

TEST REPORT



CTK Co., Ltd.
(Ho-dong), 113, Yejik-ro, Cheoin-gu,
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Report No.:
CTK-2021-04507
Page (1) / (22) Pages

1. Client

- Name : Haier US Appliance Solutions, Inc.
- Address : Appliance Park AP2-226, Louisville, KY 40225, United States
- Date of Receipt : 2020-10-28

2. Manufacturer

- Name : Haier US Appliance Solutions, Inc.
- Address : Appliance Park AP2-226, Louisville, KY 40225, United States

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

4. Test Sample / Model: Wi-Fi Module / WCATC001



5. Date of Test : 2021-11-29 to 2021-12-07

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

7. Testing Environment: Temp.: (24 ± 5) °C, 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)
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2021-12-09

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



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CTK-2021-04507
Page (2) / (22)Pages

REPORT REVISION HISTORY

Date	Revision	Page No
2021-12-09	Issued (CTK-2021-04507)	all

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Report No.:
CTK-2021-04507
Page (3) / (22)Pages

CONTENTS

1. General Product Description	4
1.1 Client Information	4
1.2 Product Information.....	4
1.3 Peripheral Devices	4
2. Facility and Accreditations.....	5
2.1 Test Facility	5
2.2 Laboratory Accreditations and Listings.....	5
2.3 Calibration Details of Equipment Used for Measurement.....	5
3. Test Specifications	6
3.1 Standards	6
3.2 Mode of operation during the test	7
3.3 Introduction	7
3.4 Differences.....	8
3.5 Maximum Measurement Uncertainty	8
3.6 Test Software	8
4. Technical Characteristic Test.....	9
4.1 Radiated Emission	9
4.2 AC Power Line Conducted Emissions.....	19
APPENDIX A – Test Equipment Used For Tests	22



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Page (4) / (22)Pages

1. General Product Description

1.1 Client Information

Company	Haier US Appliance Solutions, Inc.
Contact Point	Appliance Park AP2-226, Louisville, KY 40225, United States
Contact Person	Name : Park, Hansung E-mail : hansung.park@geappliances.com Tel : +82-31-8094-6732

1.2 Product Information

FCC ID	ZKJ-WCATC001
ISED	10229A-WCATC001
Product Description	Wi-Fi Module
Model name	WCATC001
Variant Model name	-
Operating Frequency	2 412 MHz – 2 462 MHz
RF Output Power	802.11b : 21.63 dBm (145.55 mW) 802.11g : 16.83 dBm (48.19 mW) 802.11n : 16.99 dBm (50.00 mW)
Antenna Specification	Antenna type : Chip Antenna Peak Gain : 1.47 dBi
Number of channels	11
Type of Modulation	802.11b : DSSS 802.11g/n : OFDM
Data Rate	802.11b : 11 / 5.5 / 2 / 1 Mbps 802.11g : 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6 Mbps 802.11n: MCS0-7, up to 72.2 Mbps
Power Source	DC 5 V, DC 13.6 V
Hardware Rev	1.4a
Software Rev	15.38

1.3 Peripheral Devices

Device	Manufacturer	Model No.	Serial No.
Note Computer	HP	15-bs563TU	CND7253QPR
AC/DC Adapter	HP	HSTNN-LA40	-



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CTK-2021-04507
Page (5) / (22)Pages

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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Report No.:
 CTK-2021-04507
 Page (6) / (22)Pages

3. Test Specifications

3.1 Standards

FCC Part Section(s)	Requirement(s)	Status (Note 1)	Test Condition
15.247(a)	6 dB Bandwidth	C (Note 5)	Conducted
15.247(b)	Maximum Output Power	C (Note 5)	
15.247(d)	Conducted Spurious emission	C (Note 5)	
15.247(d)	Unwanted Emission(Conducted)	C (Note 5)	
15.247(e)	Power Spectral Density	C (Note 5)	
15.209	Radiated Emissions (9 kHz ~ 1 GHz)	C	Radiated
15.209	Radiated Emissions (above 1 GHz)	C (Note 5)	
15.207	AC Conducted Emission	C	Line Conducted
<i>Note 1:</i> C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable			
<i>Note 2:</i> The data in this test report are traceable to the national or international standards.			
<i>Note 3:</i> The sample was tested according to the following specification: FCC Part 15.247, ANSI C63.10-2013			
<i>Note 4:</i> The tests were performed according to the method of measurements prescribed in KDB No.558074.			
<i>Note 5:</i> etc. : The conformity assessment of except for this item was confirmed by the other report. (Test Report No. CTK-2019-00690 issued on 2019-02-26 by CTK Co., Ltd..)			

ISED Part Section(s)	Requirement(s)	Status (Note 1)	Test Condition
RSS-Gen 6.6	6 dB Bandwidth	C (Note 5)	Conducted
RSS-247 5.4(d)	Maximum Output Power	C (Note 5)	
RSS-Gen 6.13	Conducted Spurious emission	C (Note 5)	
RSS-Gen 6.13	Unwanted Emission(Conducted)	C (Note 5)	
RSS-247 5.2(b)	Power Spectral Density	C (Note 5)	
RSS-Gen 6.13	Radiated Emissions (9 kHz ~ 1 GHz)	C	Radiated
RSS-Gen 6.13	Radiated Emissions (above 1 GHz)	C (Note 5)	
RSS-Gen 5	Receiver Spurious Emissions (9 kHz ~ 1 GHz)	C	
RSS-Gen 5	Receiver Spurious Emissions (above 1 GHz)	C (Note 5)	
RSS-Gen 8.8	AC Conducted Emission	C	Line Conducted
<i>Note 1:</i> C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable			
<i>Note 2:</i> The data in this test report are traceable to the national or international standards.			
<i>Note 3:</i> The sample was tested according to the following specification: ISED RSS-247 Issue 2, RSS-GEN Issue 5, ANSI C63.10-2013			
<i>Note 4:</i> The tests were performed according to the method of measurements prescribed in KDB No.558074.			
<i>Note 5:</i> etc. : The conformity assessment of except for this item was confirmed by the other report. (Test Report No. CTK-2019-00690 issued on 2019-02-26 by CTK Co., Ltd..)			



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Report No.:
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Page (7) / (22)Pages

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

Lowest channel	Middle channel	Highest channel
2 412 MHz	2 442 MHz	2 462 MHz

Test mode

Test mode	Modulation	Data rate	Duty Cycle	Duty Cycle Factor
802.11b	DSSS	1 Mbps	99.0%	-
802.11g	OFDM	6 Mbps	94.2%	0.26 dB
802.11n	OFDM	MCS 0	93.9%	0.27 dB

3.3 Introduction

The before change and the after changing PCB has identical PCB layout, antenna, SW implementation for Wi-Fi. Based on their similarity, the FCC Part 15C (equipment class: DTS) test data issued data of WCATC001 references the test data of existing report. (Test Report No. CTK-2019-00690 issued on 2019-02-26 by Haier US Appliance Solutions, Inc..)

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID (FCC ID: ZKJ-WCATC001) and IC Cert.No(IC : 10229A-WCATC001).



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Page (8) / (22)Pages

3.4 Differences

There are some minor changes to improve power stability, and there is no change in the operating voltage level.

- 1) Changed the buck boost converter and regulator products that convert the power level.
- 2) The two input power sources are completely separated by using a load switch.

Except for the mentioned changes, has identical PCB layout, antenna, SW implementation for Wi-Fi.

Except for the mentioned changes, the device remains electrically, Software Configuration and mechanically identical to the originally certified device and no changes have been made.

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
Line Conducted Emissions (150 kHz to 30 MHz)	1.96 dB (C.L.: Approx. 95 %, $k = 2$)
Radiated Emissions ($f \leq 1$ GHz)	4.66 dB (C.L.: Approx. 95 %, $k = 2$)

3.6 Test Software

Radiated Test	TOYO EMI software EP5RE Ver. 6.0.1.0
Line Conducted Test	ESCI7, ESCI3 : EMC32 Ver. 8.50.0 ESR7 : EMC32 Ver. 8.53.0



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Page (9) / (22)Pages

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 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



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 Page (10) / (22)Pages

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 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.



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Page (11) / (22)Pages

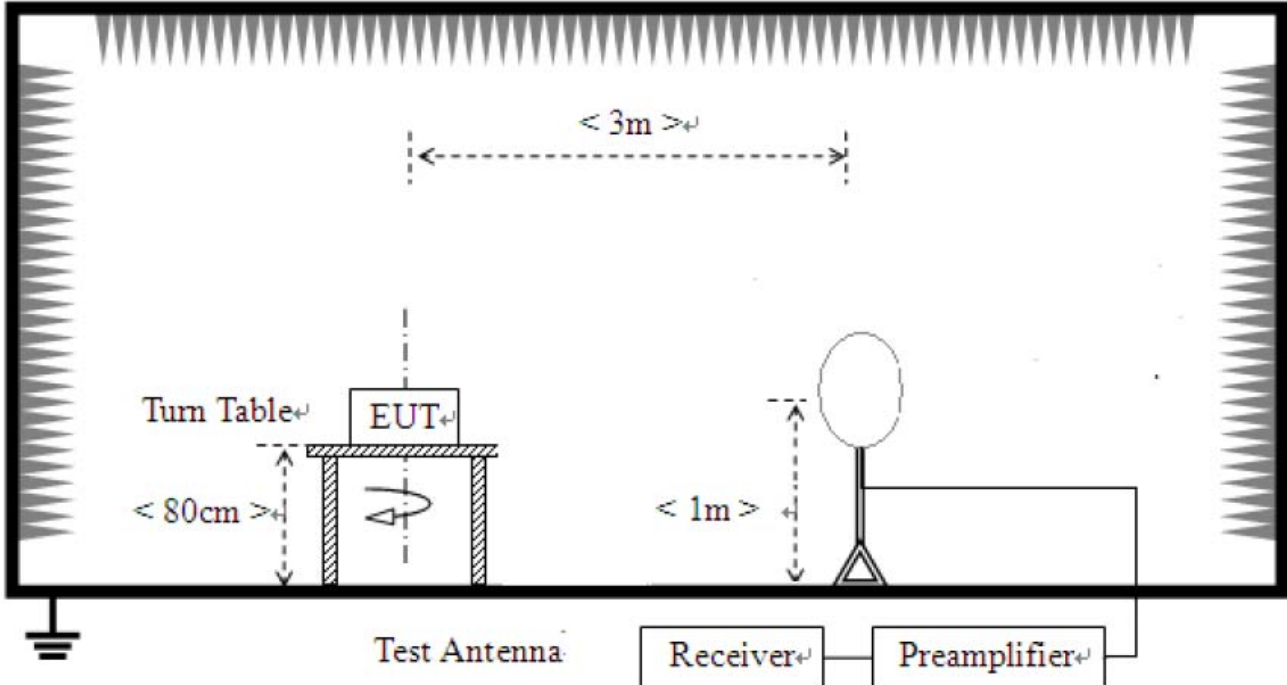
FCC Part 15 § 15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table :

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

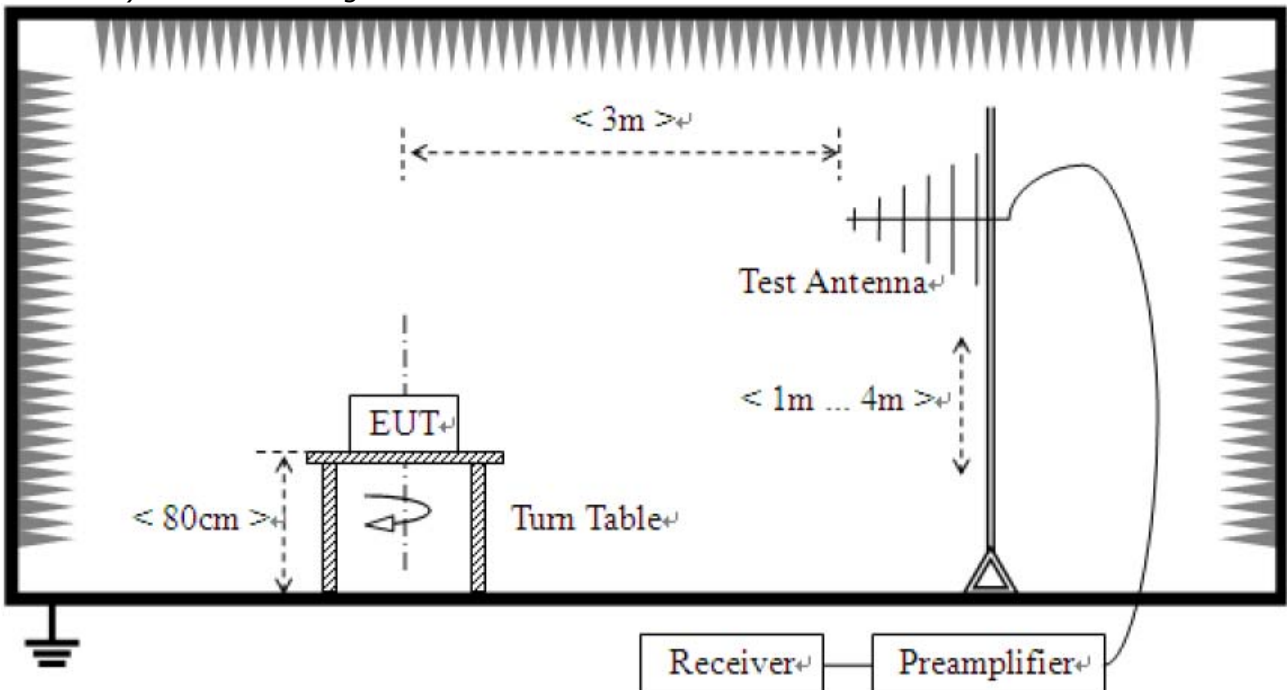
** Except as provided in 15.209(g).fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72MHz, 76-88MHz, 174-216MHz, 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g.15.231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

This EUT is supported the DC 5 V and DC 13.6 V. We have done all test mode. Worst case is DC 5 V. So the worst data of DC 5 V are shown.

Test results

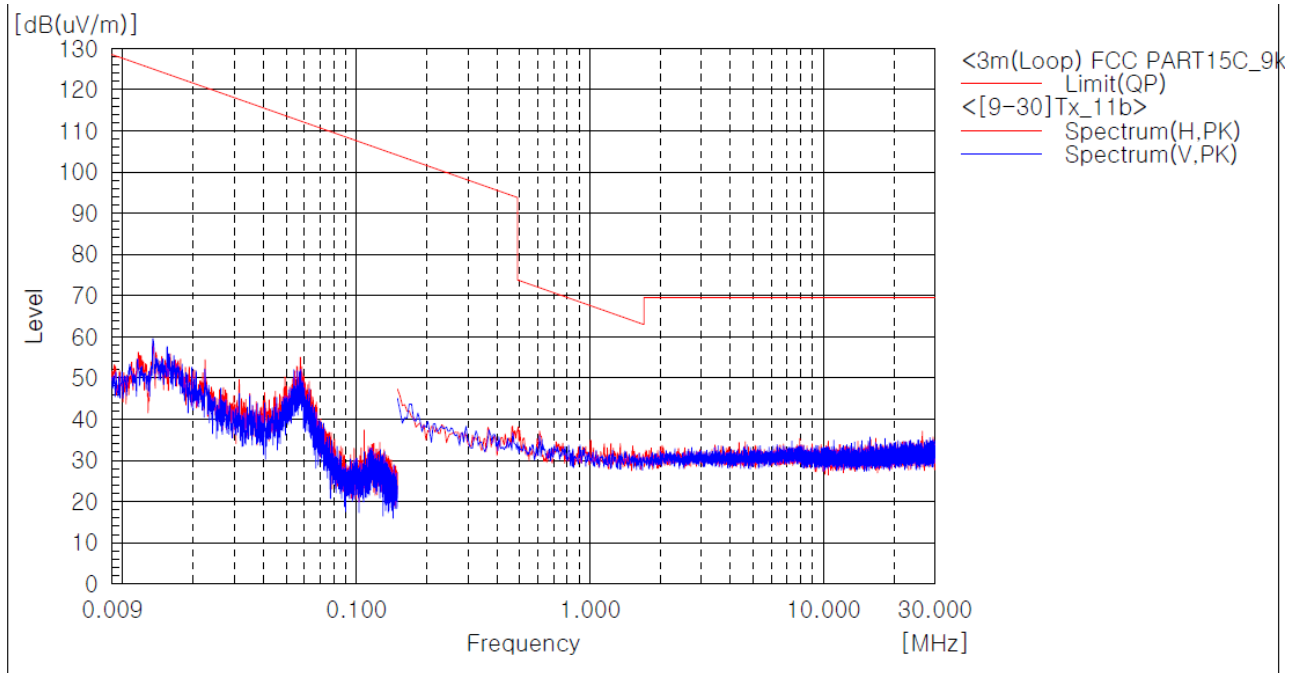
1) 9 kHz to 30 MHz

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 :

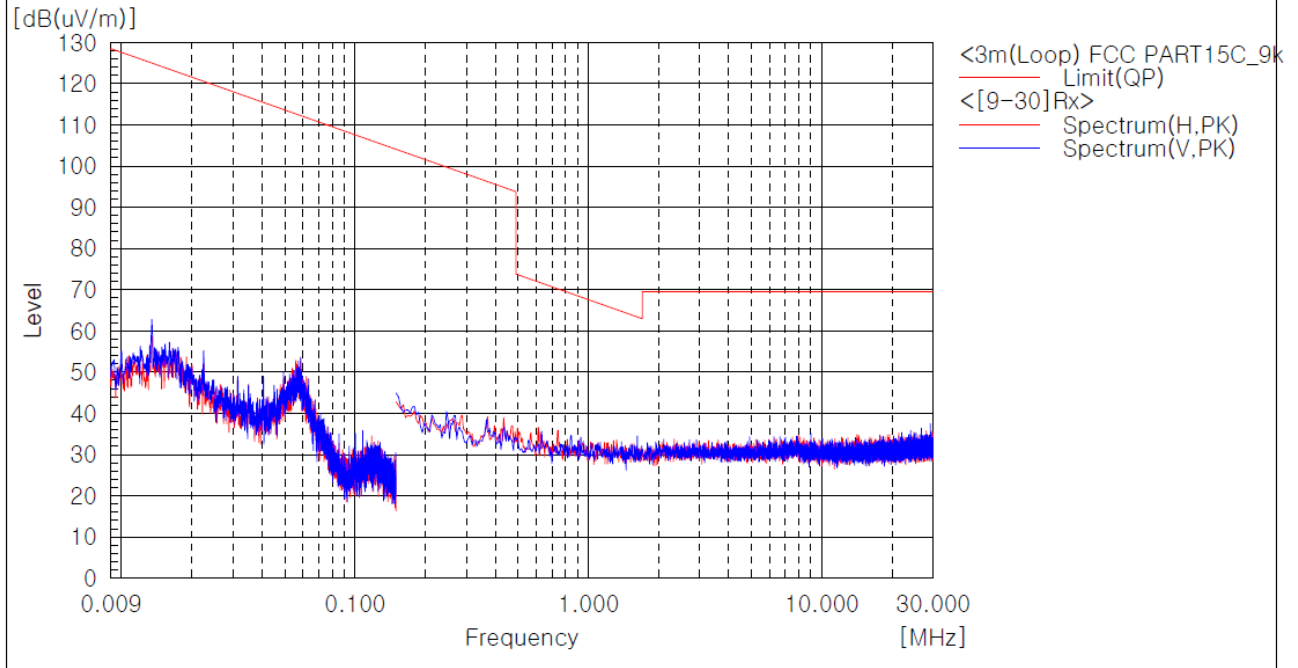
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor +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

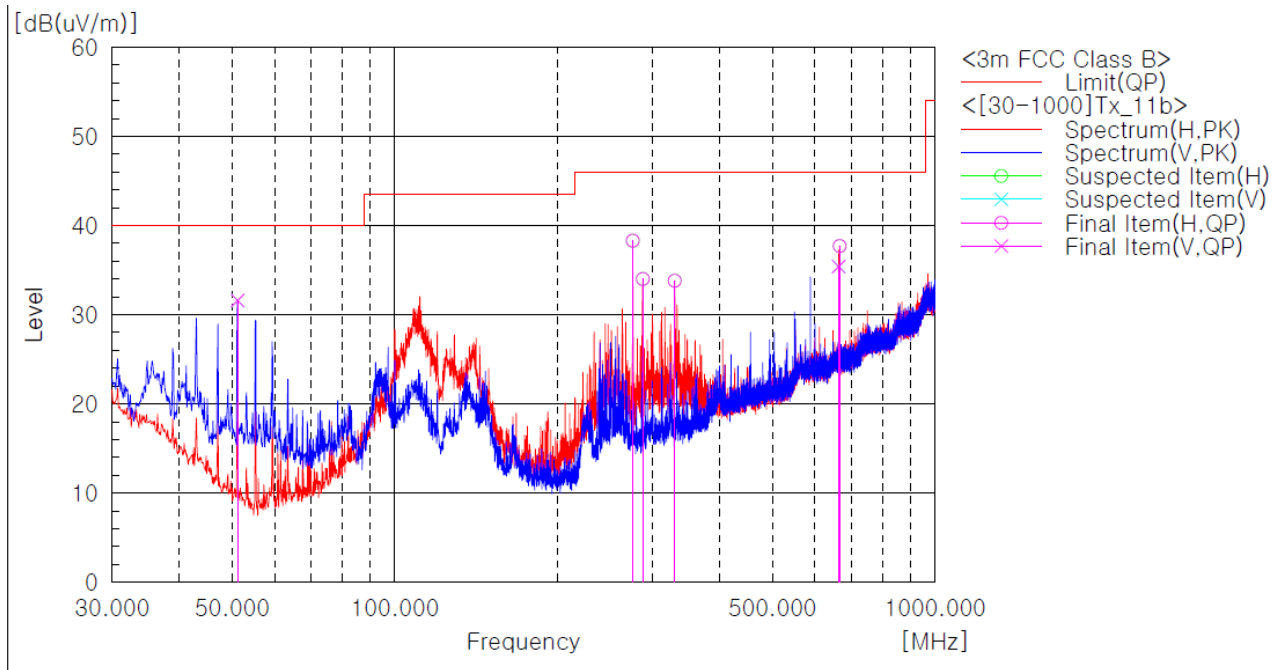
2) 30 MHz to 1 GHz

Test mode : Transmitter, 802.11b (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	51.219	V	48.5	-16.9	31.6	40.0	8.4	101.0	6.0
2	276.016	H	47.7	-9.4	38.3	46.0	7.7	101.0	355.0
3	288.020	H	43.1	-9.1	34.0	46.0	12.0	101.0	262.0
4	329.973	H	41.6	-7.8	33.8	46.0	12.2	101.0	1.0
5	663.774	V	34.3	1.1	35.4	46.0	10.6	101.0	184.0
6	666.441	H	36.7	1.0	37.7	46.0	8.3	206.0	237.0

Remark :

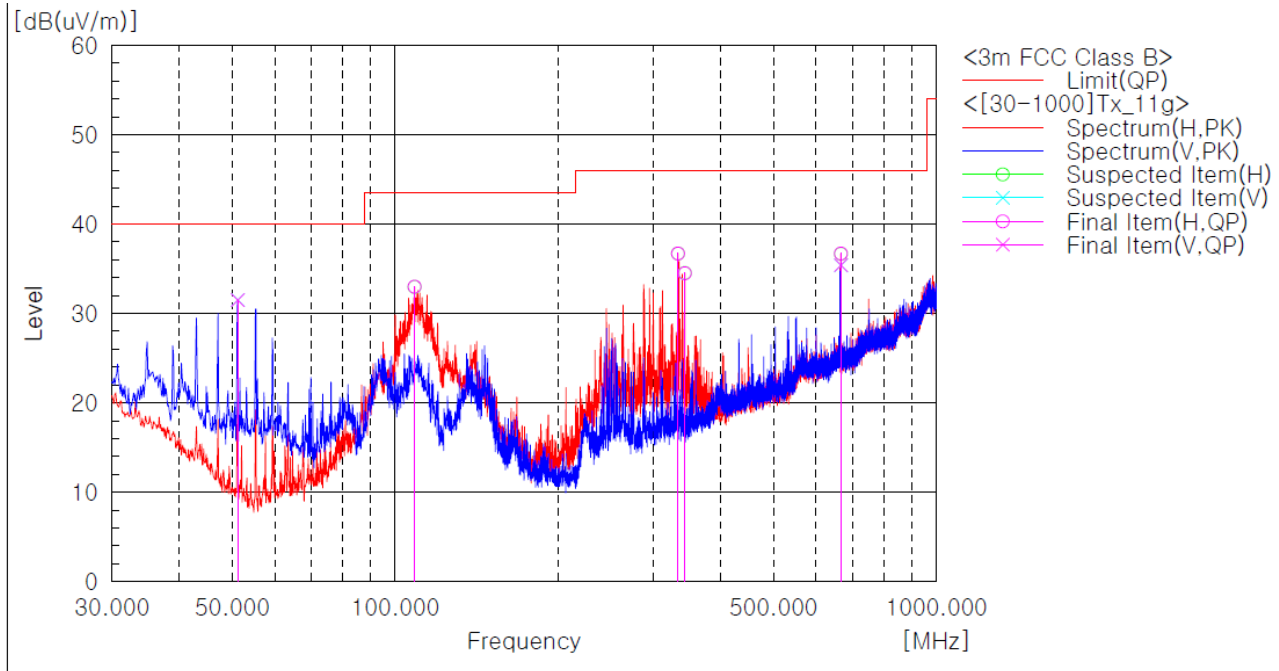
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor +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

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	51.219	V	48.4	-16.9	31.5	40.0	8.5	101.0	270.0
2	108.691	H	45.7	-12.7	33.0	43.5	10.5	305.0	21.0
3	333.368	H	44.4	-7.7	36.7	46.0	9.3	101.0	21.0
4	343.189	H	41.9	-7.4	34.5	46.0	11.5	101.0	130.0
5	666.441	H	35.7	1.0	36.7	46.0	9.3	101.0	210.0
6	666.563	V	34.4	1.0	35.4	46.0	10.6	191.0	206.0

Remark :

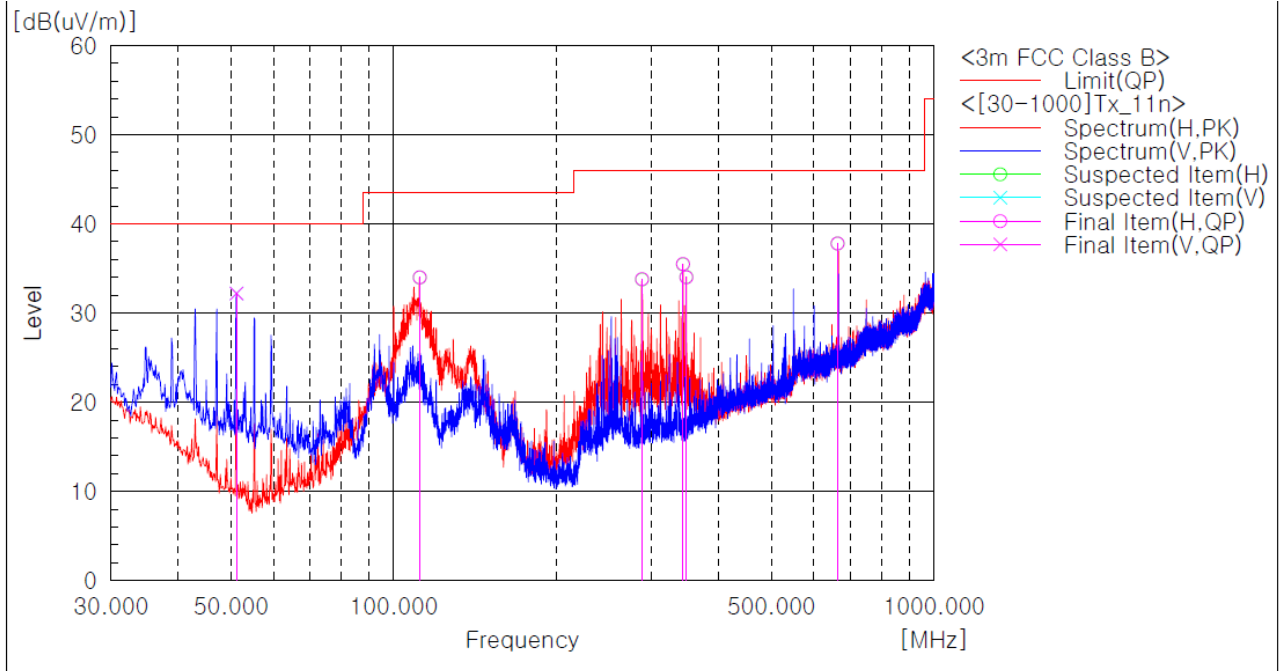
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor +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

Test mode : Transmitter, 802.11n (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	51.219	V	49.1	-16.9	32.2	40.0	7.8	101.0	312.0
2	111.844	H	46.9	-12.9	34.0	43.5	9.5	205.0	5.0
3	288.384	H	42.9	-9.1	33.8	46.0	12.2	101.0	252.0
4	343.310	H	42.9	-7.4	35.5	46.0	10.5	101.0	97.0
5	348.281	H	41.2	-7.2	34.0	46.0	12.0	101.0	355.0
6	663.774	H	36.7	1.1	37.8	46.0	8.2	205.0	227.0

Remark :

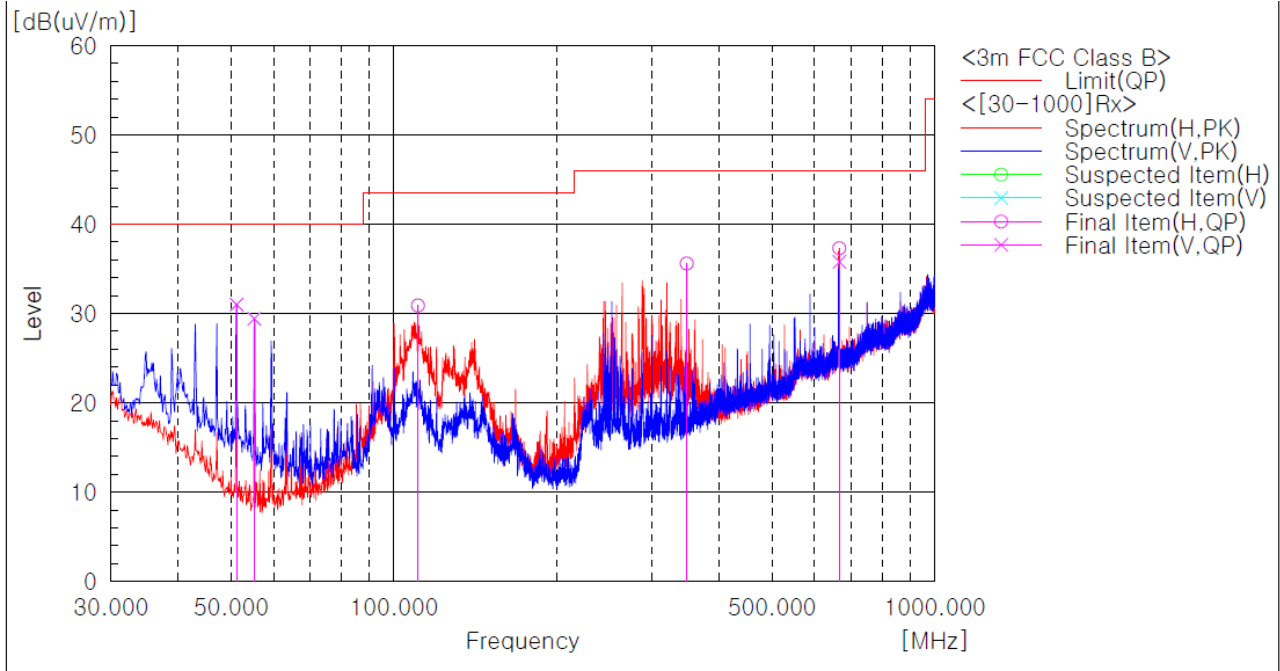
1. The unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor +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

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	51.219	V	47.9	-16.9	31.0	40.0	9.0	101.0	249.0
2	55.220	V	47.7	-18.3	29.4	40.0	10.6	101.0	272.0
3	110.874	H	43.6	-12.7	30.9	43.5	12.6	209.0	200.0
4	348.039	H	42.9	-7.3	35.6	46.0	10.4	101.0	253.0
5	666.320	H	36.3	1.0	37.3	46.0	8.7	209.0	223.0
6	666.563	V	34.8	1.0	35.8	46.0	10.2	101.0	97.0

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
4. This data is the Peak(PK) value.



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CTK-2021-04507
Page (19) / (22)Pages

4.2 AC Power Line Conducted Emissions

A radio apparatus that is designed to be connected to the public utility (AC) power line shall ensure that the radio frequency voltage, which is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz-30 MHz, shall not exceed the limits.

Instrument Settings

IF Band Width: 9 kHz

Test Procedures

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

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

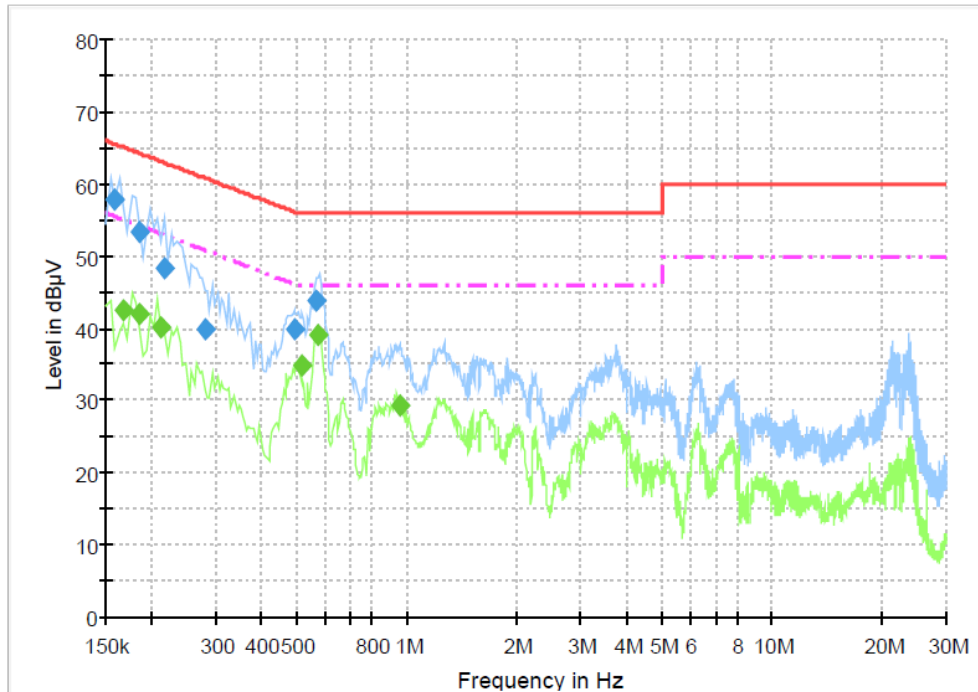
The requirements are:

Complies

Test Data

[LINE]

3CE_Class B_L1



Final Result 1

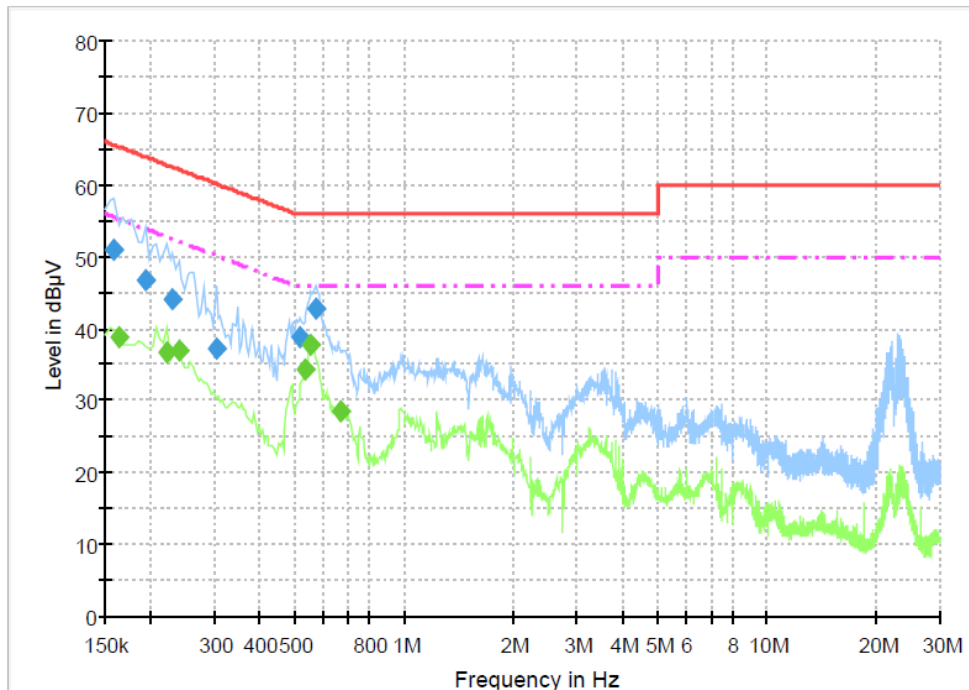
Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.159000	57.8	1000.0	9.000	On	L1	9.9	7.7	65.5
0.186000	53.3	1000.0	9.000	On	L1	9.9	10.9	64.2
0.217500	48.4	1000.0	9.000	On	L1	9.8	14.5	62.9
0.280500	40.0	1000.0	9.000	On	L1	9.7	20.8	60.8
0.492000	39.9	1000.0	9.000	On	L1	9.9	16.2	56.1
0.564000	43.8	1000.0	9.000	On	L1	9.9	12.2	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.168000	42.4	1000.0	9.000	On	L1	10.0	12.6	55.1
0.186000	42.0	1000.0	9.000	On	L1	9.9	12.2	54.2
0.213000	40.1	1000.0	9.000	On	L1	9.8	13.0	53.1
0.514500	34.9	1000.0	9.000	On	L1	9.9	11.1	46.0
0.573000	39.1	1000.0	9.000	On	L1	9.9	6.9	46.0
0.964500	29.4	1000.0	9.000	On	L1	9.8	16.6	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)
0.159000	51.0	1000.0	9.000	On	N	9.9	14.5	65.5
0.195000	46.7	1000.0	9.000	On	N	9.9	17.1	63.8
0.231000	44.0	1000.0	9.000	On	N	9.7	18.4	62.4
0.303000	37.1	1000.0	9.000	On	N	9.8	23.0	60.2
0.519000	38.8	1000.0	9.000	On	N	9.9	17.2	56.0
0.573000	42.7	1000.0	9.000	On	N	9.9	13.3	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.163500	38.8	1000.0	9.000	On	N	10.0	16.5	55.3
0.222000	36.8	1000.0	9.000	On	N	9.7	16.0	52.7
0.240000	36.9	1000.0	9.000	On	N	9.7	15.2	52.1
0.532500	34.3	1000.0	9.000	On	N	9.9	11.7	46.0
0.555000	37.6	1000.0	9.000	On	N	9.9	8.4	46.0
0.667500	28.5	1000.0	9.000	On	N	9.9	17.5	46.0



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Report No.:
 CTK-2021-04507
 Page (22) / (22)Pages

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	2021-10-20	2022-10-20
2	Bilog Antenna	TESEQ	CBL6111D	58490	2021-03-03	2023-03-03
3	Active Loop Antenna	SCHWARZBECK	FMZB 1513	1513-126	2020-05-20	2022-05-20
4	6dB Attenuator	PASTERNAK	PE7047-6	NONE	2021-02-26	2022-02-26
5	6dB Attenuator	BIRD	5W 6dB	1744	2021-11-18	2022-11-18
6	AMPLIFIER	SONOMA	310	291721	2021-01-22	2022-01-22
7	LISN	Rohde & Schwarz	ENV216	101235	2021-01-12	2022-01-12
8	EMI Test Receiver	Rohde & Schwarz	ESCI7	100814	2021-10-20	2022-10-20

	Cable	Manufacturer	Model No.	Serial No.	Check Date
1	RF Cable	Canare Corporation	L-5D2W	N/A	2021-01-21
2	RF Cable	HUBER+SUHNER	SUCOFLEX 104	MY27558/4	2021-06-01
3	RF Cable	HUBER+SUHNER	SUCOFLEX 104	N/A	2021-06-01
4	RF Cable	HUBER+SUHNER	SUCOFLEX 104	MY27573/4	2021-06-01
5	RF Cable	HUBER+SUHNER	SUCOFLEX 106	N/A	2021-06-01