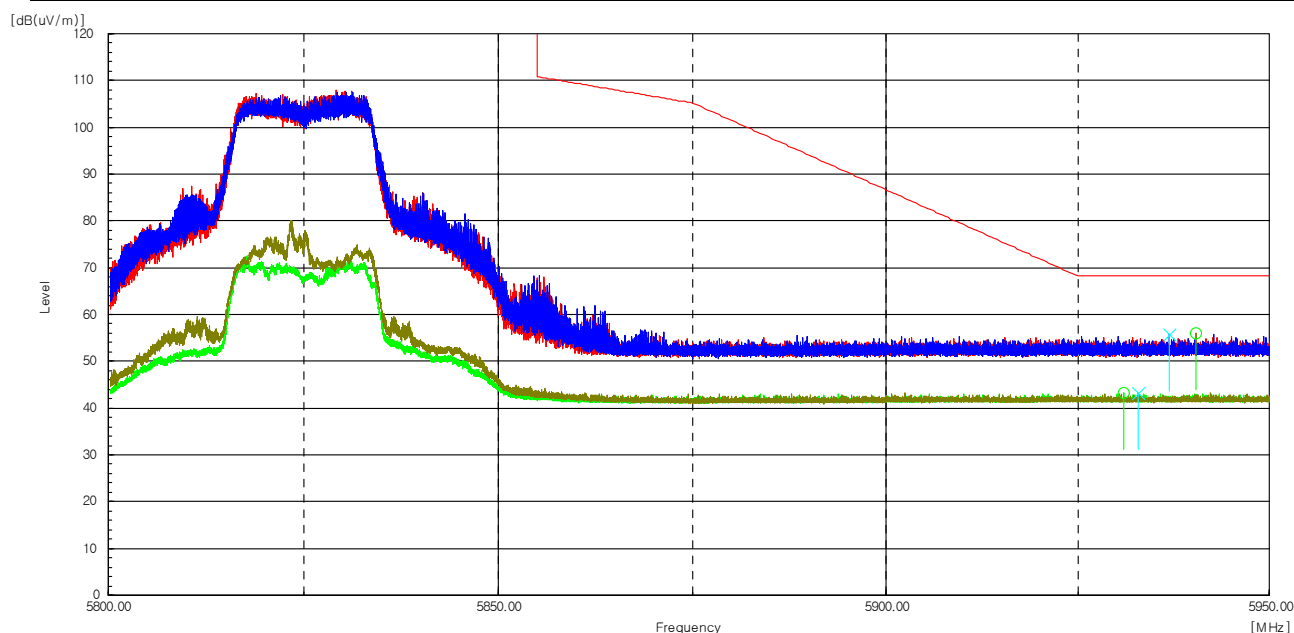
CTK Co., Ltd.

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Report No.:
CTK-2025-02084
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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)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 936.94	V	49.4	6.3	-----	55.7	-----	68.2	-----	12.5	-----	Peak
5 940.43	H	49.6	6.4	-----	56.0	-----	68.2	-----	12.2	-----	Peak



Radiated Restricted Band Edge Plot

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 lie-down position(Y axis) and the worst case was recorded.
2. Peak Result = Reading + c.f(Correction factor)
Average Result = Reading + c.f(Correction factor) + Duty Cycle Factor
3. Correction factor = Antenna factor + Cable loss - Amp Gain
4. The 18 GHz end had no signal detected. As can be seen from the conducted spurious emission test, no signal was detected in the section.



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Report No.:
CTK-2025-02084
Page (68) / (87) Pages

Test mode : Transmitter, 802.11n_HT40

The requirements are:

☒ Complies

Test Data

Ch.38(5 190 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No Peak Found

Ch.46(5 230 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No Peak Found

Ch.151(5 755 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No Peak Found

Ch.159(5 795 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
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No Peak Found



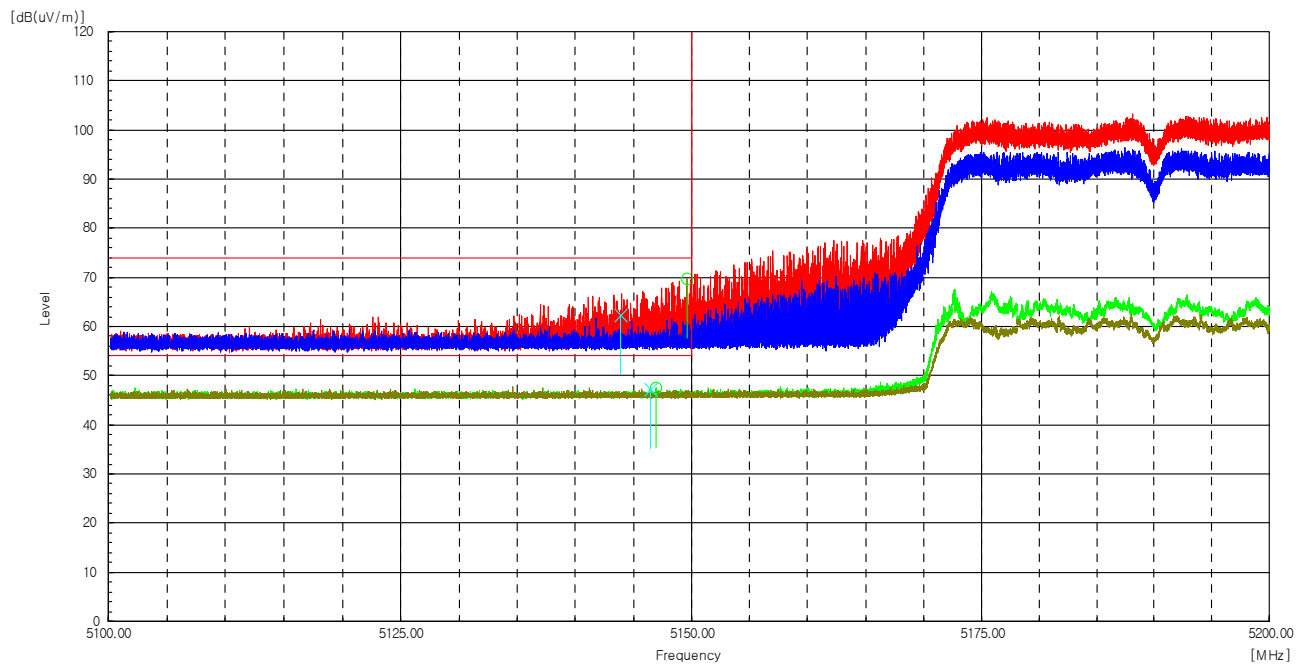
CTK Co., Ltd.

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Fax: +82-31-624-9501

Report No.:
CTK-2025-02084
Page (69) / (87) Pages

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)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 143.92	V	58.5	3.8	-----	62.3	-----	74.0	-----	11.7	-----	Peak
5 146.48	V	43.5	3.8	4.11	-----	51.4	-----	54.0	-----	2.6	Average
5 146.91	H	43.6	3.8	4.11	-----	51.5	-----	54.0	-----	2.5	Average
5 149.65	H	65.8	3.8	-----	69.6	-----	74.0	-----	4.4	-----	Peak



Radiated Restricted Band Edge Plot

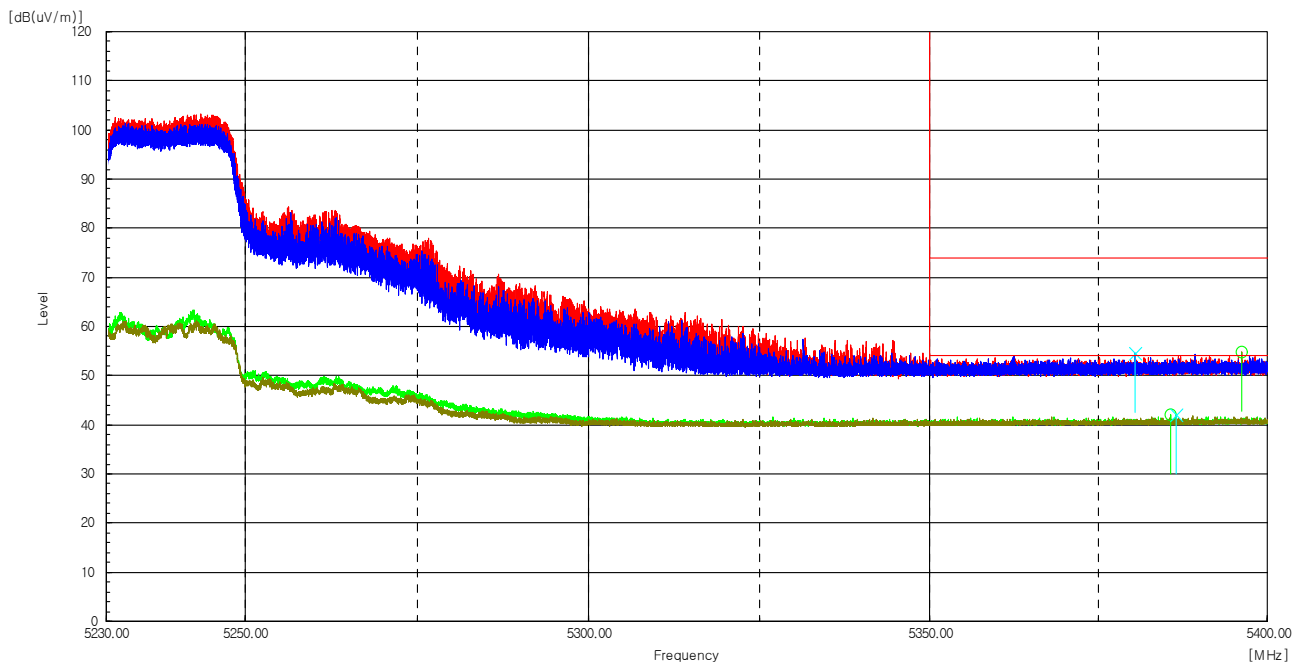
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Report No.:
CTK-2025-02084
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Worst Case Mode :	802.11n_HT40
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 230 MHz
Channel :	46

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 380.35	V	50.1	4.5	-----	54.6	-----	74.0	-----	19.4	-----	Peak
5 385.62	H	37.4	4.5	4.11	-----	46.0	-----	54.0	-----	8.0	Average
5 386.52	V	37.7	4.5	4.11	-----	46.3	-----	54.0	-----	7.7	Average
5 396.12	H	50.1	4.6	-----	54.7	-----	74.0	-----	19.3	-----	Peak



Radiated Restricted Band Edge Plot



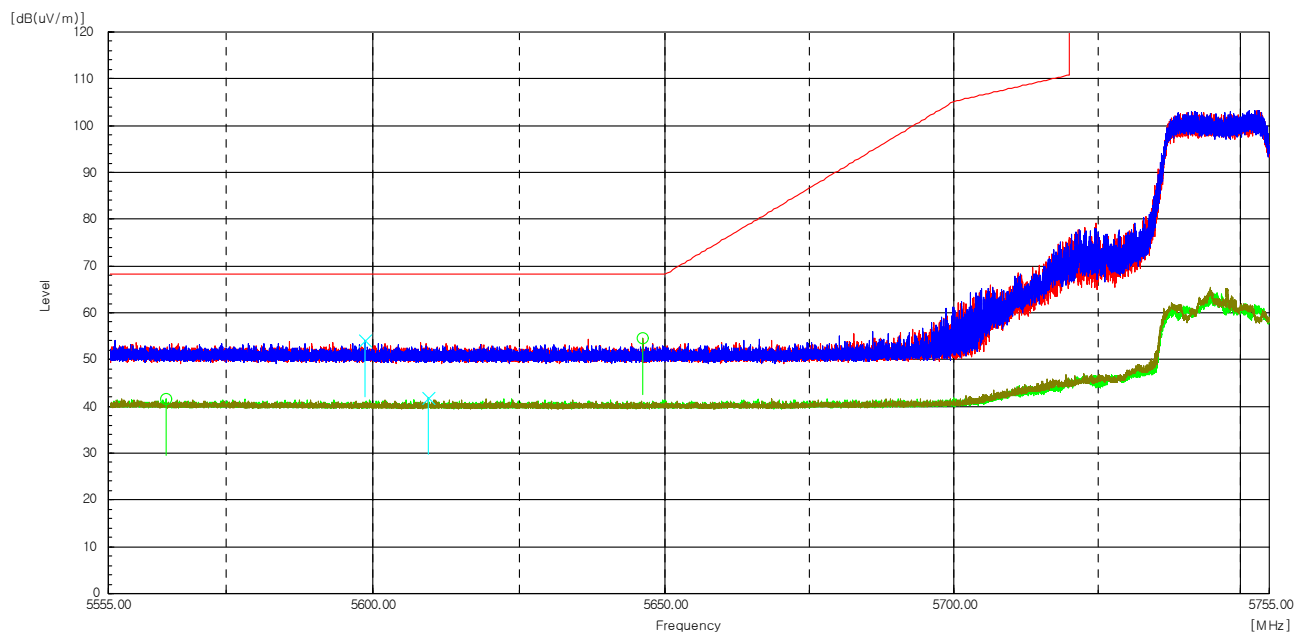
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Report No.:
CTK-2025-02084
Page (71) / (87) Pages

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)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 598.68	V	49.0	5.2	-----	54.2	-----	68.2	-----	14.0	-----	Peak
5 646.27	H	49.3	5.2	-----	54.5	-----	68.2	-----	13.7	-----	Peak



Radiated Restricted Band Edge Plot



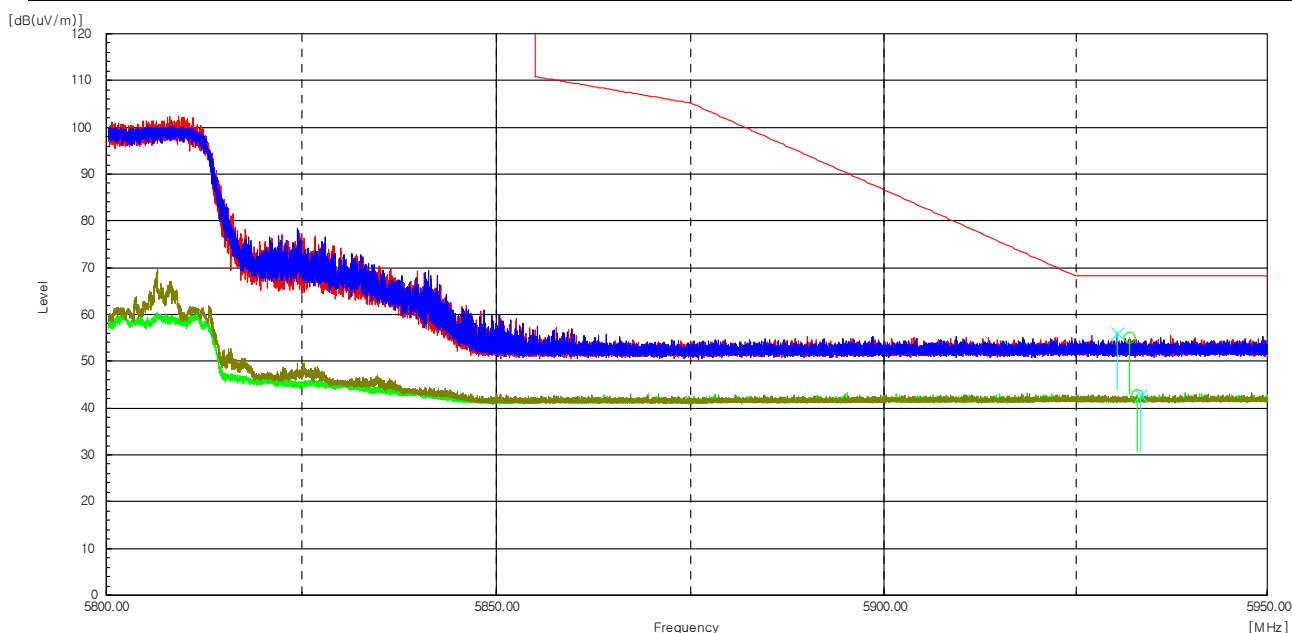
CTK Co., Ltd.

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Report No.:
CTK-2025-02084
Page (72) / (87) Pages

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)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 930.36	V	49.6	6.3	-----	55.9	-----	68.2	-----	12.3	-----	Peak
5 932.02	H	48.7	6.3	-----	55.0	-----	68.2	-----	13.2	-----	Peak



Radiated Restricted Band Edge Plot

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 lie-down position(Y axis) and the worst case was recorded.
2. Peak Result = Reading + c.f(Correction factor)
Average Result = Reading + c.f(Correction factor) + Duty Cycle Factor
3. Correction factor = Antenna factor + Cable loss - Amp Gain
4. The 18 GHz end had no signal detected. As can be seen from the conducted spurious emission test, no signal was detected in the section.



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Report No.:
CTK-2025-02084
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Test mode : Transmitter, 802.11ac_VHT40

The requirements are:

☒ Complies

Test Data

Ch.38(5 190 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
--------------------	-----	-------------------	------------------	------------------------------	------------------------	------------------------	------------------------	------------------------	----------------------	----------------------	------

No Peak Found

Ch.46(5 230 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
--------------------	-----	-------------------	------------------	------------------------------	------------------------	------------------------	------------------------	------------------------	----------------------	----------------------	------

No Peak Found

Ch.151(5 755 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
--------------------	-----	-------------------	------------------	------------------------------	------------------------	------------------------	------------------------	------------------------	----------------------	----------------------	------

No Peak Found

Ch.159(5 795 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
--------------------	-----	-------------------	------------------	------------------------------	------------------------	------------------------	------------------------	------------------------	----------------------	----------------------	------

No Peak Found



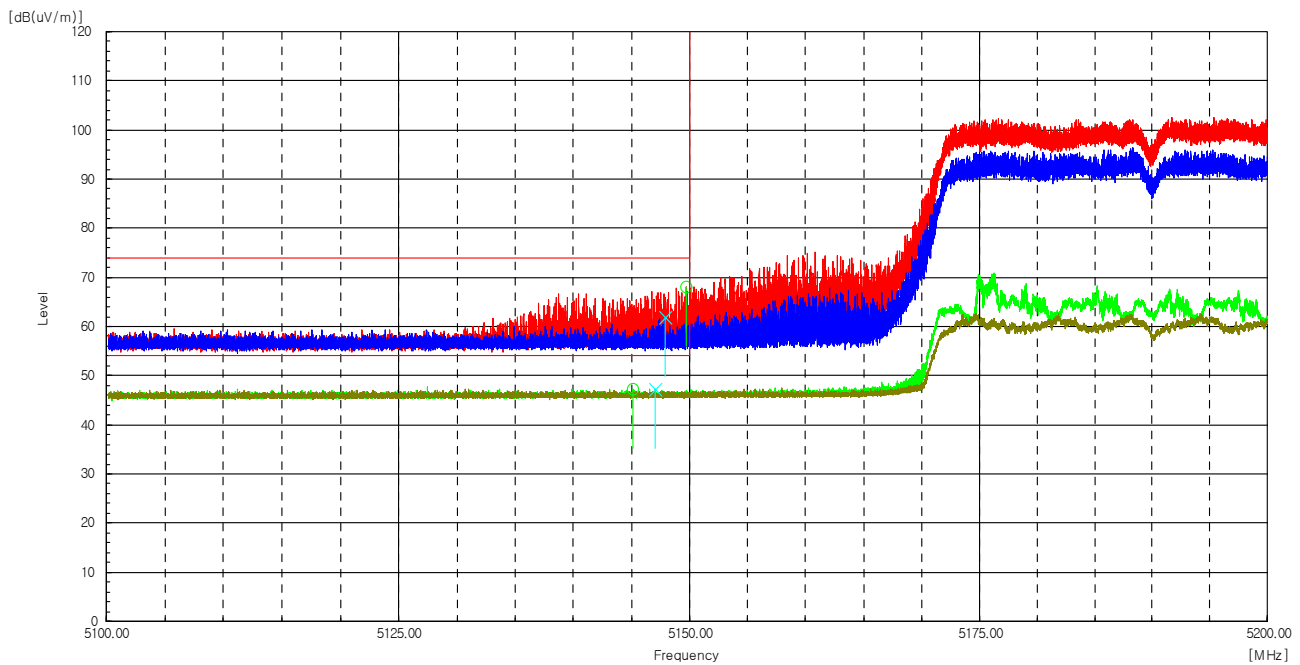
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Worst Case Mode :	802.11ac_VHT40
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 190 MHz
Channel :	38

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 145.13	H	43.4	3.8	4.12	-----	51.3	-----	54.0	-----	2.7	Average
5 147.06	V	43.4	3.8	4.12	-----	51.3	-----	54.0	-----	2.7	Average
5 147.91	V	58.0	3.8	-----	61.8	-----	74.0	-----	12.2	-----	Peak
5 149.70	H	64.1	3.8	-----	67.9	-----	74.0	-----	6.1	-----	Peak



Radiated Restricted Band Edge Plot



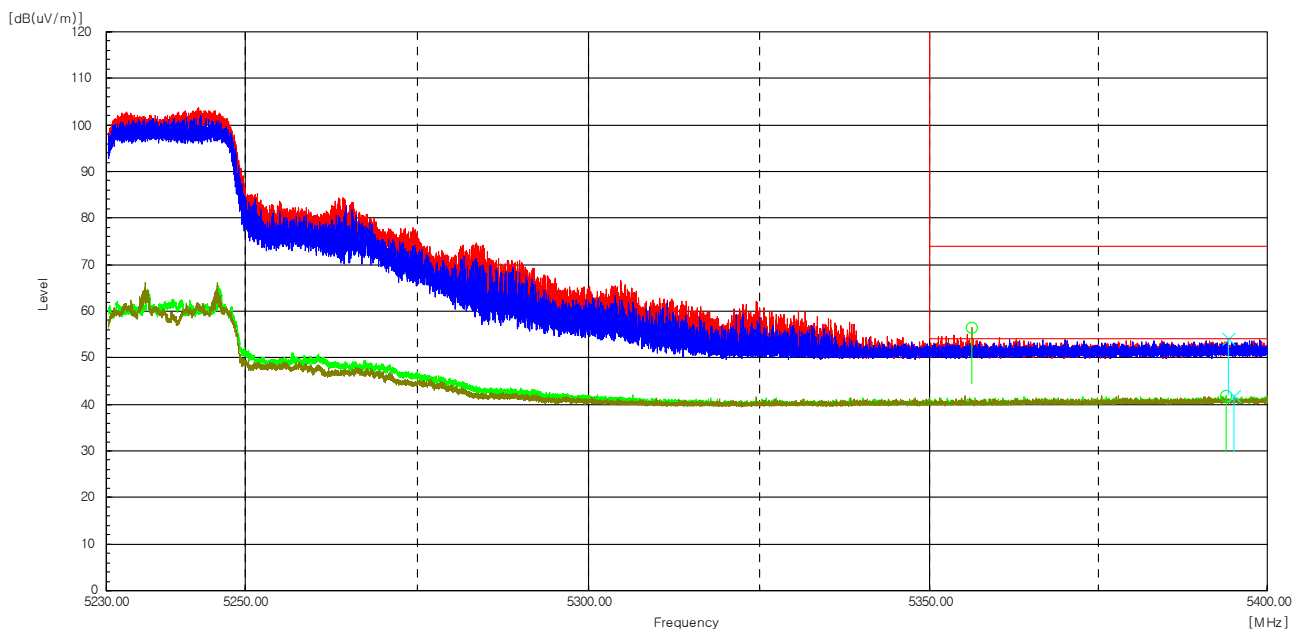
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Worst Case Mode :	802.11ac_VHT40
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 230 MHz
Channel :	46

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 356.21	H	52.1	4.3	-----	56.4	-----	74.0	-----	17.6	-----	Peak
5 393.93	H	37.1	4.6	4.12	-----	45.8	-----	54.0	-----	8.2	Average
5 394.23	V	49.5	4.6	-----	54.1	-----	74.0	-----	19.9	-----	Peak
5 394.98	V	37.2	4.6	4.12	-----	45.9	-----	54.0	-----	8.1	Average



Radiated Restricted Band Edge Plot



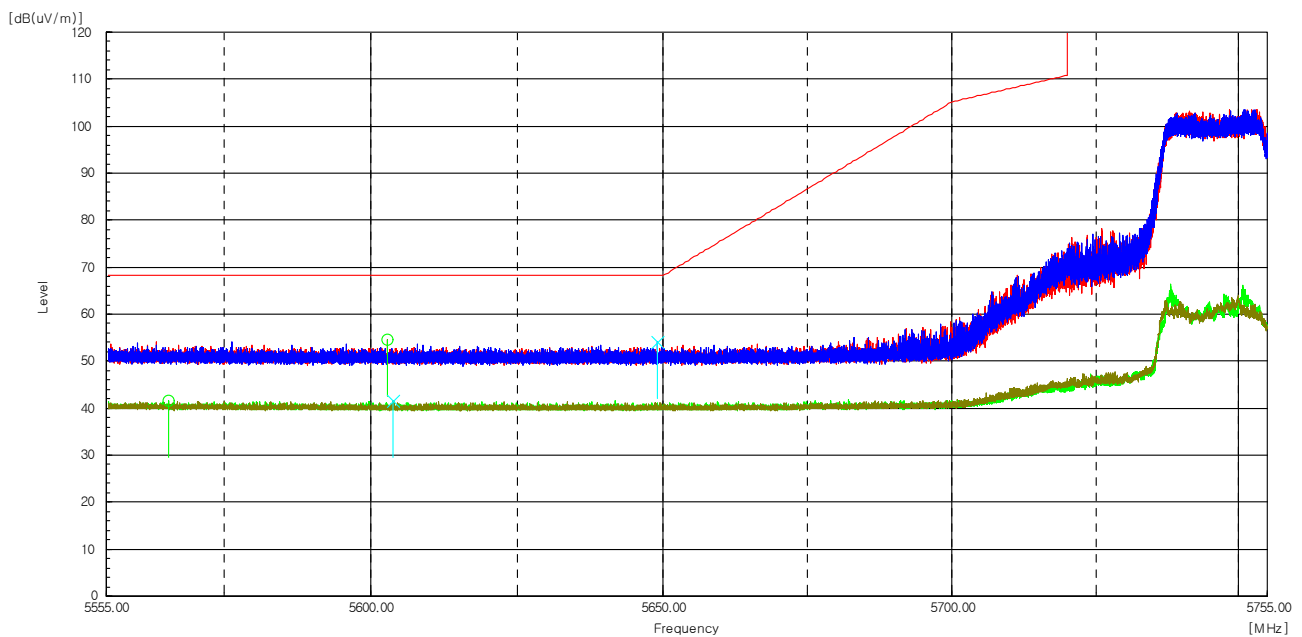
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Worst Case Mode :	802.11ac_VHT40
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 755 MHz
Channel :	151

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 602.83	H	49.4	5.2	-----	54.6	-----	68.2	-----	13.6	-----	Peak
5 649.12	V	48.9	5.2	-----	54.1	-----	68.2	-----	14.1	-----	Peak



Radiated Restricted Band Edge Plot



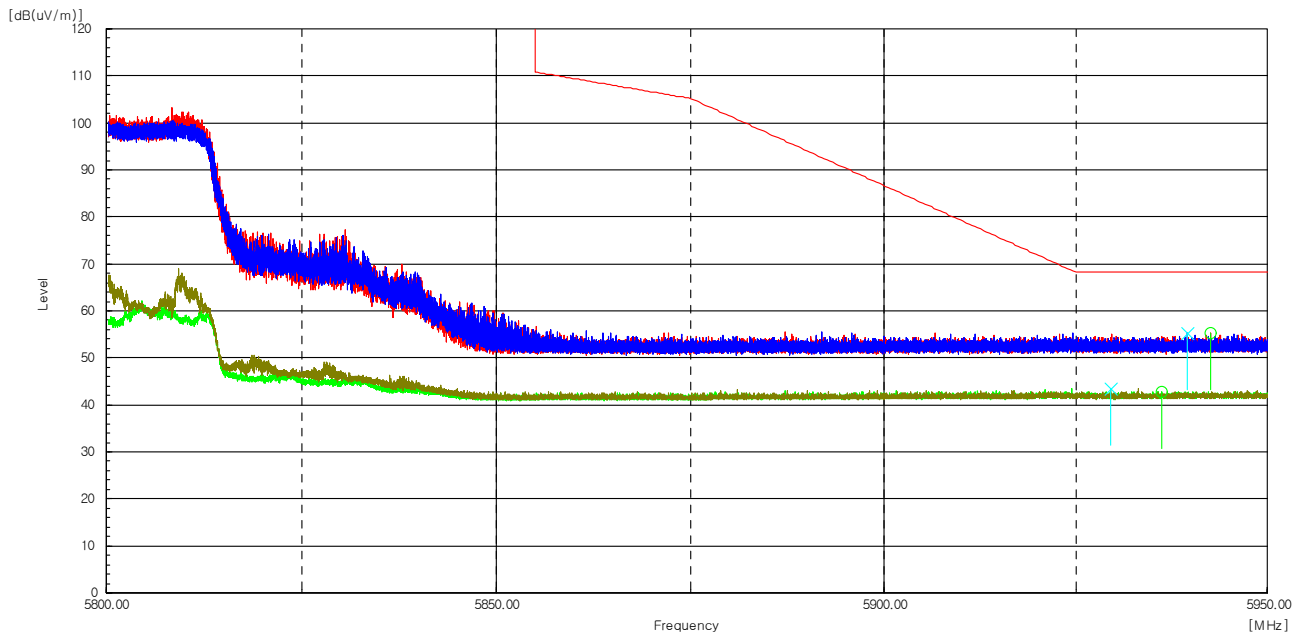
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Report No.:
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Worst Case Mode :	802.11ac_VHT40
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 795 MHz
Channel :	159

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 939.57	V	48.8	6.4	-----	55.2	-----	68.2	-----	13.0	-----	Peak
5 942.54	H	48.8	6.4	-----	55.2	-----	68.2	-----	13.0	-----	Peak



Radiated Restricted Band Edge Plot

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 lie-down position(Y axis) and the worst case was recorded.
2. Peak Result = Reading + c.f(Correction factor)
Average Result = Reading + c.f(Correction factor) + Duty Cycle Factor
3. Correction factor = Antenna factor + Cable loss - Amp Gain
4. The 18 GHz end had no signal detected. As can be seen from the conducted spurious emission test, no signal was detected in the section.

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Test mode : Transmitter, 802.11ac_VHT80

The requirements are:

☒ Complies

Test Data

Ch.44(5 210 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
--------------------	-----	-------------------	------------------	------------------------------	------------------------	------------------------	------------------------	------------------------	----------------------	----------------------	------

No Peak Found

Ch.155(5 775 MHz)

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
--------------------	-----	-------------------	------------------	------------------------------	------------------------	------------------------	------------------------	------------------------	----------------------	----------------------	------

No Peak Found



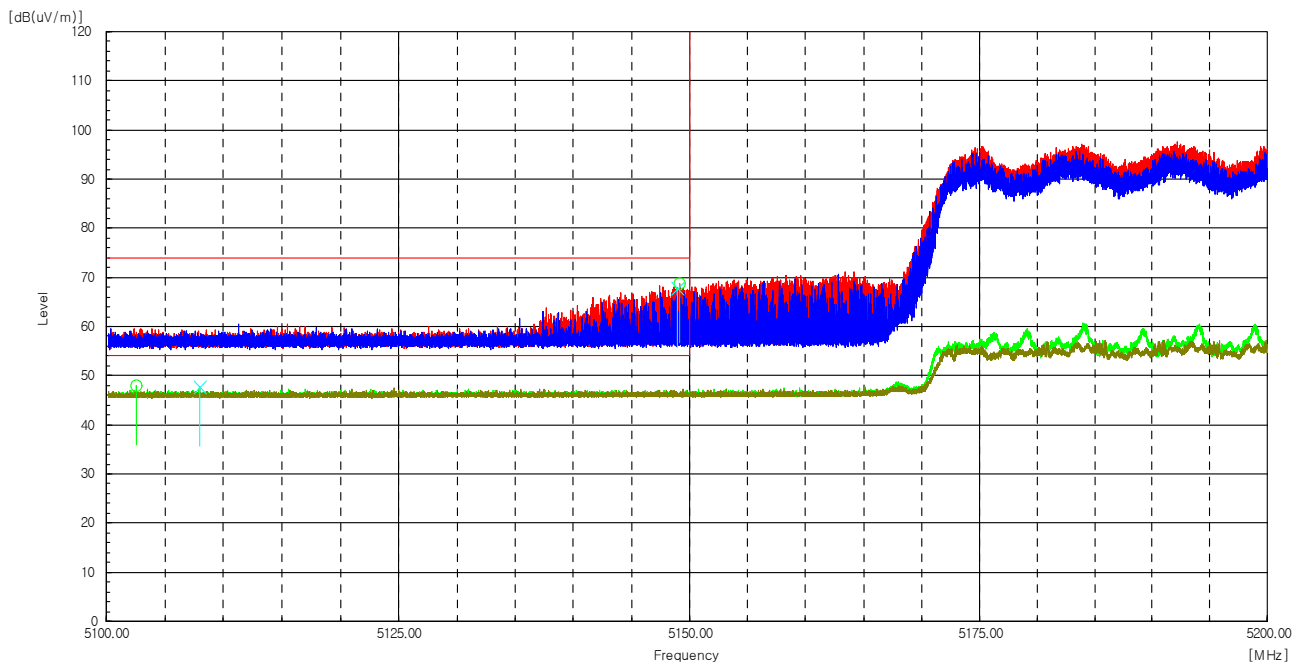
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Worst Case Mode :	802.11ac_VHT80
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 210 MHz
Channel :	42

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 102.59	H	44.1	3.8	6.18	-----	53.7	-----	54.0	-----	0.3	Average
5 107.97	V	43.9	3.8	6.18	-----	53.7	-----	54.0	-----	0.3	Average
5 148.97	V	63.9	3.8	-----	67.7	-----	74.0	-----	6.3	-----	Peak
5 149.17	H	64.8	3.8	-----	68.6	-----	74.0	-----	5.4	-----	Peak



Radiated Restricted Band Edge Plot



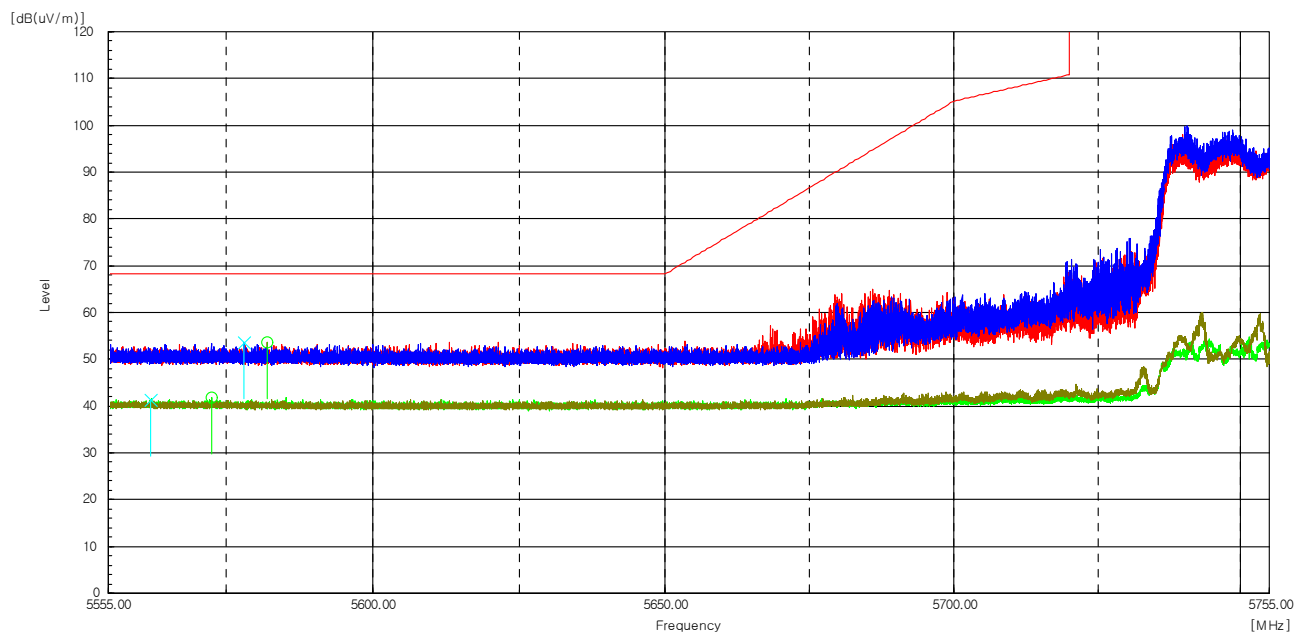
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Worst Case Mode :	802.11ac_VHT80
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 775 MHz
Channel :	155

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 578.03	V	48.3	5.2	-----	53.5	-----	68.2	-----	14.7	-----	Peak
5 581.91	H	48.5	5.2	-----	53.7	-----	68.2	-----	14.5	-----	Peak





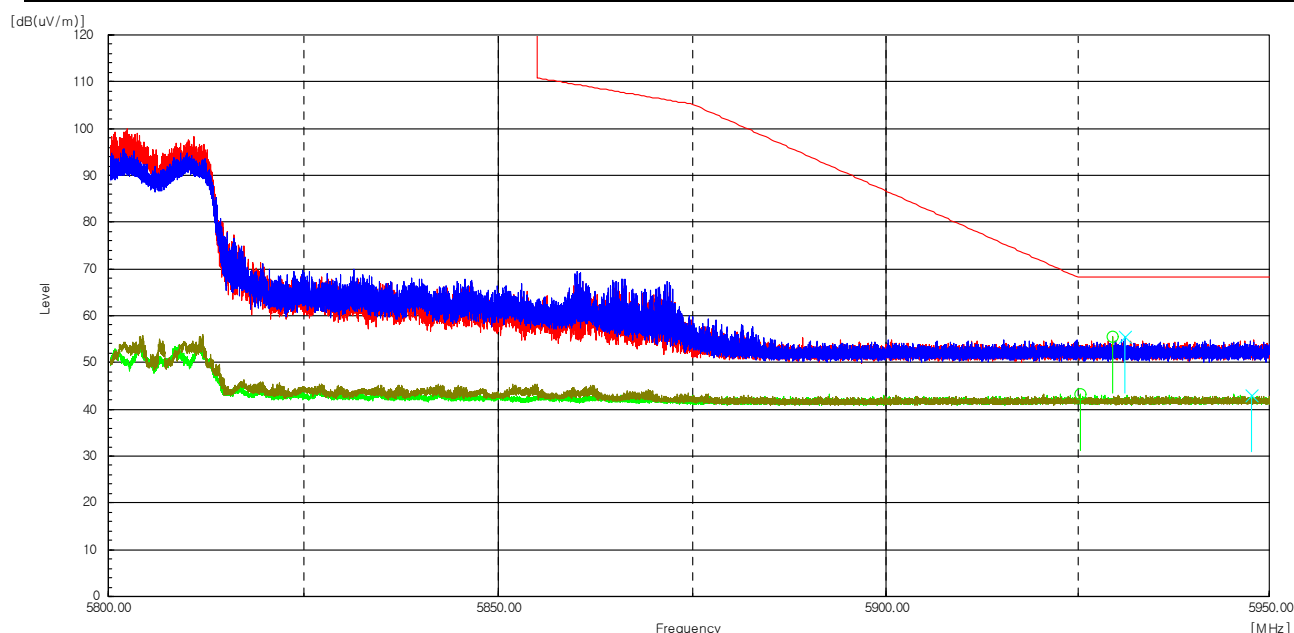
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Report No.:
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Worst Case Mode :	802.11ac VHT80
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5 775 MHz
Channel :	155

Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]	Note
5 929.491	H	49.2	6.3	-----	55.5	-----	68.0	-----	12.7	-----	Peak
5 931.165	V	49.3	6.3	-----	55.6	-----	68.0	-----	12.6	-----	Peak



Radiated Restricted Band Edge Plot

Remarks

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 lie-down positon(Y axis) and the worst case was recorded.
2. Peak Result = Reading + c.f(Correction factor)
Average Result = Reading + c.f(Correction factor) + Duty Cycle Factor
3. Correction factor = Antenna factor + Cable loss - Amp Gain
4. The 18 GHz end had no signal detected. As can be seen from the conducted spurious emission test, no signal was detected in the section.



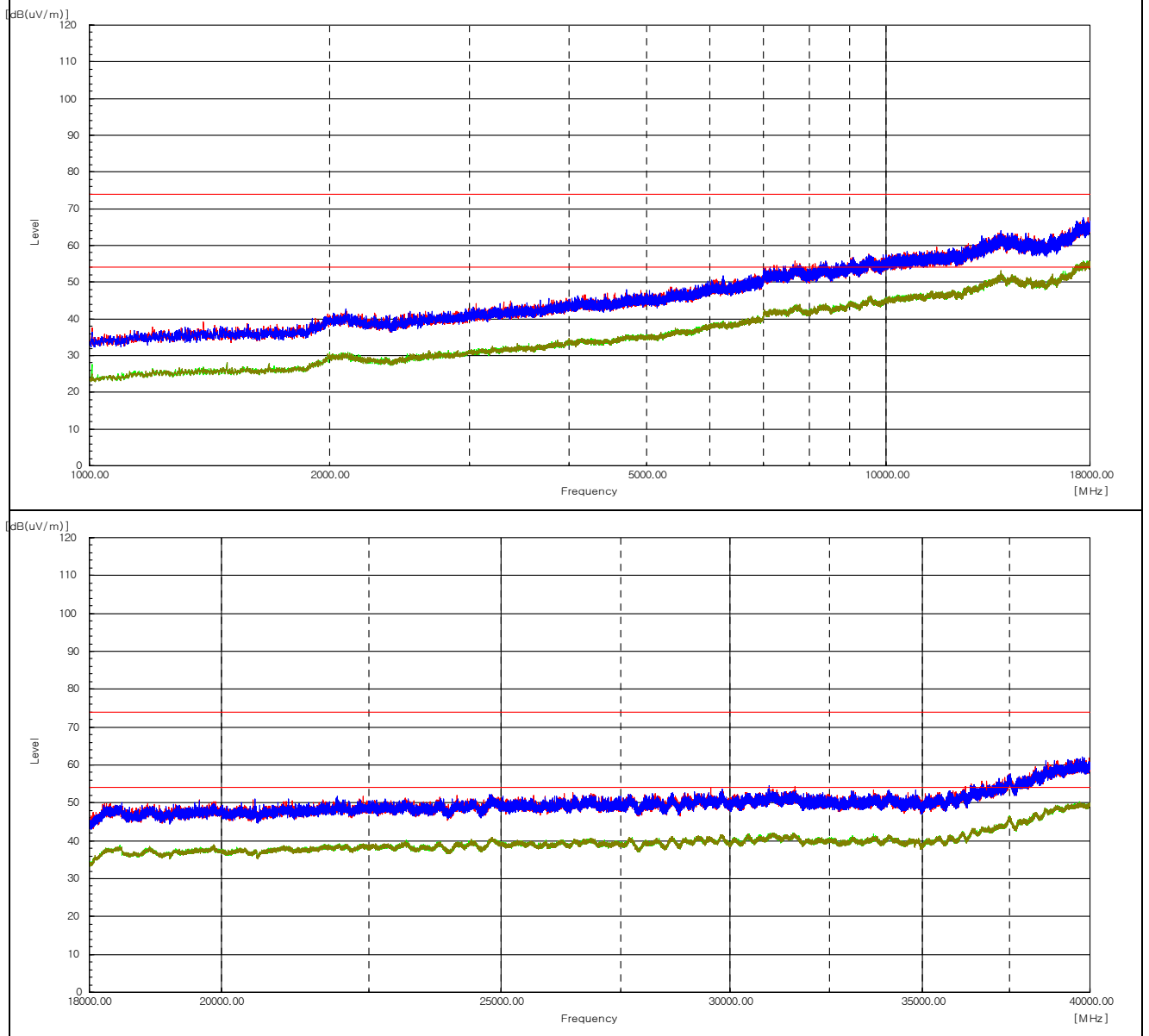
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Test mode : Receiver (Worst Case)

Test Data



Frequency [MHz]	Reading (P) [dBuV]	Reading AV [dBuV]	c.f [dB(1/m)]	Duty Cycle Factor [dB]	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]
--------------------	--------------------------	-------------------------	------------------	------------------------------	------------------------	------------------------	------------------------	------------------------	----------------------	----------------------

No Peak Found

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Report No.:
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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 lie-down position(X axis) and the worst case was recorded.
2. Peak Result = Reading + c.f(Correction factor)
Average Result = Reading + c.f(Correction factor) + Duty Cycle Factor
3. Correction factor = Antenna factor + Cable loss - Amp Gain
4. The 18 GHz end had no signal detected. As can be seen from the conducted spurious emission test, no signal was detected in the section.

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Report No.:
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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

ANSI C63.10-2013 - Section 6.2

RSS-Gen - Section 8.8

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

* The level decreases linearly with the logarithm of the frequency.

** A linear average detector is required.

Test Results

The requirements are:

☒ Complies



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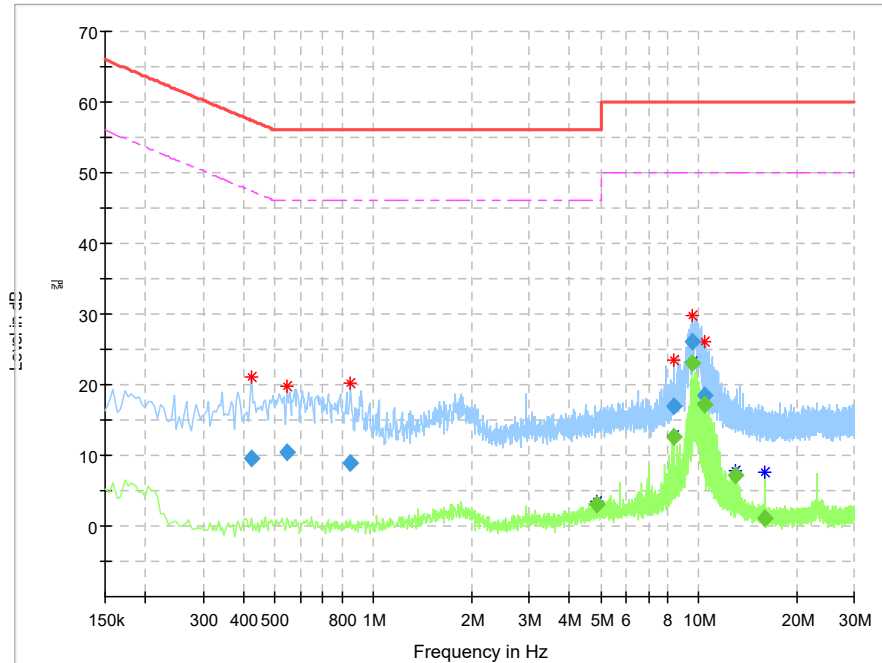
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Test Data

[LINE_Worst case 802.11a]

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.424500	9.63	---	57.36	47.72	15000.0	9.000	L1	ON	10.0
0.541500	10.40	---	56.00	45.60	15000.0	9.000	L1	ON	10.0
0.852000	8.99	---	56.00	47.01	15000.0	9.000	L1	ON	9.9
4.857000	---	3.05	46.00	42.95	15000.0	9.000	L1	ON	9.9
8.394000	---	12.61	50.00	37.39	15000.0	9.000	L1	ON	10.0
8.394000	17.05	---	60.00	42.95	15000.0	9.000	L1	ON	10.0
9.595500	26.11	---	60.00	33.89	15000.0	9.000	L1	ON	10.0
9.595500	---	22.97	50.00	27.03	15000.0	9.000	L1	ON	10.0
10.423500	18.47	---	60.00	41.53	15000.0	9.000	L1	ON	10.0
10.428000	---	17.20	50.00	32.80	15000.0	9.000	L1	ON	10.0
12.952500	---	7.07	50.00	42.93	15000.0	9.000	L1	ON	10.1
15.967500	---	1.13	50.00	48.87	15000.0	9.000	L1	ON	10.2



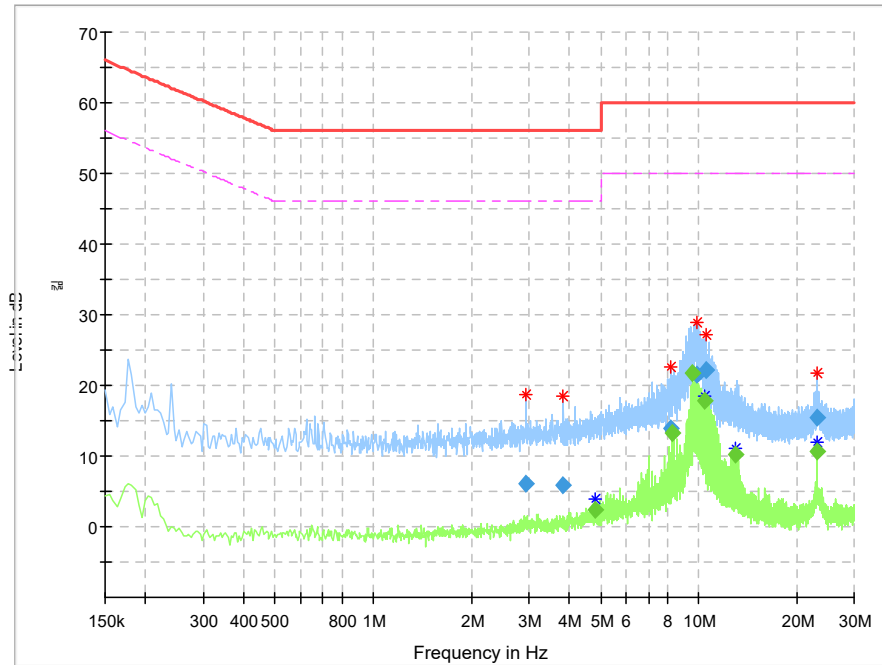
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[NEUTRAL_Worst case 802.11a]

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
2.931000	6.02	---	56.00	49.98	15000.0	9.000	N	ON	9.7
3.840000	5.84	---	56.00	50.16	15000.0	9.000	N	ON	9.7
4.807500	---	2.36	46.00	43.64	15000.0	9.000	N	ON	9.8
8.241000	13.93	---	60.00	46.07	15000.0	9.000	N	ON	9.9
8.263500	---	13.26	50.00	36.74	15000.0	9.000	N	ON	9.9
9.595500	---	21.63	50.00	28.37	15000.0	9.000	N	ON	9.9
9.816000	21.41	---	60.00	38.59	15000.0	9.000	N	ON	9.9
10.428000	---	17.83	50.00	32.17	15000.0	9.000	N	ON	9.9
10.522500	22.22	---	60.00	37.78	15000.0	9.000	N	ON	9.9
12.952500	---	10.28	50.00	39.72	15000.0	9.000	N	ON	10.1
23.127000	---	10.67	50.00	39.33	15000.0	9.000	N	ON	10.3
23.127000	15.43	---	60.00	44.57	15000.0	9.000	N	ON	10.3

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APPENDIX A – Test Equipment Used For Tests

No.	Name of Equipment	Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date
1	Signal Analyzer	Agilent	N9020A	US46470483	2024-11-26	2025-11-26
2	Signal Generator	Rohde & Schwarz	SMB100A	175528	2025-03-21	2026-03-21
3	EMI TEST RECEIVER	Rohde & Schwarz	ESW44	102039	2025-04-28	2026-04-28
4	BILOG ANTENNA	TESEQ	CBL6111D	60654	2023-08-21	2025-08-21
5	Active Loop Antenna	SCHWARZBECK	FMZB 1513	1513-125	2024-04-15	2026-04-15
6	6dB Attenuator	PASTERNAK	PE7AP006-06	L20210504000023	2024-07-31	2025-07-31
7	6dB Attenuator	NONE	6dB	190557	2024-09-19	2025-09-19
8	AMPLIFIER	SONOMA INSTRUMENT	310N	411011	2024-07-31	2025-07-31
9	Spectrum Analyzer	R&S	FSV40	101574	2025-01-10	2026-01-10
10	PRE AMPLIFIER	HP	8449B	3008A00620	2025-03-11	2026-03-11
11	Double Ridged Guide Antenna	ETS-Lindgren	3115	00078895	2025-03-13	2026-03-13
12	HORN ANTENNA	SCHWARZBECK	BBHA9170	1153	2024-10-18	2025-10-18
13	LOW NOISE AMPLIFIER	TESTEK	TK-PA1840H	210124-L	2024-10-18	2025-10-18
14	EMI TEST RECEIVER	Rohde & Schwarz	ESR3	102826	2025-04-28	2026-04-28
15	LISN	Rohde & Schwarz	ENV216	102698	2025-04-28	2026-04-28
16	Band Reject Filter	Micro Tronics	BRM50702	G233	2024-11-25	2025-11-25
17	DC Power Supply	Agilent	E3632A	MY40008023	2025-03-12	2026-03-12
18	Dual-Tracking DC Power Supply	Topward Electric Instruments Co.,Ltd.	6303D	802204	2025-03-13	2026-03-13

No.	Cable	Manufacturer	Model No.	Serial No.	Check Date
1	RF Cable (Conducted)	Junkosha Inc.	MWX221	1512S151	2025-05-28
2	RF Cable (9 kHz - 1 GHz Radiated)	HUBER+SUHNER	SUCOFLEX 104	MY27558/4	2025-03-05
3	RF Cable (9 kHz - 1 GHz Radiated)	HUBER+SUHNER	L-5D2W	N/A	2025-03-05
4	RF Cable (1 GHz - 18 GHz Radiated)	Junkosha Inc.	MWX221	2008S246	2025-02-21
5	RF Cable (1 GHz - 18 GHz Radiated)	Junkosha Inc.	MWX221	J0970749	2025-02-21
6	RF Cable (1 GHz - 18 GHz Radiated)	Sensorview Co., LTD	13A26	TPC2204060007	2025-02-21
7	RF Cable (18 GHz - 40 GHz Radiated)	Sensorview Co., LTD	9S40	TPC2204060009	2025-02-21
8	RF Cable (18 GHz - 40 GHz Radiated)	Sensorview Co., LTD	9A40	TP210713-001	2025-02-21

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