

FCC REPORT

Applicant: COPPERNIC

Address of Applicant: 185 avenue Archimede, 13857 Aix en Provence, FRANCE

Equipment Under Test (EUT)

Product Name: C-One e-ID, RAPID3

Model No.: C-One e-ID

Trade mark: COPPERNIC, IDEMIA

FCC ID: XGK-C-ONE-EID-ELY

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.225

Date of sample receipt: 11 Nov., 2019

Date of Test: 12 Nov., to 30 Dec., 2019

Date of report issue: 31 Dec., 2019

Test Result: PASS*

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Bruce Zhang
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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2 Version

Version No.	Date	Description
00	31 Dec., 2019	Original

Tested by:

Mike.ou

Date:

31 Dec., 2019

Test Engineer

Reviewed by:

Winner Zhang

Date:

31 Dec., 2019

Project Engineer

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4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
Field strength of the fundamental signal	15.225 (a)	Pass
Spurious emissions	15.225(d) & 15.209	Pass
20dB Bandwidth	15.215(c)	Pass
Frequency tolerance	15.225 (e)	Pass
Conducted Emission	15.207	Pass

Remark:

1. Pass: The EUT complies with the essential requirements in the standard.
2. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).

Test Method:	ANSI C63.4-2014 ANSI C63.10-2013
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5 General Information

5.1 Client Information

Applicant:	COPPERNIC
Address:	185 avenue Archimede, 13857 Aix en Provence, FRANCE
Manufacturer:	ASKEY COMPUTER Corp.
Address:	10 F, N°119, JIANKANG RD., ZHONGHE DIST., New Taipei City, TAIWAN

5.2 General Description of E.U.T.

Product Name:	C-One e-ID, RAPID3
Model No.:	C-One e-ID
Operation Frequency:	13.56MHz
Channel numbers:	1
Modulation type:	ASK
Antenna Type:	Induction Coil Antenna
Power supply:	Rechargeable Li-ion Battery DC3.7V/3300mAh
AC adapter:	Model No.: SYS1561-1105-1 Input: AC100-240V, 50/60Hz 1.0 A Output: DC 5.35V, 2.0A
Test Sample Condition:	The test samples were provided in good working order with no visible defects.
Remark:	Product Name: C-One e-ID, RAPID3 were identical inside, the electrical circuit design, layout, components used and internal wiring. They only differences were Trade mark: C-One e-ID (for trade mark COPPERNIC) RAPID3 (for trade mark IDEMIA)

5.3 Test mode

Transmitting mode:	Keep the EUT in transmitting mode with modulation					
Pre-Test Mode:						
CCIS has verified the construction and function in typical operation, The EUT was placed on three different polar directions; i.e. X axis, Y axis, Z axis. which was shown in this test report and defined as follows:						
Axis	X	Y	Z			
Field Strength(dBuV/m)	39.52	35.04	37.71			
Final Test Mode:						
According to ANSI C63.4 standards, the test results are both the "worst case" and "worst setup": Y axis (see the test setup photo).						

5.4 Description of Support Units

N/A

5.5 Measurement Uncertainty

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±1.60 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±3.12 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.32 dB (k=2)

5.6 Additions to, deviations, or exclusions from the method

No

5.7 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC- Designation No.: CN1211**

Shenzhen ZhongjianNanfang Testing Co., Ltd.has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber of Shenzhen ZhongjianNanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L6048**

Shenzhen ZhongjianNanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

5.8 Laboratory Location

Shenzhen ZhongjianNanfang Testing Co., Ltd.

Address: No.B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755-23118282, Fax:+86-755-23116366

Email: info@ccis-cb.com, Website: <http://www.ccis-cb.com>

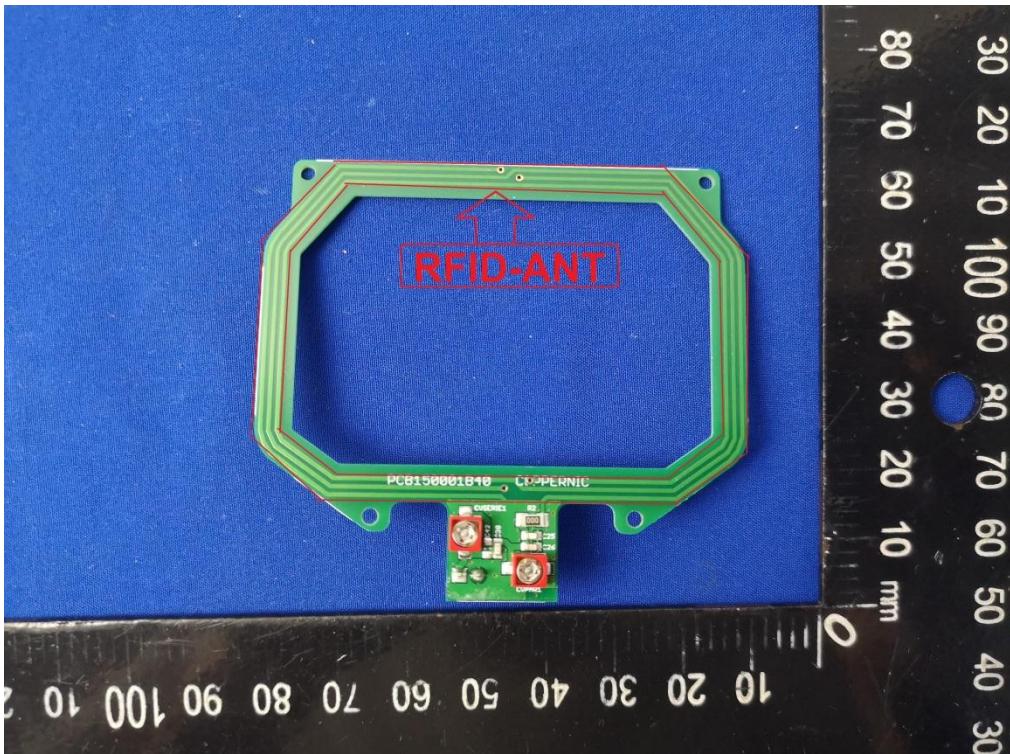
5.9 Test Instrumentslist

Radiated Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	SAEMC	9m*6m*6m	966	07-22-2017	07-21-2020
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-18-2019	03-17-2020
Biconical Antenna	SCHWARZBECK	VUBA9117	359	06-22-2017	06-21-2020
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-18-2019	03-17-2020
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2017	06-21-2020
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-21-2018	11-20-2019
				11-21-2019	11-20-2020
Loop Antenna	SCHWARZBECK	FMZB 1519 B	00044	03-18-2019	03-17-2020
EMI Test Software	AUDIX	E3	Version: 6.110919b		
Pre-amplifier	HP	8447D	2944A09358	03-18-2019	03-17-2020
Pre-amplifier	CD	PAP-1G18	11804	03-18-2019	03-17-2020
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-18-2019	03-17-2020
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-21-2018	11-20-2019
				11-21-2019	11-20-2020
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-18-2019	03-17-2020
Signal Generator	Rohde & Schwarz	SMX	835454/016	03-18-2019	03-17-2020
Signal Generator	R&S	SMR20	1008100050	03-18-2019	03-17-2020
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-18-2019	03-17-2020
Cable	MICRO-COAX	MFR64639	K10742-5	03-18-2019	03-17-2020
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-18-2019	03-17-2020

Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	07-22-2017	07-21-2020
EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	03-18-2019	03-17-2020
LISN	CHASE	MN2050D	CCIS0074	03-18-2019	03-17-2020
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2018	07-20-2021
Coaxial Cable	CCIS	N/A	CCIS0086	03-18-2019	03-17-2020
EMI Test Software	AUDIX	E3	Version: 6.110919b		

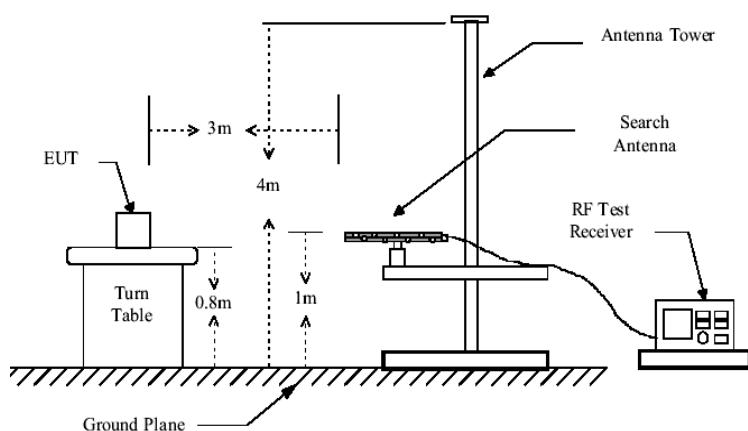
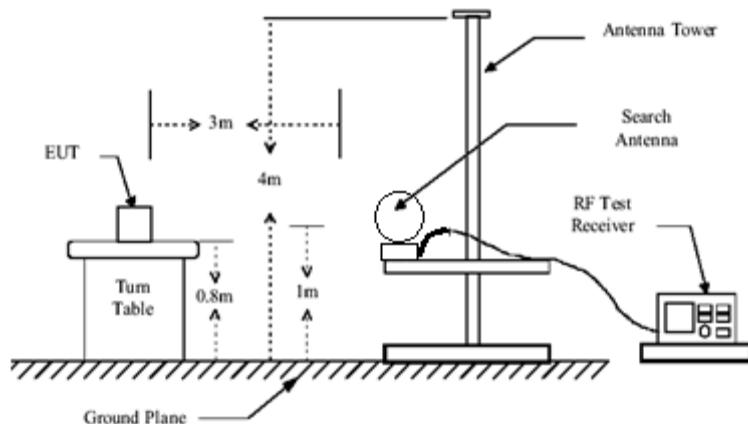
6 Test results and Measurement Data

6.1 Antenna requirement

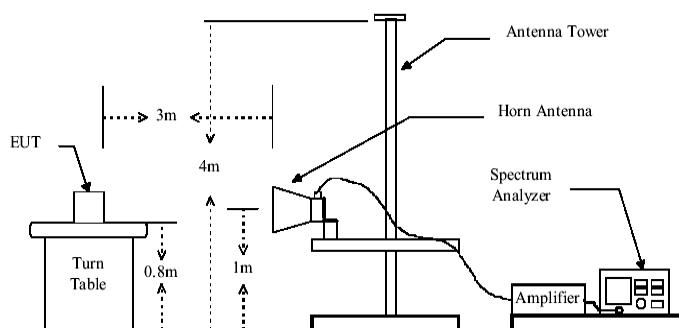
Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement:	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
E.U.T Antenna:	The EUT make use of an Induction coil antenna.
	

6.2 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.225(a) and 15.209								
Test Frequency Range:	9 kHz to 1000MHz								
Test site:	Measurement Distance: 3m(Semi-Anechoic Chamber)								
Receiver setup:	Frequency	Detector	RBW	VBW	Remark				
	9kHz-150kHz	Quasi-peak	200Hz	600Hz	Quasi-peak Value				
	150kHz-30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value				
	30MHz-1GHz	Quasi-peak	120kHz	300KHz	Quasi-peak Value				
	Above 1GHz	Peak	1MHz	3MHz	Peak Value				
Limit: (Field strength of the fundamental signal)	Frequency	Limit (uV/m @30m)		Limit (dBuV/m @3m)					
	13.553MHz-13.567MHz	15848		124.0					
	13.410MHz-13.553MHz & 13.567MHz-13.710MHz	334		90.5					
	13.110MHz-13.410MHz & 13.710MHz-14.010MHz	106		80.5					
	Remark: Per FCC part 15.31, when performing measurements at a distance which is closer than specified, the field strength results shall be extrapolated to the specified distance by using the square of an inverse linear distance extrapolation factor (i.e., 40 dB/decade) in conjunction with the slant-range distance defined in §15.3(hh) of this part.								
Limit: (Spurious Emissions)	Frequency (MHz)	Limit (uV/m @3m)		Distance (m)					
	0.009-0.490	2400/F(kHz)		300					
	0.490-1.705	24000/F(kHz)		30					
	1.705-30	30		30					
	30-88	100		3					
	88-216	150		3					
	216-960	200		3					
	Above 1GHz	500		3					
Test Procedure:	<ol style="list-style-type: none"> The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. 								
Test setup:	9kHz-30MHz								



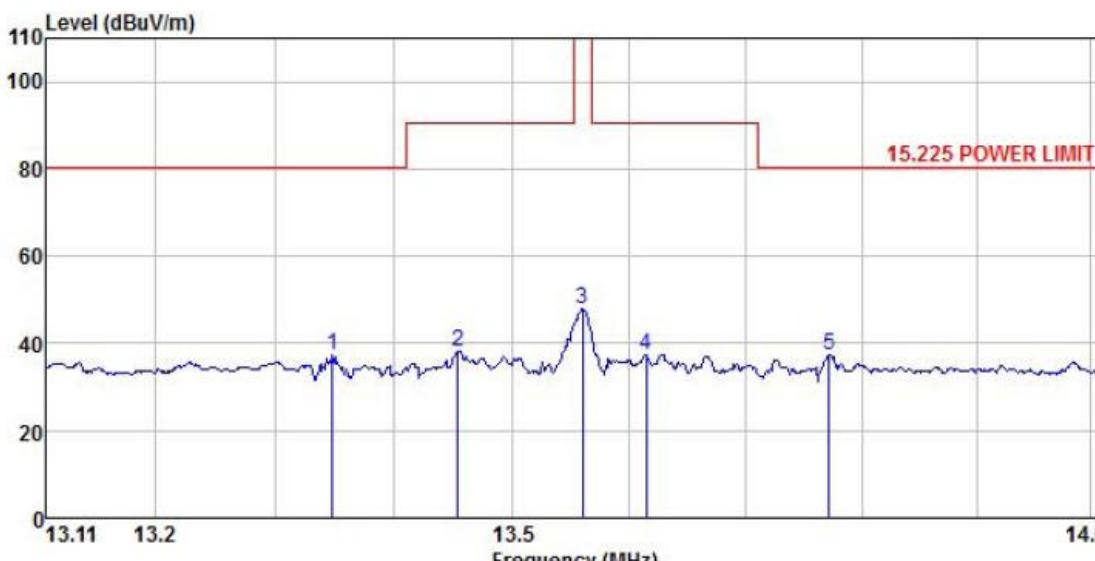
Above 1GHz



Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement Data:

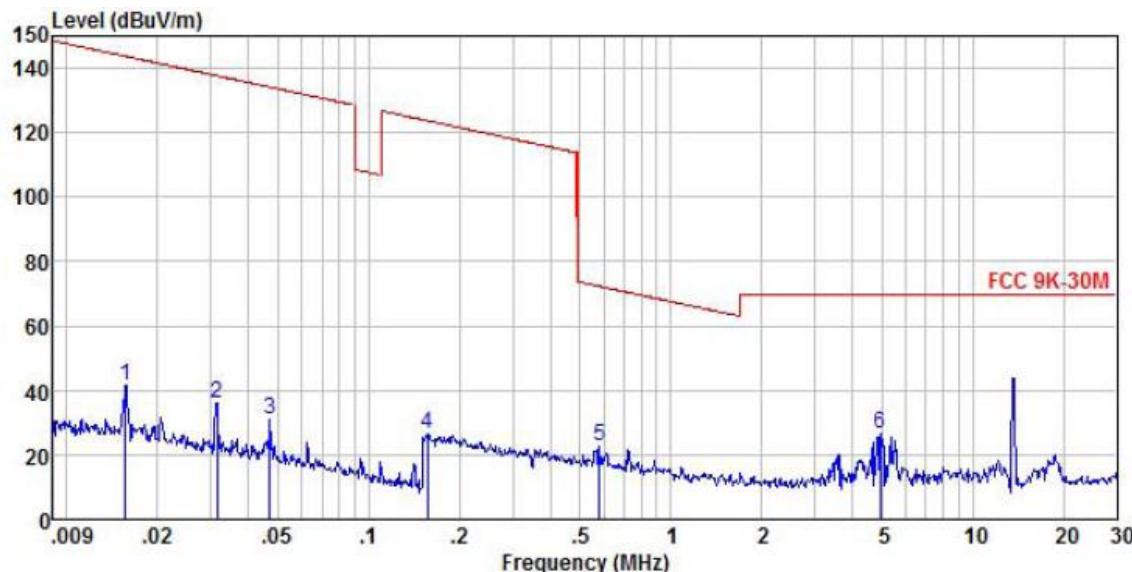
Field Strength of fundamental signal:

Product Name:	C-One e-ID,RAPID3		Product Model:	C-One e-ID																																																									
Test By:	Mike		Test mode:	NFC Tx mode																																																									
Test Voltage:	AC 120/60Hz		Environment:	Temp: 24°C Huni: 57%																																																									
Level (dBuV/m)																																																													
																																																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding-bottom: 5px;">Freq</th><th style="text-align: left; padding-bottom: 5px;">ReadAntenna Level</th><th style="text-align: left; padding-bottom: 5px;">Cable Loss</th><th style="text-align: left; padding-bottom: 5px;">Preamp Factor</th><th style="text-align: left; padding-bottom: 5px;">Limit Level</th><th style="text-align: left; padding-bottom: 5px;">Limit Line</th><th style="text-align: left; padding-bottom: 5px;">Over Limit</th><th style="text-align: left; padding-bottom: 5px;">Remark</th></tr> <tr> <th style="text-align: left;">MHz</th><th style="text-align: left;">dBuV</th><th style="text-align: left;">dB/m</th><th style="text-align: left;">dB</th><th style="text-align: left;">dB</th><th style="text-align: left;">dBuV/m</th><th style="text-align: left;">dBuV/m</th><th style="text-align: left;">dB</th></tr> </thead> <tbody> <tr> <td>1 13.348</td><td>11.66</td><td>-26.47</td><td>0.63</td><td>0.00</td><td>37.32</td><td>80.50</td><td>-43.18 Peak</td></tr> <tr> <td>2 13.454</td><td>12.62</td><td>-26.47</td><td>0.63</td><td>0.00</td><td>38.28</td><td>90.50</td><td>-52.22 Peak</td></tr> <tr> <td>3 13.560</td><td>22.33</td><td>-26.47</td><td>0.64</td><td>0.00</td><td>48.00</td><td>124.00</td><td>-76.00 Peak</td></tr> <tr> <td>4 13.614</td><td>11.74</td><td>-26.48</td><td>0.64</td><td>0.00</td><td>37.40</td><td>90.50</td><td>-53.10 Peak</td></tr> <tr> <td>5 13.772</td><td>11.64</td><td>-26.48</td><td>0.64</td><td>0.00</td><td>37.30</td><td>80.50</td><td>-43.20 Peak</td></tr> </tbody> </table>						Freq	ReadAntenna Level	Cable Loss	Preamp Factor	Limit Level	Limit Line	Over Limit	Remark	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	1 13.348	11.66	-26.47	0.63	0.00	37.32	80.50	-43.18 Peak	2 13.454	12.62	-26.47	0.63	0.00	38.28	90.50	-52.22 Peak	3 13.560	22.33	-26.47	0.64	0.00	48.00	124.00	-76.00 Peak	4 13.614	11.74	-26.48	0.64	0.00	37.40	90.50	-53.10 Peak	5 13.772	11.64	-26.48	0.64	0.00	37.30	80.50	-43.20 Peak
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5 13.772	11.64	-26.48	0.64	0.00	37.30	80.50	-43.20 Peak																																																						
Remark:																																																													
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor.																																																													

Spurious Emissions:

Test frequency range:9 kHz- 30MHz

Product Name:	C-One e-ID,RAPID3	Product Model:	C-One e-ID
Test By:	Mike	Test mode:	NCF Tx mode
Test Frequency:	150 kHz ~ 30 MHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%

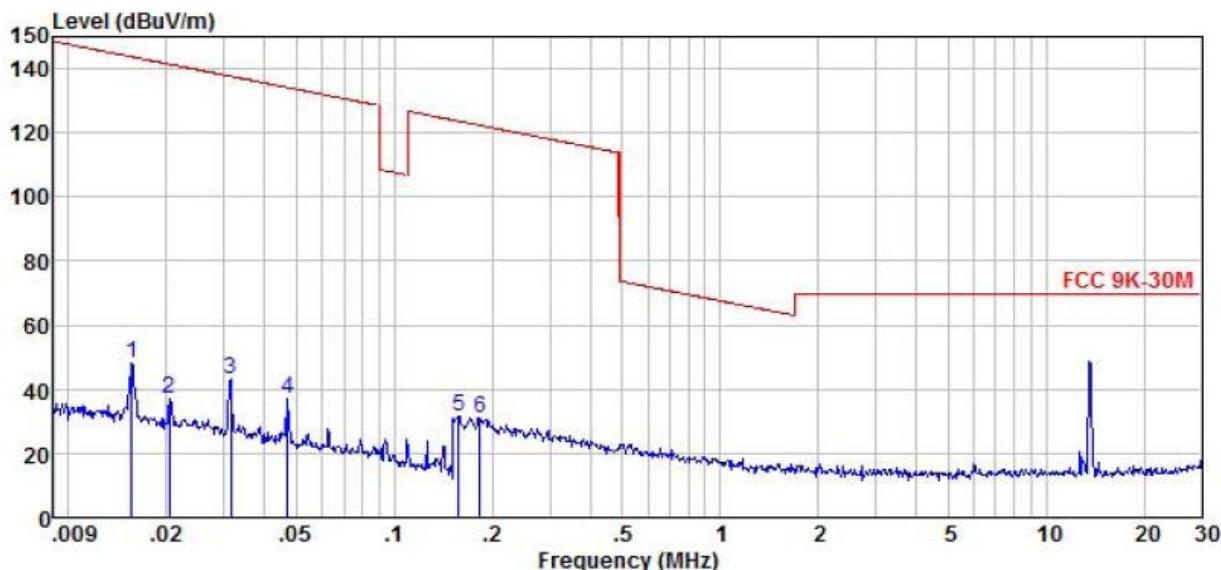


Freq MHz	ReadAntenna Level Factor		Cable Preamp Loss Factor		Limit Level dBuV/m	Over Line Limit dBuV/m	Over Limit dB	Remark
	MHz	dBuV	dB/m	dB				
1	0.016	15.63	-25.86	0.05	0.00	41.32	143.71-102.39	Peak
2	0.031	10.27	-25.95	0.12	0.00	35.94	137.65-101.71	Peak
3	0.047	5.07	-25.99	0.17	0.00	30.75	134.13-103.38	Peak
4	0.156	0.86	-26.16	0.28	0.00	26.48	123.74 -97.26	Peak
5	0.582	-2.93	-26.30	0.51	0.00	22.78	72.31 -49.53	Peak
6	4.955	1.31	-26.60	0.58	0.00	26.79	69.50 -42.71	Peak

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor.
- The emission levels of 9kHz~150kHz are background noise and very lower than the limit, not show in test report.

Product Name:	C-One e-ID,RAPID3	Product Model:	C-One e-ID
Test By:	Mike	Test mode:	NFC Tx mode
Test Frequency:	150 kHz ~ 30 MHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



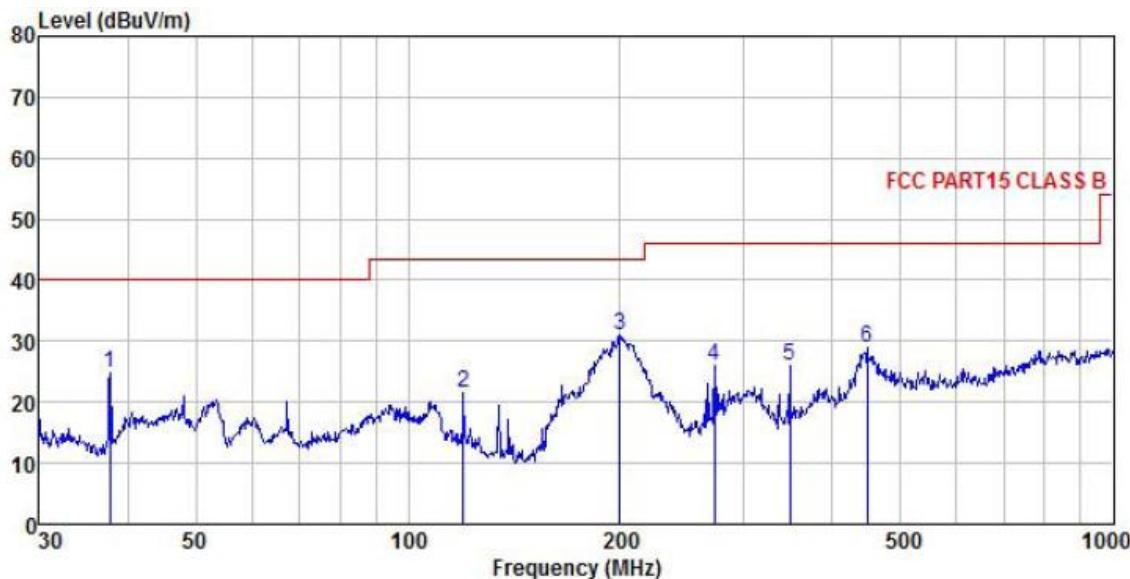
Freq MHz	Read Level dBuV	Antenna Factor dB/m	Cable Loss Factor dB	Preamp Level dB	Line Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Over Limit Remark
	MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
1	0.016	39.85	-25.86	0.05	17.50	48.04	143.71	-95.67 Peak
2	0.020	28.91	-25.90	0.06	17.50	37.07	141.38	-104.31 Peak
3	0.031	34.80	-25.95	0.12	17.50	42.97	137.65	-94.68 Peak
4	0.047	29.05	-25.99	0.17	17.50	37.23	134.13	-96.90 Peak
5	0.158	23.47	-26.17	0.28	17.50	31.58	123.67	-92.09 Peak
6	0.182	22.89	-26.19	0.31	17.50	31.01	122.40	-91.39 Peak

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of 9kHz~150kHz are background noise and very lower than the limit, not show in test report.

Test frequency range:30MHz-1000MHz

Product Name:	C-One e-ID,RAPID3	Product Model:	C-One e-ID
Test By:	Mike	Test mode:	NFC Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%

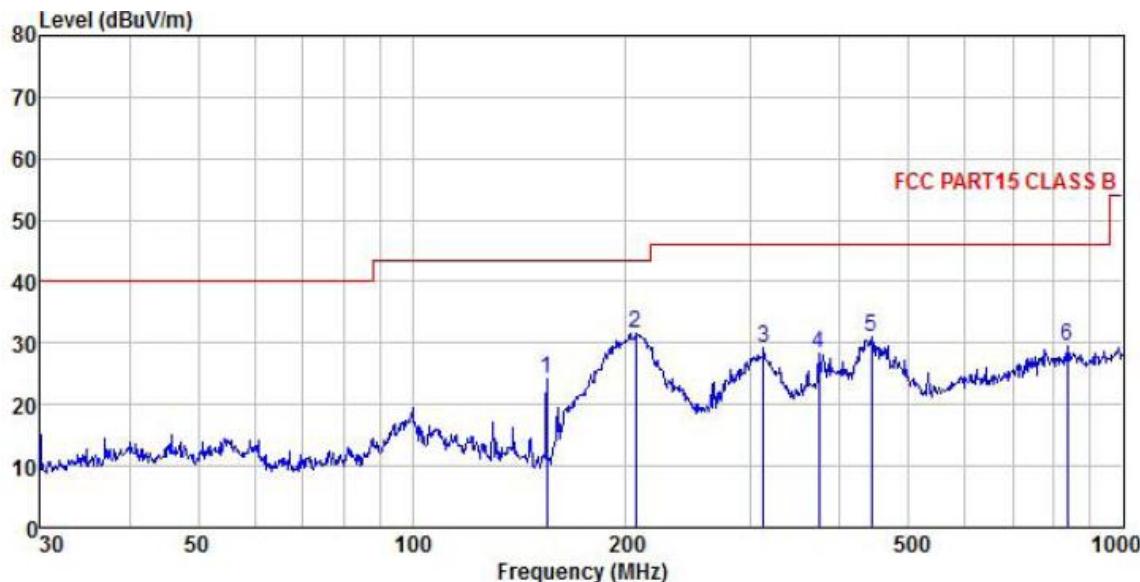


Freq MHz	Read	Antenna Level	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	Antenna Level dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 37.812	41.63	11.88	1.14	29.92	24.73	40.00	-15.27	QP
2 119.856	37.87	10.89	2.17	29.39	21.54	43.50	-21.96	QP
3 199.986	46.48	10.60	2.87	28.83	31.12	43.50	-12.38	QP
4 272.278	38.63	13.12	2.87	28.50	26.12	46.00	-19.88	QP
5 348.027	36.74	14.57	3.09	28.56	25.84	46.00	-20.16	QP
6 447.982	38.01	16.46	3.20	28.87	28.80	46.00	-17.20	QP

Remark:

- Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	C-One e-ID,RAPID3	Product Model:	C-One e-ID
Test By:	Mike	Test mode:	NFC Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%

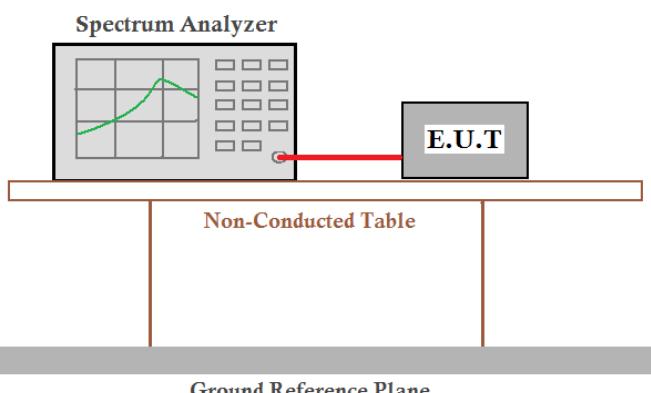


Freq MHz	Read	Antenna Level	Cable Loss	Preamp Factor	Level dB	Limit Line dBuV/m	Over Line dBuV/m	Over Limit dB	Remark
	Antenna Level dBuV	Antenna Factor dB/m	Cable Loss dB	Preamp Factor dB	Final Level dB	Line dBuV/m	Line dBuV/m	Over Limit dB	
1 154.821	41.75	9.10	2.55	29.18	24.22	43.50	43.50	-19.28	QP
2 206.398	46.69	10.88	2.86	28.79	31.64	43.50	43.50	-11.86	QP
3 312.179	40.80	13.87	2.98	28.48	29.17	46.00	46.00	-16.83	QP
4 373.311	39.00	14.93	3.09	28.66	28.36	46.00	46.00	-17.64	QP
5 443.294	40.27	16.33	3.18	28.86	30.92	46.00	46.00	-15.08	QP
6 836.244	30.92	22.29	4.23	28.06	29.38	46.00	46.00	-16.62	QP

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

6.3 20dB Bandwidth

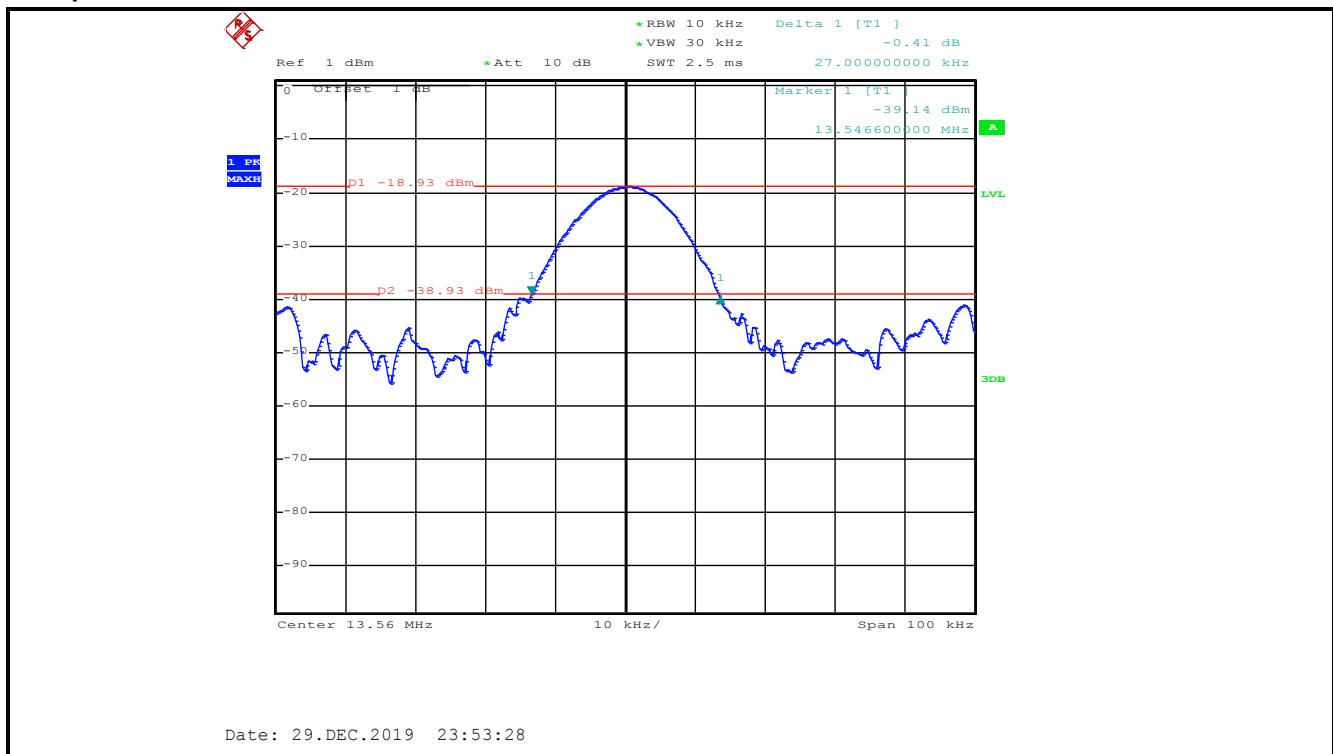
Test Requirement:	FCC Part15 C Section 15.215 (c)
Receiver setup:	RBW=200Hz, VBW=300Hz, detector: Peak
Limit:	The fundamental emission be kept within atleast the central 80% of the permitted band
Test Procedure:	<ol style="list-style-type: none"> 1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. 2. Set the EUT to proper test channel. 3. Max hold the radiated emissions, mark the peak power frequency point and the -20dB upper and lower frequency points. 4. Read 20dB bandwidth.
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data

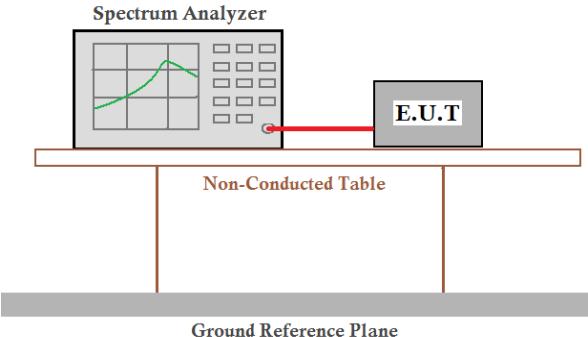
20dB bandwidth (kHz)	Limit (kHz)	Results
0.027	11.2	Passed

Note: For 13.56MHz, permitted Band is 14 kHz, so the Limit is 11.2 kHz.

Test plot as follows:



6.4 Frequency Tolerance

Test Requirement:	FCC Part15 C Section 15.225 (e)
Receiver setup:	RBW=200Hz, VBW=300Hz, span=14kHz, detector: Peak
Limit:	$\pm 0.01\%$ of the operating frequency
Test mode:	Transmitting mode
Test Procedure:	<p>Frequency stability V.S. Temperature measurement</p> <ol style="list-style-type: none"> 1. The equipment under test was powered by a fresh battery. 2. RF output was connected to spectrum analyzer via feed through attenuators. 3. The EUT was placed inside the temperature chamber. 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to -20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached <p>Frequency stability V.S. Voltage measurement</p> <ol style="list-style-type: none"> 1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage. 2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. <p>Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.</p>
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

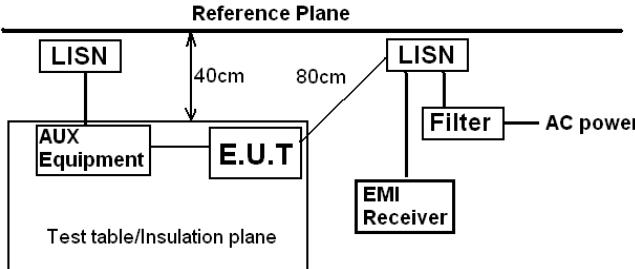
Measurement Data:**a) Frequency stability V.S. Temperature measurement**

Voltage (Vdc)	Temperature (°C)	Frequency Tolerance (MHz)	Frequency Error (%)	Limit (%)	Results
3.7	-20	0.00038	0.0028	±0.01	Pass
	-10	0.00015	0.0011	±0.01	Pass
	0	-0.00024	-0.0018	±0.01	Pass
	+10	0.00029	0.0021	±0.01	Pass
	+20	-0.00036	-0.0027	±0.01	Pass
	+30	0.00014	0.0010	±0.01	Pass
	+40	0.00029	0.0021	±0.01	Pass
	+50	-0.00026	-0.0019	±0.01	Pass

b) Frequency stability V.S. Voltage measurement

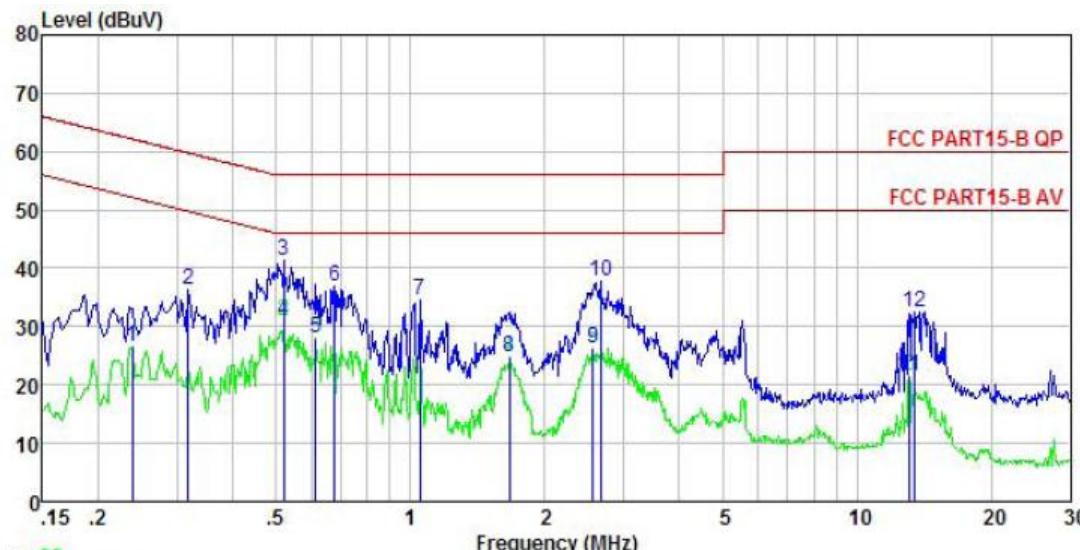
Temperature (°C)	Voltage (Vdc)	Frequency Tolerance (MHz)	Frequency Error (%)	Limit (%)	Results
25.0	4.2	-0.00015	-0.0011	±0.01	Pass
	3.7	0.00031	0.0023	±0.01	Pass
	3.5	0.00092	0.0068	±0.01	Pass

6.5 Conducted Emission

Test Requirement:	FCC Part15 B Section 15.207		
Test Frequency Range:	150kHz to 30MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9kHz, VBW=30kHz		
Limit:	Frequency range (MHz)	Quasi-peak	Limit (dB μ V)
	0.15-0.5	66 to 56*	Average
	0.5-5	56	46
	0.5-30	60	50
* Decreases with the logarithm of the frequency.			
Test setup:	 <p><i>Remark:</i> <i>E.U.T: Equipment Under Test</i> <i>LISN: Line Impedance Stabilization Network</i> <i>Test table height=0.8m</i></p>		
Test procedure	<ol style="list-style-type: none"> 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). It provide a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement. 		
Test Instruments:	Refer to section 5.9 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Pass		

Measurement Data:

Product name:	C-One e-ID,RAPID3	Product Model:	C-One e-ID
Test by:	Mike	Test mode:	NFC Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5°C Huni: 55%



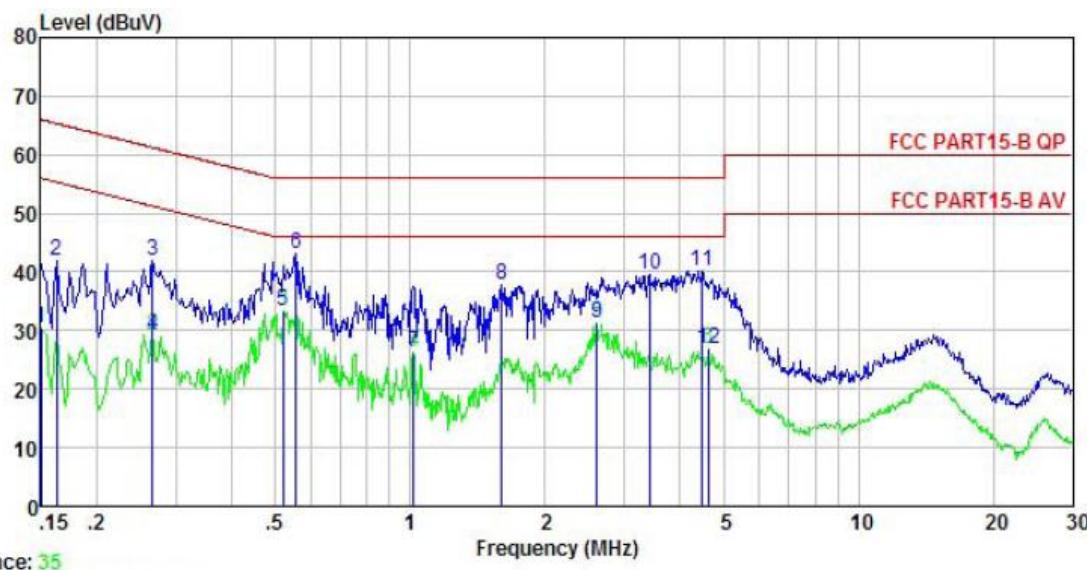
Trace: 33

Freq	Read	LISN	Aux	Cable	Limit	Over	Limit	Remark
	Level	Factor	Factor	Loss				
1	0.238	16.50	-0.66	0.00	10.75	26.59	52.17	-25.58 Average
2	0.318	26.10	-0.63	-0.01	10.74	36.20	59.75	-23.55 QP
3	0.521	31.23	-0.65	0.03	10.76	41.37	56.00	-14.63 QP
4	0.521	20.84	-0.65	0.03	10.76	30.98	46.00	-15.02 Average
5	0.614	17.84	-0.64	0.04	10.77	28.01	46.00	-17.99 Average
6	0.675	26.72	-0.64	0.04	10.77	36.89	56.00	-19.11 QP
7	1.049	24.17	-0.63	0.09	10.88	34.51	56.00	-21.49 QP
8	1.662	14.31	-0.66	0.15	10.94	24.74	46.00	-21.26 Average
9	2.567	15.75	-0.67	0.26	10.94	26.28	46.00	-19.72 Average
10	2.664	27.16	-0.67	0.27	10.93	37.69	56.00	-18.31 QP
11	13.127	8.90	-0.80	2.54	10.91	21.55	50.00	-28.45 Average
12	13.479	19.67	-0.80	2.64	10.91	32.42	60.00	-27.58 QP

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss.

Product name:	C-One e-ID,RAPID3	Product Model:	C-One e-ID
Test by:	Mike	Test mode:	NFC Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5°C Huni: 55%



Trace: 35

Freq	Read	LISN	Aux	Cable	Limit	Over	Over	
	Level	Factor	Factor	Loss				Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB
1	0.150	20.16	-0.68	0.01	10.78	30.27	56.00	-25.73 Average
2	0.162	31.77	-0.68	0.01	10.77	41.87	65.34	-23.47 QP
3	0.266	31.80	-0.65	0.01	10.75	41.91	61.25	-19.34 QP
4	0.266	19.25	-0.65	0.01	10.75	29.36	51.25	-21.89 Average
5	0.521	23.10	-0.65	0.03	10.76	33.24	46.00	-12.76 Average
6	0.555	33.10	-0.65	0.03	10.76	43.24	56.00	-12.76 QP
7	1.016	15.93	-0.63	0.08	10.87	26.25	46.00	-19.75 Average
8	1.602	27.45	-0.66	0.14	10.93	37.86	56.00	-18.14 QP
9	2.608	20.73	-0.67	0.26	10.93	31.25	46.00	-14.75 Average
10	3.417	28.83	-0.68	0.40	10.91	39.46	56.00	-16.54 QP
11	4.478	29.50	-0.71	0.60	10.87	40.26	56.00	-15.74 QP
12	4.622	16.06	-0.71	0.61	10.86	26.82	46.00	-19.18 Average

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level =Receiver Read level + LISN Factor + Cable Loss.

8 EUT Constructional Details

Reference to the test report No.:CCISE191106901

-----End of report-----