TEST REPORT

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-2021-01750

1. Client

◦ Name : Samsung Electronics Co Ltd

◦ Address : 19 Chapin Rd, Building D. Pine Brook, New Jersey, United States

◦ Date of Receipt : 2020-06-02

2. Manufacturer

◦ Name : Samsung Electronics Co., Ltd.

◦ Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea

3. Use of Report : For FCC Conformance / ISED Conformance

4. Test Sample / Model: Wi-Fi/BT Transceiver / WCT733M, WCT734M

5. Date of Test : 2021-04-28 to 2021-05-04

6. Test Standard(method) used : FCC 47 CFR part 15 subpart C 15.247
FCC 47 CFR part 15 subpart E 15.407
RSS-247 & RSS-Gen

7. Testing Environment: Temp.: (24 ± 5) ℃, Humidity: (50 ± 3) % R.H.

8. Test Results : Compliance

The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full.

Affirmation	Tested by Ji-Hye, Kim: (Signature)	Technical Manager Won-Jae, Hwang: (Signature)

2021-05-06

Republic of KOREA **CTK Co., Ltd.**

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REPORT REVISION HISTORY

Date	Revision	Page No
2021-05-06	Issued (CTK-2021-01750)	all

CONTENTS

1. General Product Description

1.1 Client Information

Company	Samsung Electronics Co., Ltd.
Contact Point	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea
Contact Person	Name : Lee Gyung-yoon E-mail : gyoon.lee@samsung.com Tel : +82-277-2688 Fax : -

1.2 Product Information

FCC ID	A3LWCT730M
IC	649E-WCT730M
Product Description	Wi-Fi/BT Transceiver
Model name	WCT733M, WCT734M
Variant Model name	-
Operating Frequency	DSS : 2 402 MHz - 2 480 MHz DTS : 2 402 MHz - 2 480 MHz 2 412 MHz – 2 472 MHz UNII 1 : 5 180 MHz – 5 240 MHz (20 MHz_BW) 5 190 MHz – 5 230 MHz (40 MHz_BW) 5 210 MHz (80 MHz_BW) UNII 2A : 5 260 MHz – 5 320 MHz (20 MHz_BW) 5 270 MHz – 5 310 MHz (40 MHz_BW) 5 290 MHz (80 MHz_BW) UNII 2C : 5 500 MHz – 5 720 MHz (20 MHz_BW) 5 510 MHz – 5 710 MHz (40 MHz_BW) 5 530 MHz – 5 690 MHz (80 MHz_BW) UNII 3 : 5 745 MHz – 5 825 MHz (20 MHz_BW) 5 755 MHz – 5 795 MHz (40 MHz_BW) 5 775 MHz (80 MHz)
RF Output Power	<DSS> GFSK : 11.86 dBm (15.35 mW) 8-DPSK : 12.00 dBm (15.85 mW) <DTS> BLE : 1 Mbps : 12.06 dBm (16.07 mW) 2 Mbps : 12.60 dBm (18.20 mW) 802.11b : 18.91 dBm (77.80 mW) 802.11g : 19.64 dBm (92.04 mW) 802.11n_HT20 : 18.57 dBm (71.94 mW) <UNII> 802.11a : 18.07 dBm (64.12 mW) 802.11n_HT20 : 17.03 dBm (50.47 mW) 802.11n_HT40 : 16.99 dBm (50.00 mW) 802.11ac_VHT20 : 16.68 dBm (46.56 mW) 802.11ac_VHT40 : 16.66 dBm (46.34 mW) 802.11ac_VHT80 : 14.39 dBm (27.48 mW)

Antenna Specification	<DTS, UNII> Antenna type : Chip Antenna Peak Gain (2.4 GHz) : -0.03 dBi (ANT-L), 1.99 dBi (ANT-R) Peak Gain (5 GHz) : 3.69 dBi (ANT-L), 1.21 dBi (ANT-R) <BT, BLE> Antenna type : Chip Antenna Peak Gain : -0.22 dBi
Type of Modulation	BT : GFSK(1Mbps), π/4 DQPSK(2Mbps), 8DPSK(3Mbps) BLE : GFSK 802.11b : DSSS 802.11a/g/n/ac : OFDM
Data Rate	<DTS> 802.11b : 11 / 5.5 / 2 / 1 Mbps 802.11g : 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6 Mbps 802.11n: up to 144 Mbps <UNII> 802.11a : 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6 Mbps 802.11n : up to 300 Mbps 802.11ac : up to 867 Mbps
Power Source	DC 5 V
Hardware Rev	WCT733M : V1.0 WCT734M : V1.0
Software Rev	FC4

1.3 Peripheral Devices

Device	Manufacturer	Model No.	Serial No.
Note Computer	HP	15-bs563TU	CND7253R6N
AC/DC Adapter	HP	HSTNN-CA40	-

2. Facility and Accreditations

2.1 Test Facility

The measurement facility is located at (Ho-dong), 113, Yejik-ro, Cheoin-gu, Yong-in-si, Gyeonggi-do, Korea.

2.2 Laboratory Accreditations and Listings

Country	Agency	Registration Number
USA	FCC	805871
CANADA	ISED	8737A-2
KOREA	NRRA	KR0025

2.3 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less. All test equipment calibrations are traceable to the Korea Research Institute of Standards and Science (KRISS), therefore, all test data recorded in this report is traceable to KRISS.

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3. Test Specifications

3.1 Standards

FCC Part Section(s)	Requirement(s)	Status (Note 1)	Test Condition
15.209, 15.205, 15.407 (b)(5),(6)	Radiated Emissions (9 kHz ~ 1 GHz)	C	Radiated
Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable			
Note 2: The data in this test report are traceable to the national or international standards.			
Note 3: The sample was tested according to the following specification: FCC Part 15.247, ANSI C63.10-2013			
Note 4: The tests were performed according to the method of measurements prescribed in KDB No.558074.			
Note 5: etc. : The conformity assessment of except for this item was confirmed by the other report. (Test Report No. CTK-2019-04996, CTK-2019-04997, CTK-2019-04998, CTK-2019-04999, CTK-2019-05002 issued on 2019-12-19 and Test Report No. CTK-2019-04998-2 issued on 2020-01-03 by CTK Co., Ltd.)			

ISED Part Section(s)	Requirement(s)	Status (Note 1)	Test Condition
RSS-Gen 6.13	Radiated Emissions (9 kHz ~ 1 GHz)	C	Radiated
RSS-Gen 5	Receiver Spurious Emissions (9 kHz ~ 1 GHz)	C	
Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable			
Note 2: The data in this test report are traceable to the national or international standards.			
Note 3: The sample was tested according to the following specification: ISED RSS-247 Issue 2, RSS-GEN Issue 4, ANSI C63.10-2013			
Note 4: The tests were performed according to the method of measurements prescribed in KDB No.558074.			
Note 5: etc. : The conformity assessment of except for this item was confirmed by the other report. (Test Report No. CTK-2019-04996, CTK-2019-04997, CTK-2019-04998, CTK-2019-04999, CTK-2019-05002 issued on 2019-12-19 and Test Report No. CTK-2019-04998-2 issued on 2020-01-03 by CTK Co., Ltd.)			

3.2 Mode of operation during the test

The EUT is operated in a manner representative of the typical of the equipments.
During at testing, system components were manipulated within the confines of typical usage to maximize each emission.
For WLAN function, the engineering test program was provided and enabled to make EUT continuous transmit.
All modulation modes were tests. The results are only attached worst cases.

Test Frequency

- BLE

Test channels
2 480 MHz

- 802.11g

Test channels
2 462 MHz

- 802.11a

Test channels
5 300 MHz

3.3 Introduction

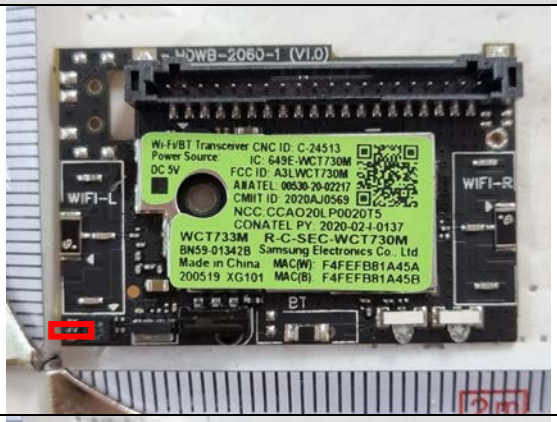
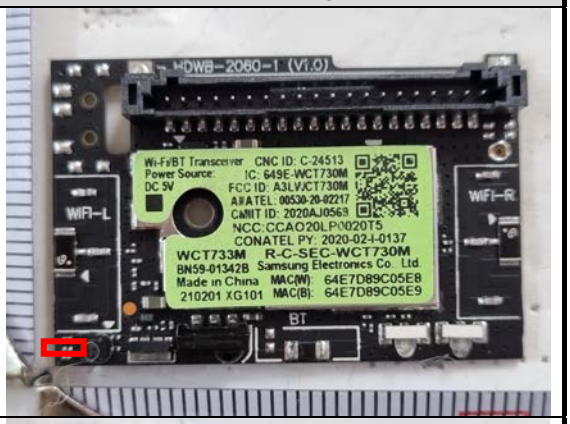
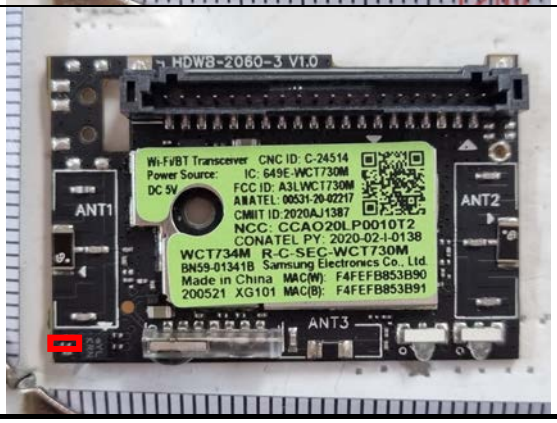
The before change(With resistance connected to the acceleration sensor) (original model : WCT733M, WCT734M) and the after changing(Delete resistance connected to the acceleration sensor) (variant model : WCT733M, WCT734M) has identical PCB layout, antenna, SW implementation for Wi-Fi. Based on their similarity, the FCC Part 15C (equipment class: DSS, DTS) and Part 15E (equipment class: NII) test data issued test data of WCT730M references the test data of WCT730M.

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID (FCC ID: A3LWCT730M) and ISED Cert.No(IC:649E-WCT730M)

3.4 Differences

The before change(With resistance connected to the acceleration sensor) (original model : WCT733M, WCT734M) and the after changing(Delete resistance connected to the acceleration sensor) (variant model : WCT733M, WCT734M) has identical PCB layout, antenna, SW implementation for Wi-Fi.

The detailed differences are as follows:

	Before Change	After Change
WCT733M		
WCT734M		

3.5 Maximum Measurement Uncertainty

The value of the measurement uncertainty for the measurement of each parameter.
Coverage factor k = 2, Confidence levels of 95 %

Description	Uncertainty
Radiated Emissions (9 kHz to 30 MHz)	1.16 dB (C.L.: Approx. 95 %, k = 2)
Radiated Emissions (30 MHz to 1 GHz)	4.54 dB (C.L.: Approx. 95 %, k = 2)

3.6 Test Software

Radiated Test	TOYO EMI software EP5RE Ver. 6.0.1.0

4. Technical Characteristic Test

4.1 Radiated Emission

Test Location

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

Test Procedures

KDB 558074 - Section 8.5, 8.6
ANSI C63.10-2013 - Section 11.11, 11.12
RSS-Gen - Section 6.13

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 rage 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 ≥ RBW

c) Detector = CISPR Quasi-peak

d) Sweep time = auto couple

Limit :

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 is 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.

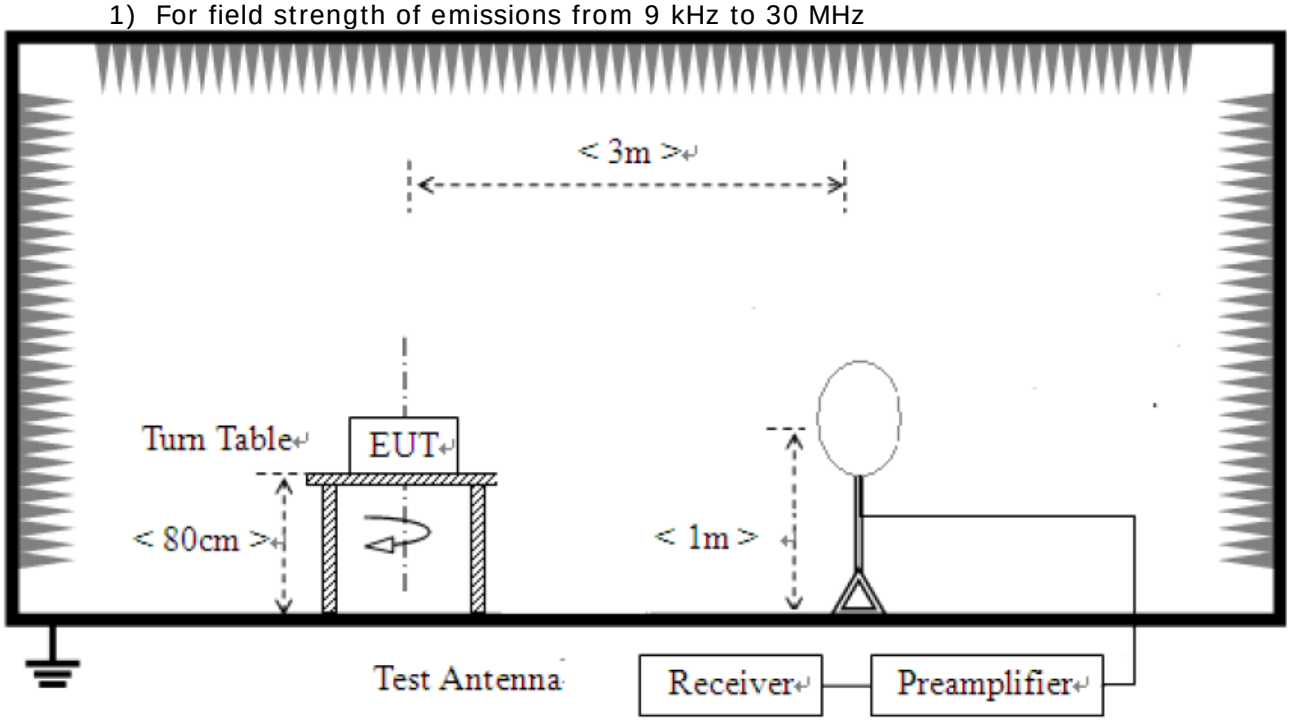
FCC Part 15 § 15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table :

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

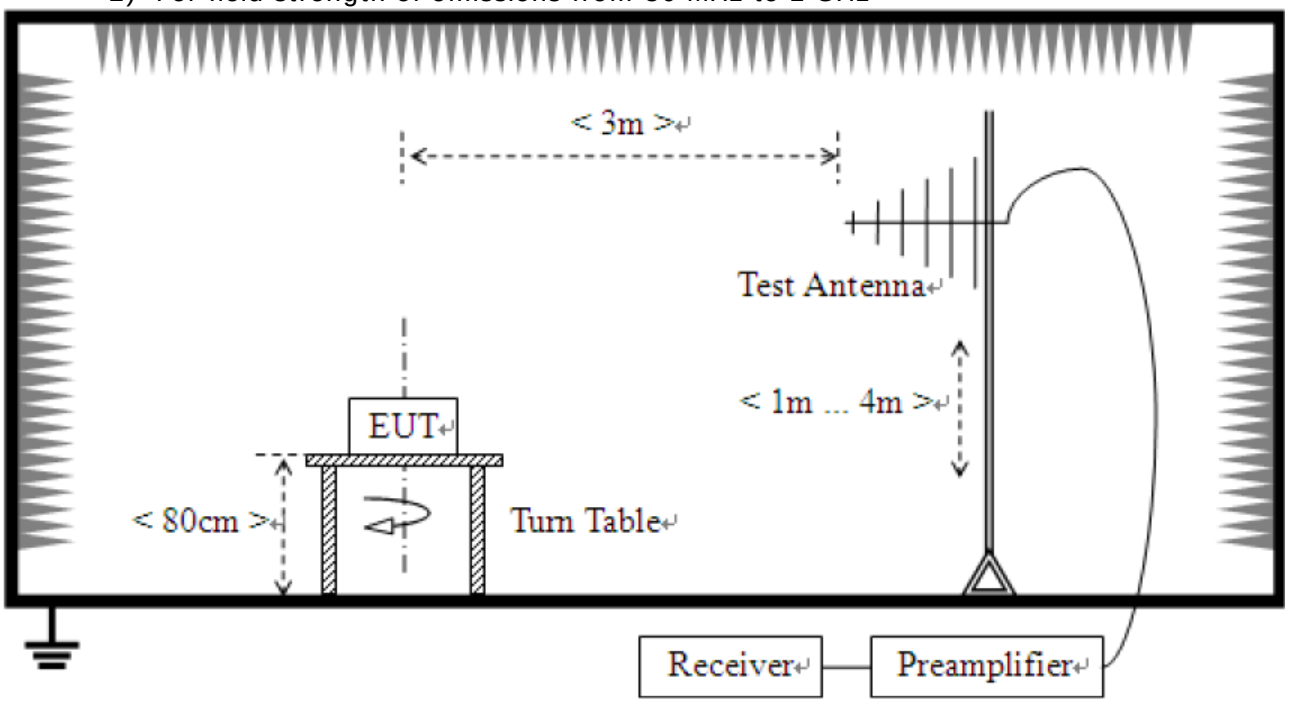
** Except as provided in 15.209(g).fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72MHz, 76-88MHz, 174-216MHz, 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g.15.231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

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



Test results

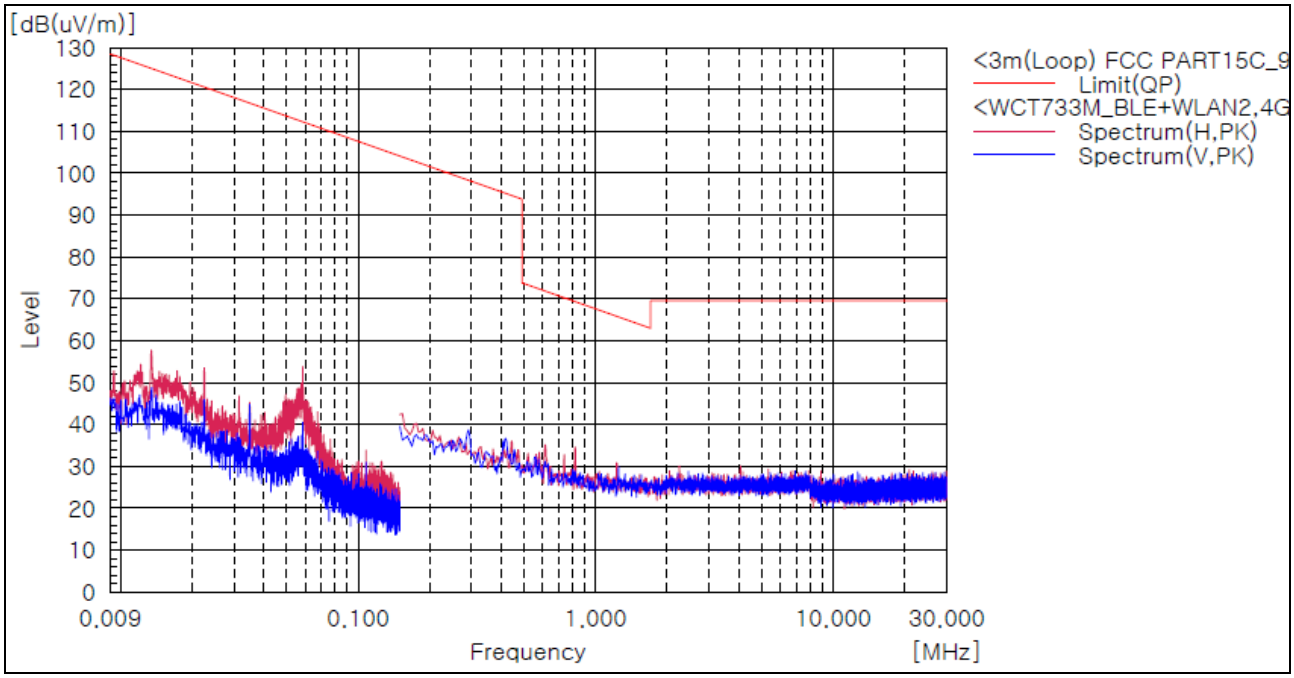
1) 9 kHz to 30 MHz

[WCT733M]

Test mode : Transmitter (simultaneous transmissions BLE+ WLAN 2.4GHz)
(Worst Case)

The requirements are:
☒ Complies

Test Data



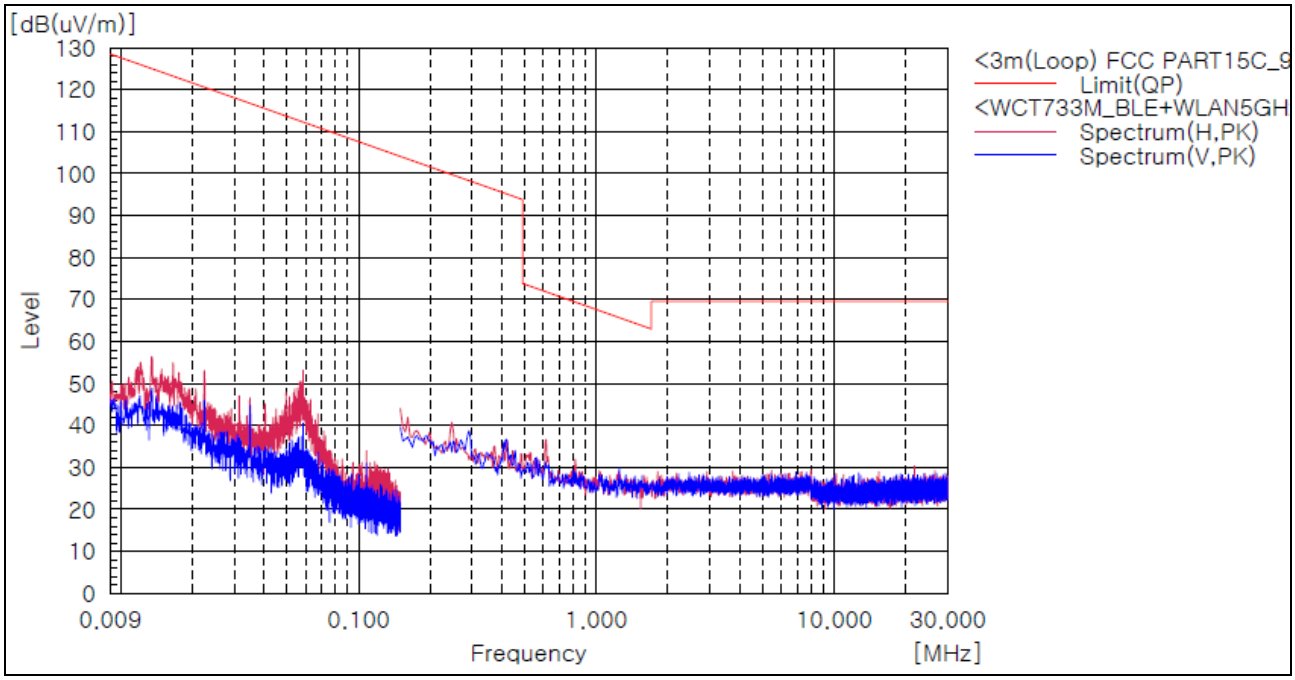
Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Level [dB(uV/m)]	Limit [dB(uV/m)]	Margin [dB]
The emissions 9 kHz to 30 MHz were 20 dB lower than the limit.						

Remark :
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in stand-up position(X 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 : Transmitter (simultaneous transmissions BLE+ WLAN 5GHz)
(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.						

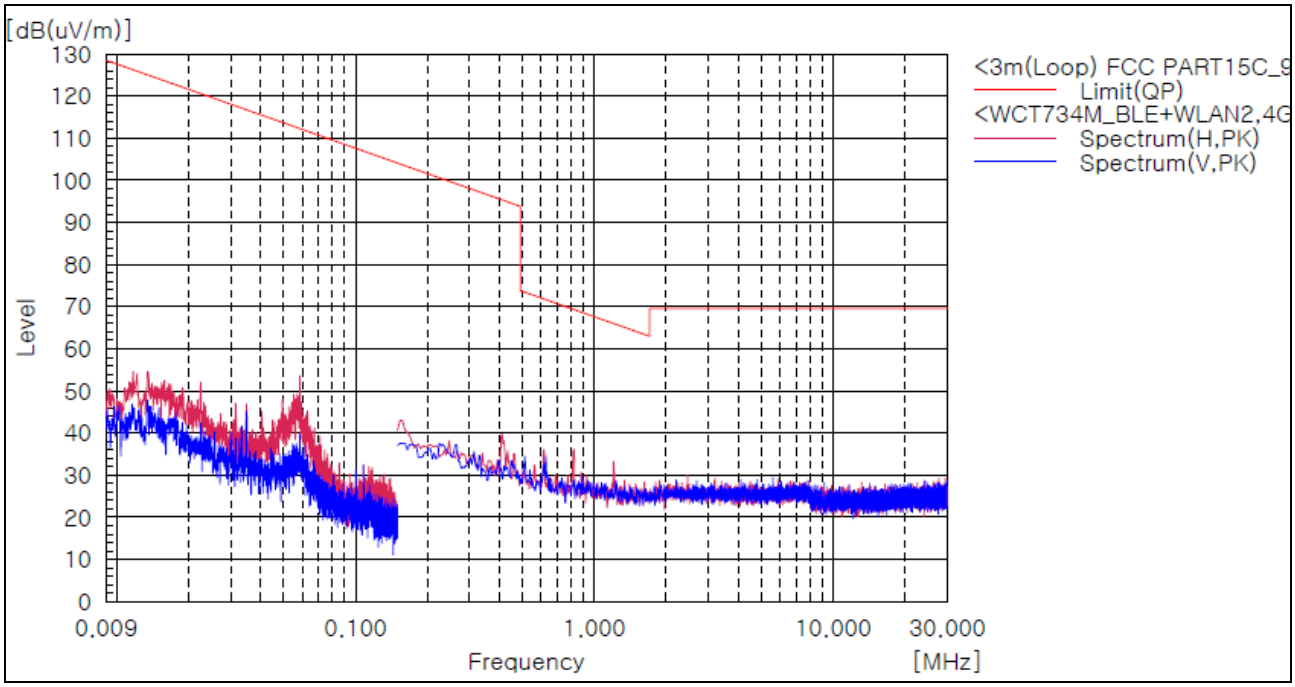
Remark :
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in stand-up position(X axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor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

[WCT734M]

Test mode : Transmitter (simultaneous transmissions BLE+ WLAN 2.4GHz)
(Worst Case)

The requirements are:
☒ Complies

Test Data



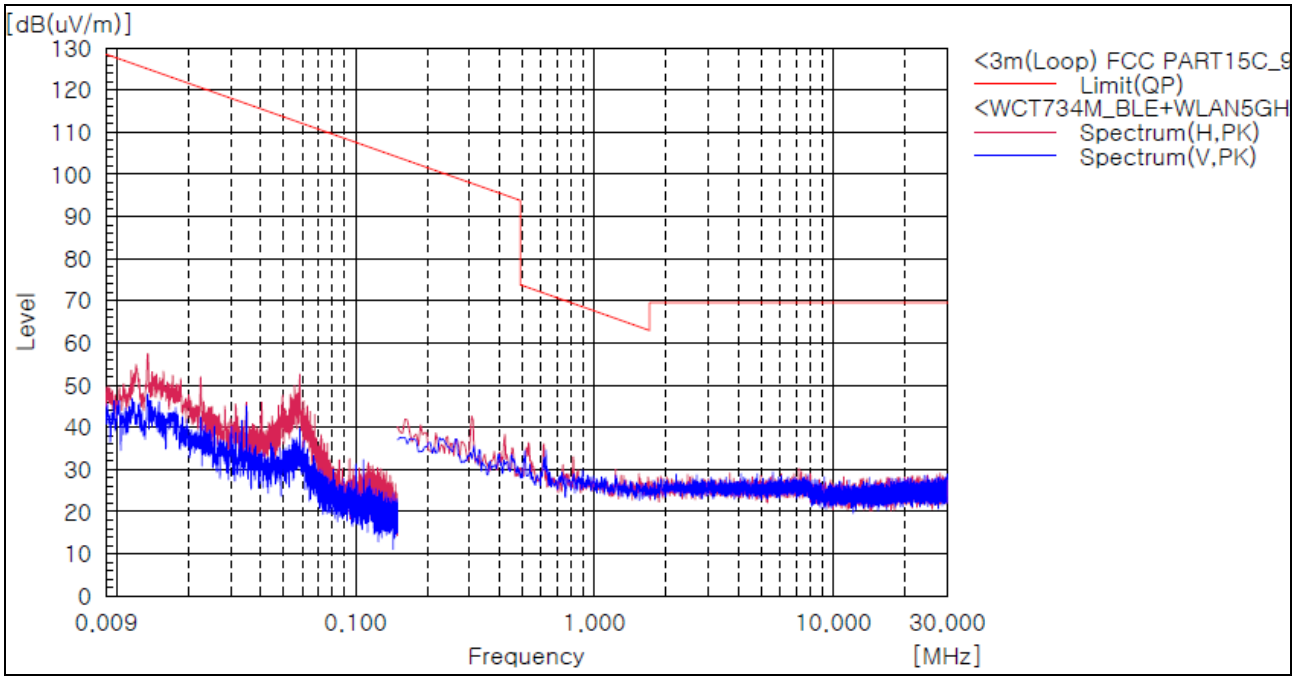
Frequency [MHz]	(P)	Reading [dBuV]	c.f [dB(1/m)]	Level [dB(uV/m)]	Limit [dB(uV/m)]	Margin [dB]
The emissions 9 kHz to 30 MHz were 20 dB lower than the limit.						

Remark :
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in stand-up position(X 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 : Transmitter (simultaneous transmissions BLE+ WLAN 5GHz)
(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.						

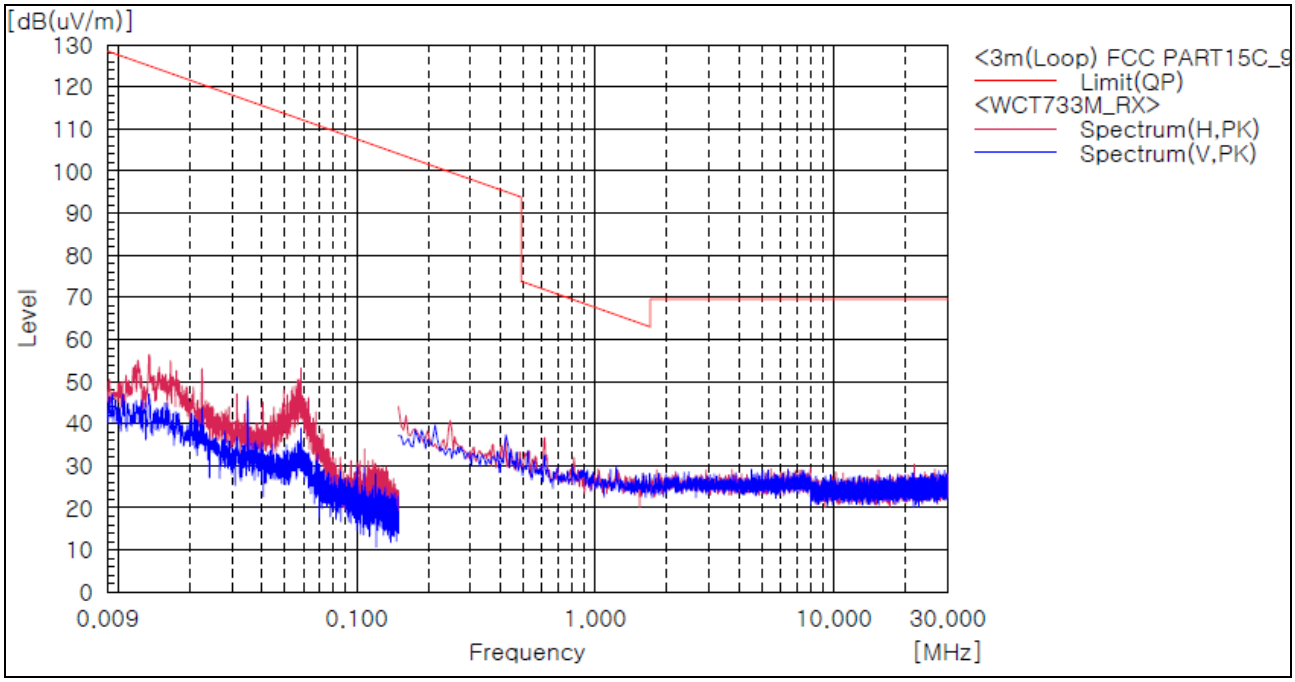
Remark :
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in stand-up position(X axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor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

[WCT733M]

Test mode : Receiver (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.						

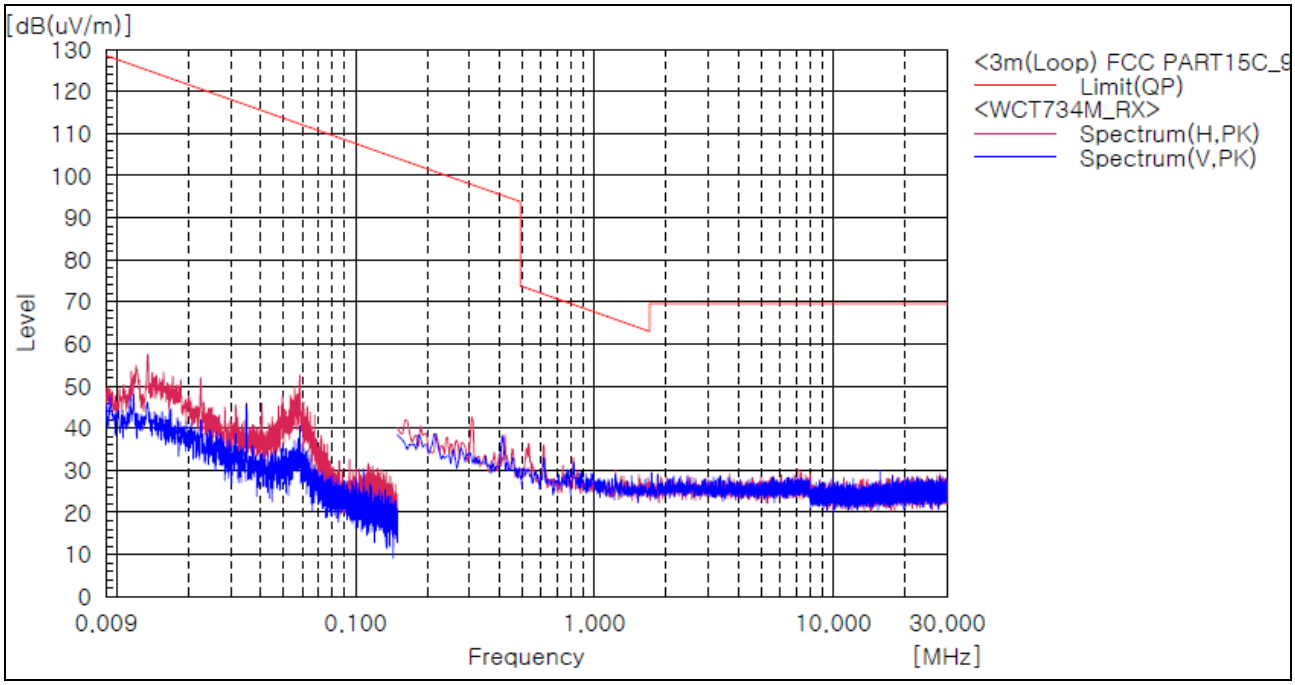
Remark :
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor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

[WCT734M]

Test mode : Receiver (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 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
4. This data is the Peak(PK) value.

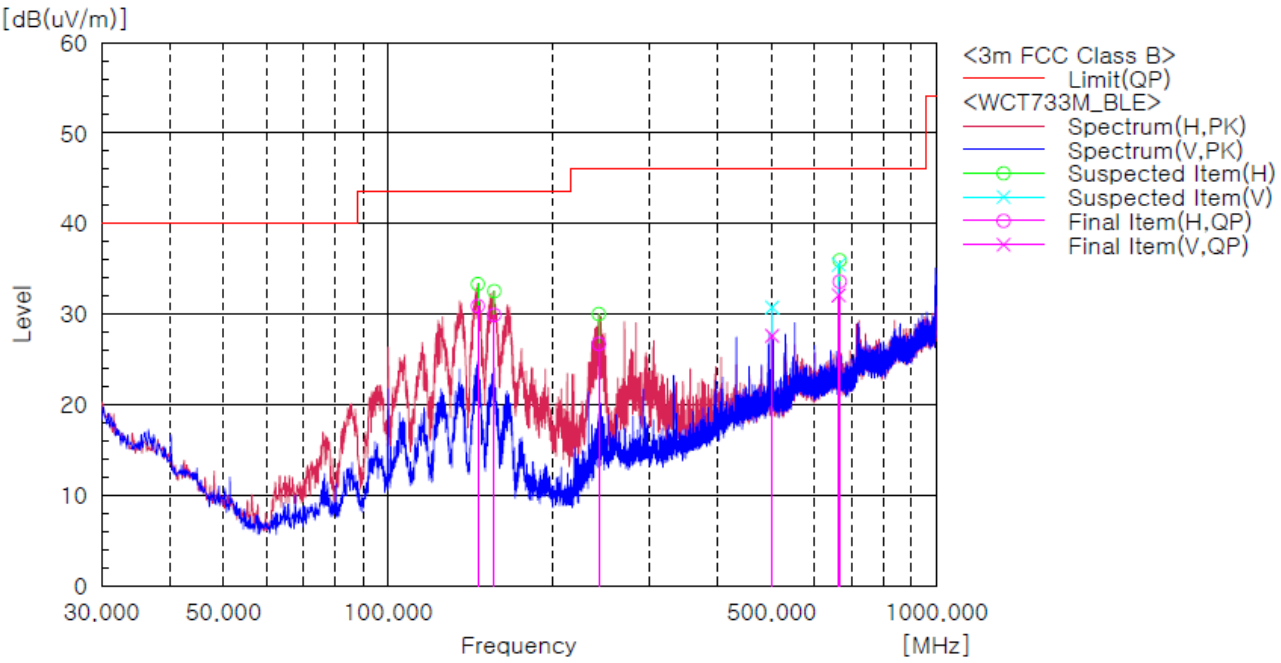
2) 30 MHz to 1 GHz

[WCT733M]

Test mode : Transmitter, BLE(Worst Case)

The requirements are:
☒ Complies

Test Data



Final Result

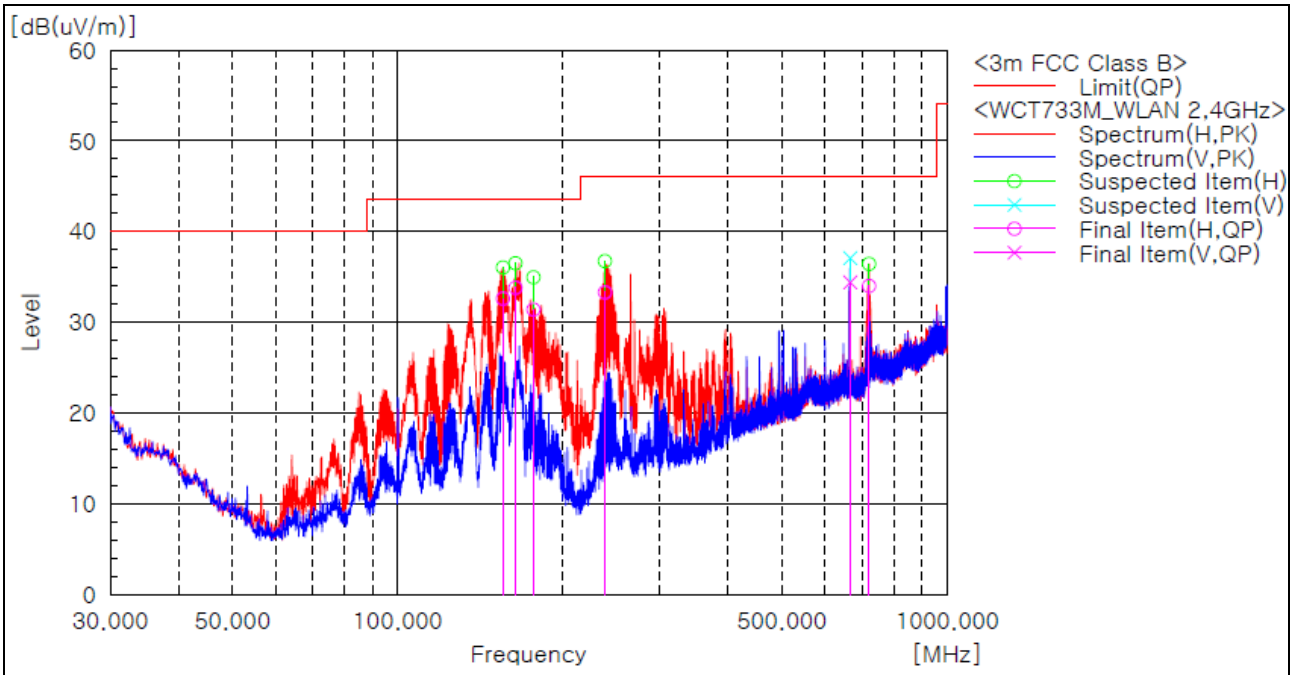
No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	145.794	H	42.8	-11.9	30.9	43.5	12.6	205.0	1.0
2	156.221	H	42.5	-12.6	29.9	43.5	13.6	205.0	356.0
3	242.309	H	37.2	-10.5	26.7	46.0	19.3	101.0	339.0
4	501.663	V	30.0	-2.4	27.6	46.0	18.4	101.0	254.0
5	663.895	V	31.3	0.8	32.1	46.0	13.9	101.0	97.0
6	666.563	H	32.9	0.7	33.6	46.0	12.4	101.0	236.0

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(X 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, 802.11g(Worst Case)

The requirements are:
☒ Complies

Test Data



Final Result

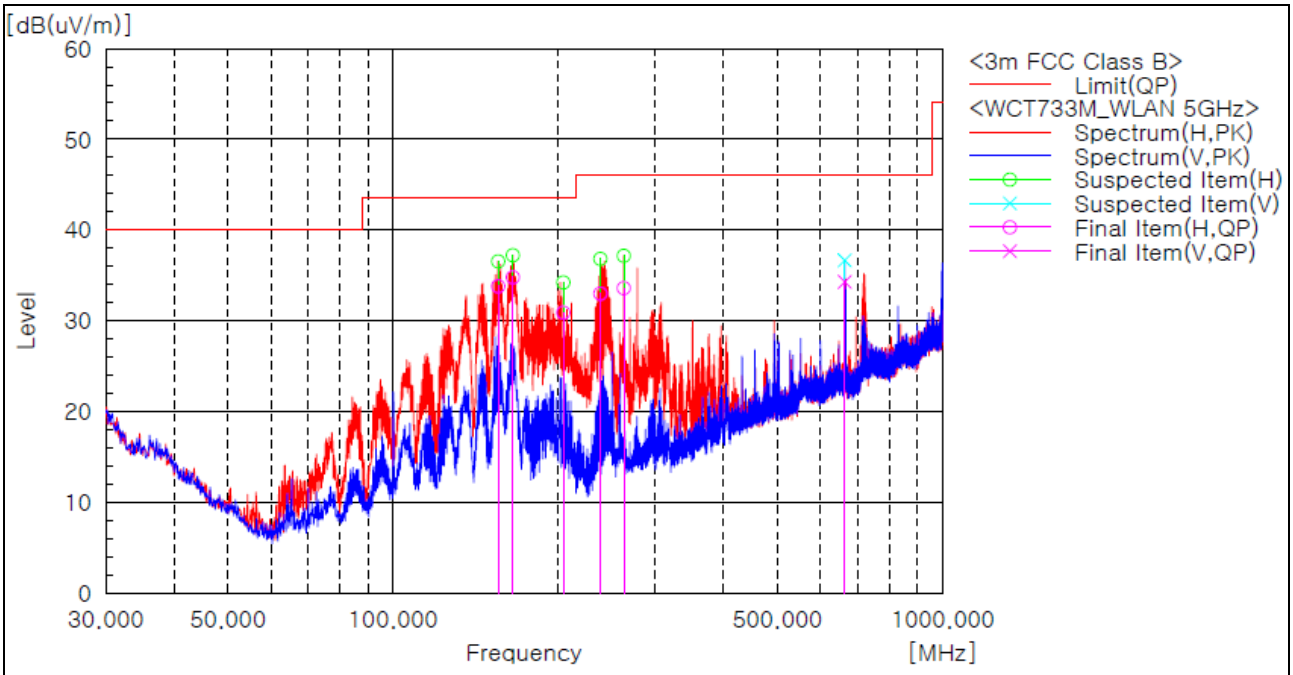
No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	155.615	H	45.2	-12.6	32.6	43.5	10.9	205.0	5.0
2	163.981	H	46.9	-13.1	33.8	43.5	9.7	205.0	9.0
3	176.834	H	45.3	-13.9	31.4	43.5	12.1	205.0	26.0
4	238.550	H	44.4	-11.1	33.3	46.0	12.7	101.0	349.0
5	666.441	V	33.7	0.7	34.4	46.0	11.6	100.0	54.0
6	721.489	H	31.8	2.2	34.0	46.0	12.0	101.0	177.0

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(X 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, 802.11a(Worst Case)

The requirements are:
☒ Complies

Test Data



Final Result

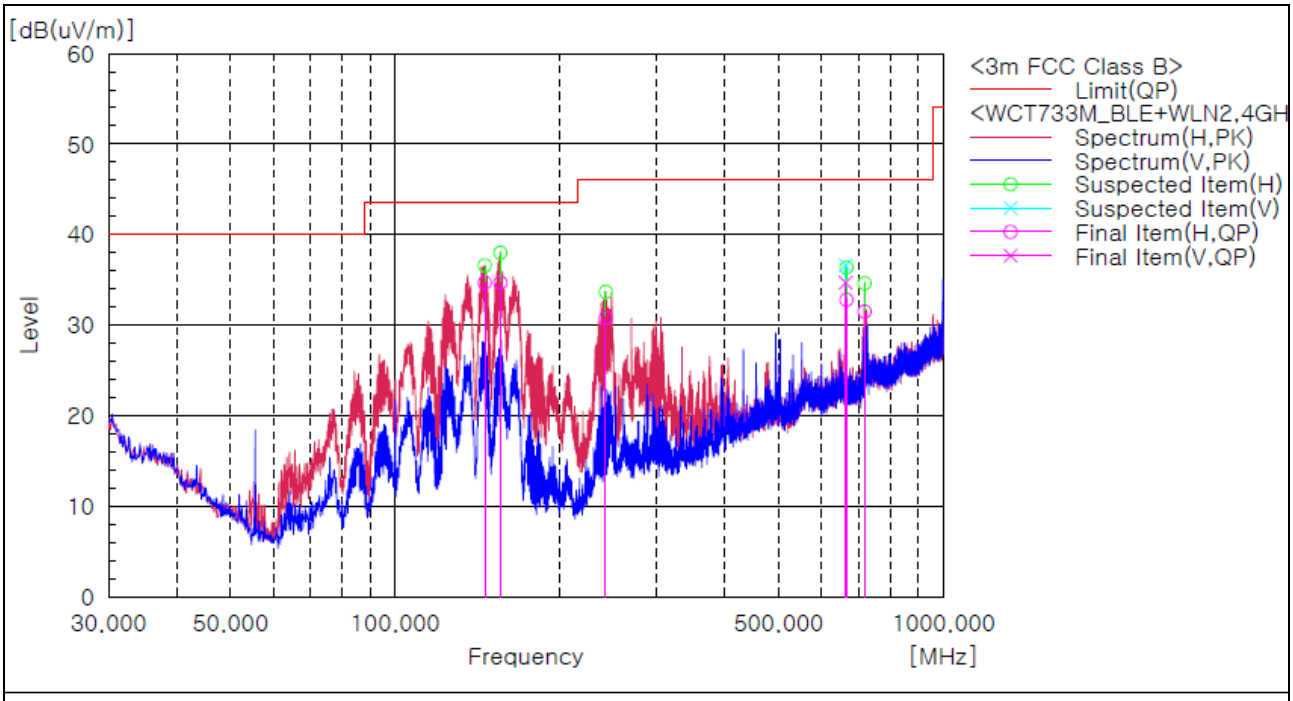
No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	155.373	H	46.3	-12.5	33.8	43.5	9.7	209.0	19.0
2	165.315	H	48.0	-13.2	34.8	43.5	8.7	209.0	14.0
3	204.236	H	44.6	-13.7	30.9	43.5	12.6	100.0	21.0
4	238.550	H	44.1	-11.1	33.0	46.0	13.0	100.0	21.0
5	263.043	H	42.0	-8.4	33.6	46.0	12.4	100.0	21.0
6	664.016	V	33.6	0.7	34.3	46.0	11.7	101.0	88.0

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(X 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+ WLAN 2.4GHz)
(Worst Case)

The requirements are:
☒ Complies

Test Data



Final Result

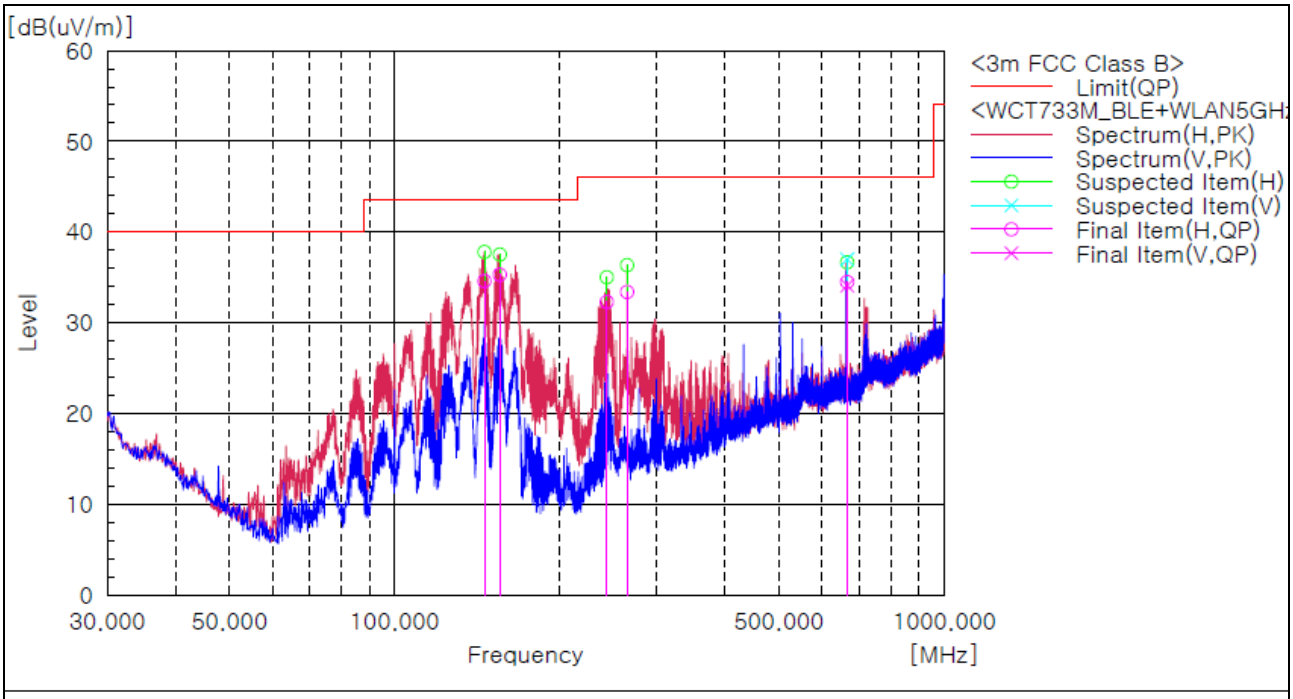
No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	145.810	H	46.6	-11.9	34.7	43.5	8.8	209.0	356.0
2	155.650	H	47.3	-12.6	34.7	43.5	8.8	209.0	1.0
3	242.188	H	41.3	-10.5	30.8	46.0	15.2	100.0	4.0
4	663.761	V	33.9	0.8	34.7	46.0	11.3	101.0	118.0
5	666.199	H	32.1	0.7	32.8	46.0	13.2	100.0	226.0
6	718.579	H	29.5	2.0	31.5	46.0	14.5	100.0	270.0

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(X 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+ WLAN 5GHz)
(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	145.794	H	46.5	-11.9	34.6	43.5	8.9	205.0	1.0
2	155.494	H	47.8	-12.5	35.3	43.5	8.2	306.0	359.0
3	243.521	H	42.6	-10.3	32.3	46.0	13.7	100.0	340.0
4	265.104	H	42.1	-8.7	33.4	46.0	12.6	100.0	330.0
5	666.441	V	33.4	0.7	34.1	46.0	11.9	101.0	91.0
6	666.563	H	33.8	0.7	34.5	46.0	11.5	100.0	207.0

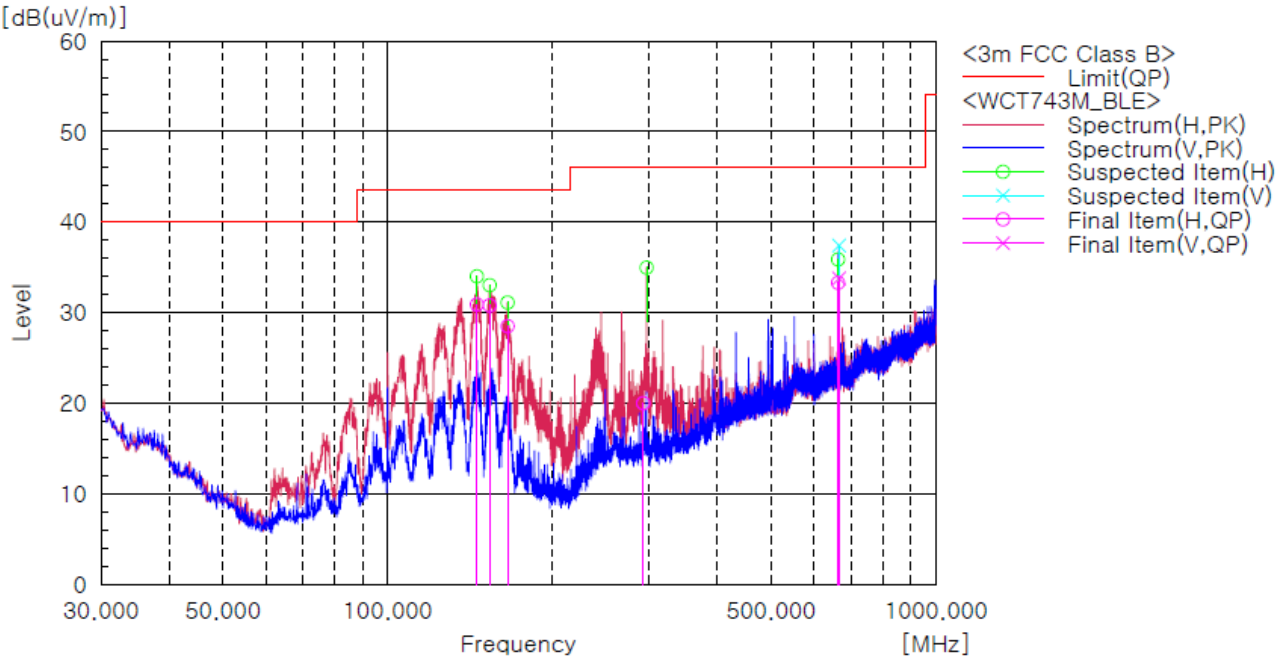
Remark :
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in stand-up position(X axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor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

[WCT734M]

Test mode : Transmitter, BLE(Worst Case)

The requirements are:
☒ Complies

Test Data



Final Result

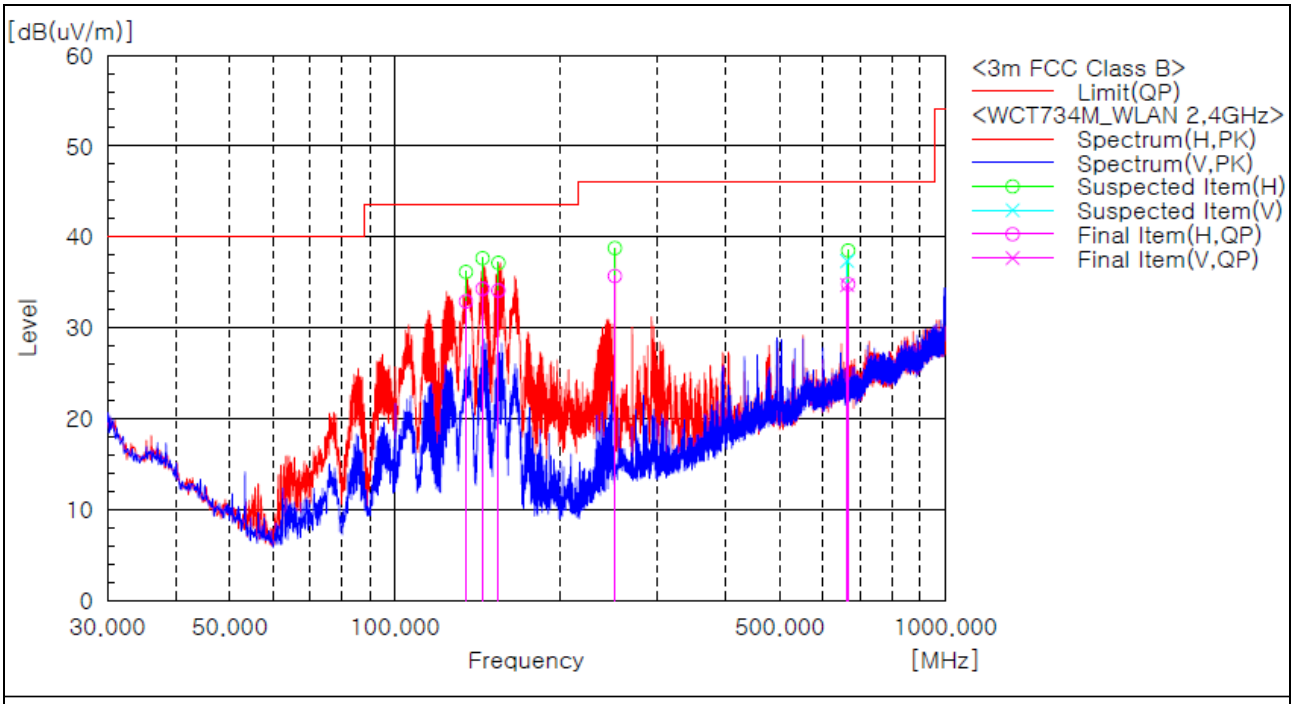
No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	145.551	H	42.8	-11.9	30.9	43.5	12.6	205.0	357.0
2	153.554	H	43.1	-12.3	30.8	43.5	12.7	205.0	21.0
3	165.558	H	41.7	-13.2	28.5	43.5	15.0	205.0	21.0
4	292.744	H	28.8	-8.8	20.0	46.0	26.0	101.0	329.0
5	663.774	H	32.5	0.8	33.3	46.0	12.7	101.0	226.0
6	666.199	V	33.1	0.7	33.8	46.0	12.2	101.0	91.0

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(X 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, 802.11g(Worst Case)

The requirements are:
☒ Complies

Test Data



Final Result

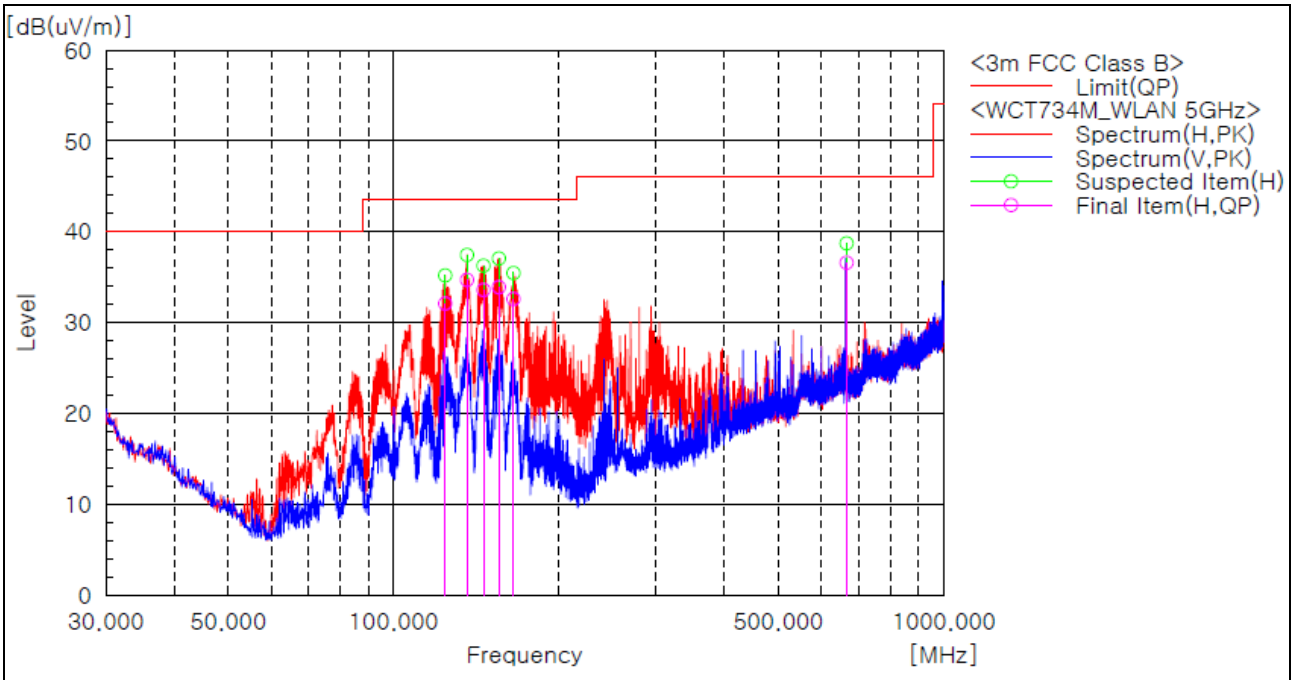
No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	134.639	H	44.5	-11.6	32.9	43.5	10.6	206.0	6.0
2	144.339	H	46.2	-11.9	34.3	43.5	9.2	206.0	0.0
3	154.160	H	46.5	-12.4	34.1	43.5	9.4	206.0	339.0
4	251.039	H	45.1	-9.4	35.7	46.0	10.3	101.0	1.0
5	664.016	V	34.0	0.7	34.7	46.0	11.3	100.0	90.0
6	666.441	H	34.1	0.7	34.8	46.0	11.2	101.0	238.0

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(X 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, 802.11a(Worst Case)

The requirements are:
☒ Complies

Test Data



Final Result

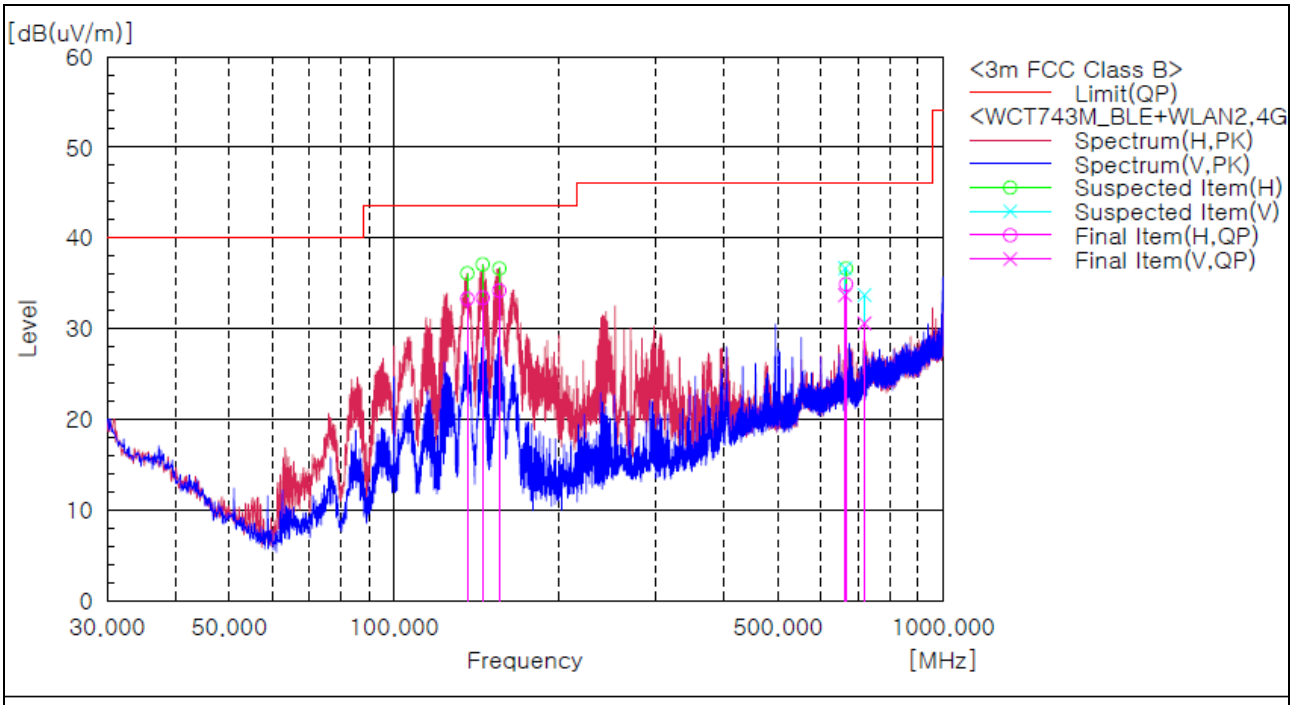
No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	124.211	H	44.0	-11.9	32.1	43.5	11.4	208.0	359.0
2	136.094	H	46.3	-11.6	34.7	43.5	8.8	306.0	1.0
3	145.794	H	45.5	-11.9	33.6	43.5	9.9	208.0	3.0
4	155.494	H	46.4	-12.5	33.9	43.5	9.6	208.0	339.0
5	165.315	H	45.8	-13.2	32.6	43.5	10.9	208.0	35.0
6	666.441	H	35.9	0.7	36.6	46.0	9.4	101.0	220.0

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(X 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+ WLAN 2.4GHz)
(Worst Case)

The requirements are:
☒ Complies

Test Data



Final Result

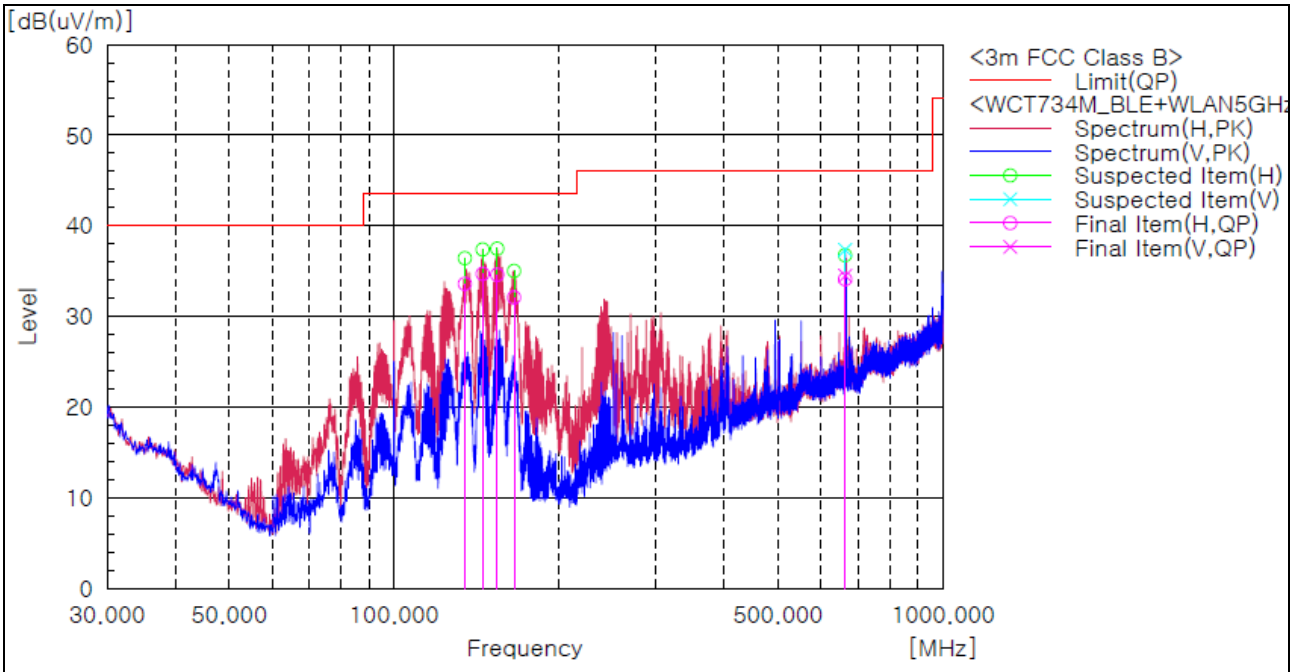
No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	135.973	H	44.9	-11.6	33.3	43.5	10.2	209.0	339.0
2	145.066	H	45.2	-11.8	33.4	43.5	10.1	209.0	13.0
3	155.615	H	46.8	-12.6	34.2	43.5	9.3	209.0	7.0
4	663.774	V	32.9	0.8	33.7	46.0	12.3	101.0	99.0
5	666.078	H	34.2	0.7	34.9	46.0	11.1	101.0	227.0
6	719.913	V	28.5	2.1	30.6	46.0	15.4	194.0	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(X 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+ WLAN 5GHz)
(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	134.639	H	45.2	-11.6	33.6	43.5	9.9	206.0	3.0
2	145.066	H	46.5	-11.8	34.7	43.5	8.8	206.0	6.0
3	154.160	H	47.0	-12.4	34.6	43.5	8.9	307.0	0.0
4	165.436	H	45.3	-13.2	32.1	43.5	11.4	206.0	6.0
5	663.774	H	33.3	0.8	34.1	46.0	11.9	101.0	221.0
6	663.895	V	33.7	0.8	34.5	46.0	11.5	101.0	123.0

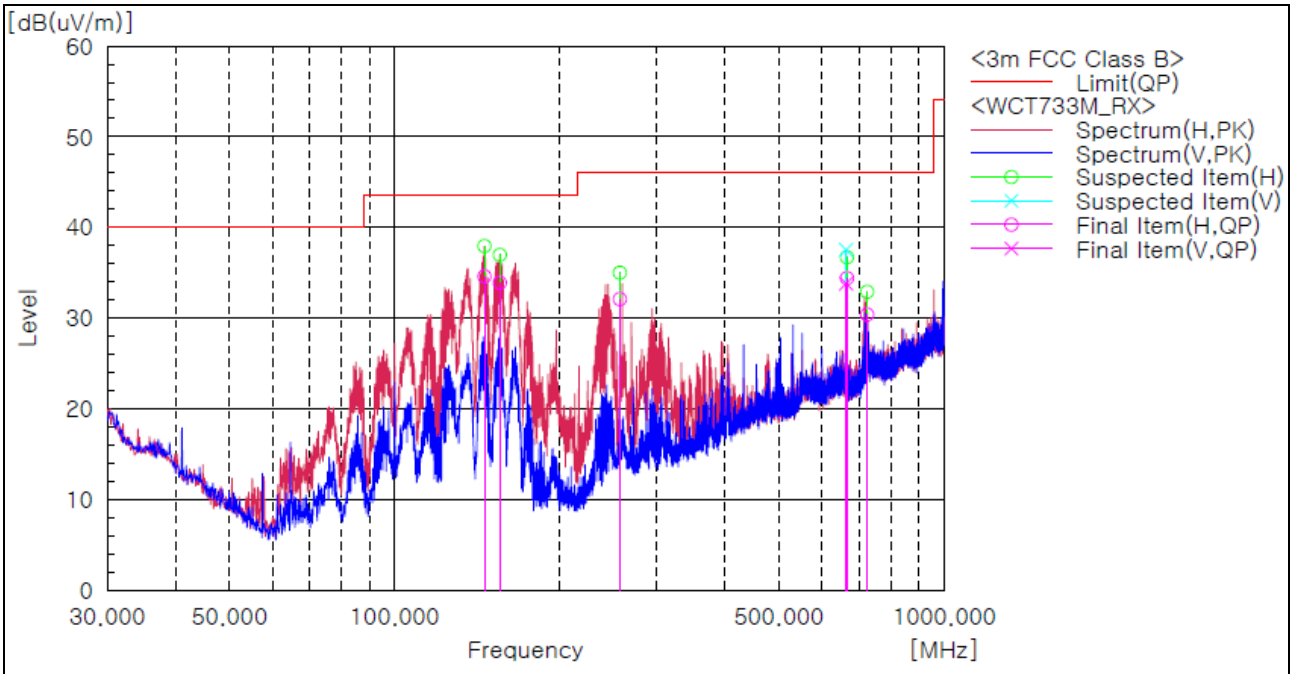
Remark :
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in stand-up position(X axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor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

[WCT733M]

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	145.794	H	46.5	-11.9	34.6	43.5	8.9	307.0	359.0
2	155.494	H	46.4	-12.5	33.9	43.5	9.6	205.0	347.0
3	257.223	H	40.6	-8.5	32.1	46.0	13.9	101.0	339.0
4	663.653	V	33.0	0.8	33.8	46.0	12.2	101.0	137.0
5	666.320	H	33.7	0.7	34.4	46.0	11.6	101.0	225.0
6	725.005	H	28.0	2.4	30.4	46.0	15.6	101.0	169.0

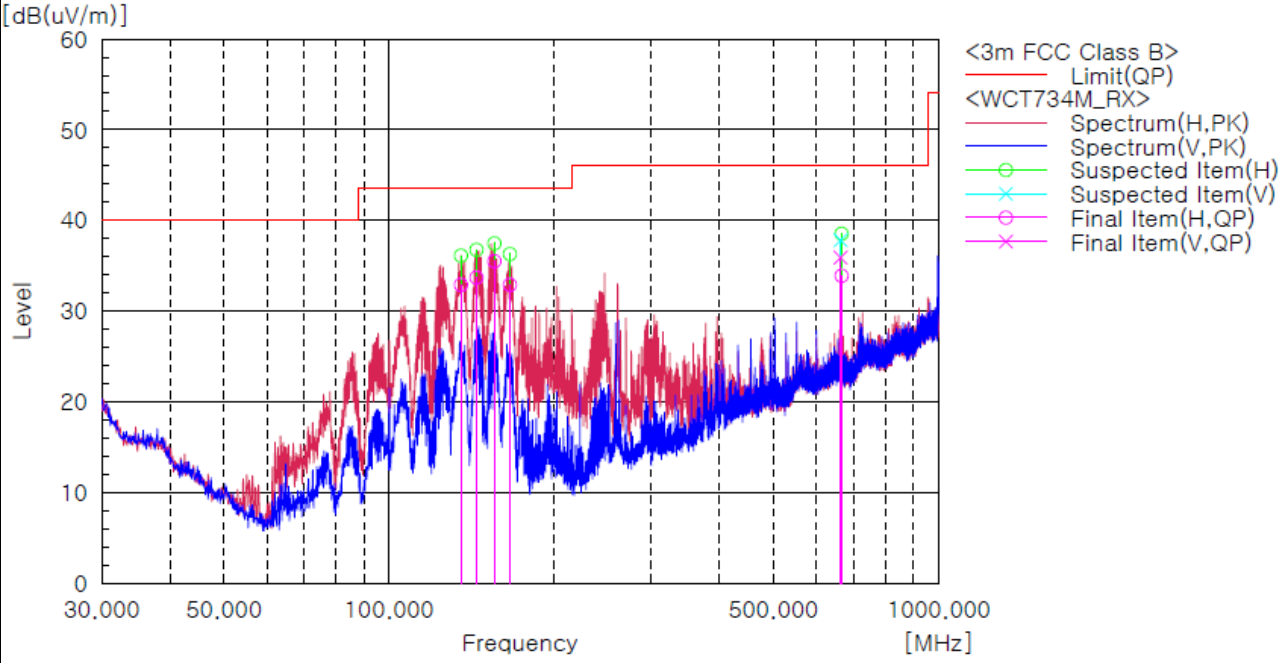
Remark :
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down positon(X,Y axis). The worst emission was found in stand-up position(X axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor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

[WCT734M]

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	135.245	H	44.5	-11.6	32.9	43.5	10.6	207.0	359.0
2	144.339	H	45.6	-11.9	33.7	43.5	9.8	207.0	5.0
3	155.615	H	48.1	-12.6	35.5	43.5	8.0	207.0	5.0
4	166.043	H	46.2	-13.3	32.9	43.5	10.6	207.0	6.0
5	663.774	V	35.1	0.8	35.9	46.0	10.1	101.0	93.0
6	666.563	H	33.2	0.7	33.9	46.0	12.1	101.0	221.0

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(X 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

APPENDIX A – Test Equipment Used For Tests

	Name of Equipment	Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date
1	EMI Test Receiver	Rohde & Schwarz	ESCI7	100814	2020-10-20	2021-10-20
2	Bilog Antenna	Schaffner	CBL6111C	2551	2020-05-26	2022-05-26
3	Active Loop Antenna	SCHWARZBECK	FMZB 1513	1513-126	2020-05-20	2022-05-20
4	6dB Attenuator	R&S	DNF	272.4110.50-2	2020-10-23	2021-10-23
5	6dB Attenuator	BIRD	5W 6dB	1744	2020-12-17	2021-12-17
6	AMPLIFIER	SONOMA	310	291721	2021-01-22	2022-01-22

	Cable	Manufacturer	Model No.	Serial No.	Check Date
1	RF Cable	HUBER+SUHNER	SUCOFLEX 104	MY27558/4	2021-02-20
2	RF Cable	HUBER+SUHNER	SUCOFLEX 104	N/A	2021-02-20
3	RF Cable	HUBER+SUHNER	SUCOFLEX 104	MY27573/4	2021-02-20
4	RF Cable	HUBER+SUHNER	SUCOFLEX 106	N/A	2021-02-20