

FCC/ IC REPORT

Applicant: COPPERNIC

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

Equipment Under Test (EUT)

Product Name: C-One² LF AGRIDENT

Model No.: C-One

Trade mark: COPPERNIC

FCC ID: XGK-C-ONE-LF-AGR

Canada IC: 8402A-CONEFLAGR

FCC CFR Title 47 Part 15 Subpart C

Applicable standards: RSS-210 Issue 10, December 2019

RSS-Gen Issue 5, March 2019 Amendment 1

Date of sample receipt: 11 Nov., 2019

Date of Test: 12 Nov., 2019 to 07 Apr., 2020

Date of report issue: 07 Apr., 2020

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	11 Mar., 2020	Original
01	02 Apr., 2020	Update page1, Update IC ID number, Update page 5
02	07 Apr., 2020	Add Field strength of the fundamental signal test

Tested by:**Date:**

07 Apr., 2020

Test Engineer**Reviewed by:****Date:**

07 Apr., 2020

Project Engineer

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4 Test Summary

Test Item	Section		Result
	FCC	IC	
Antenna requirement	15.203	/	Pass
AC Power Line Conducted Emission	15.207	RSS-GEN Section 8.8	Pass
99% Bandwidth	2.202(a)	RSS-GEN Section 6.7	Pass
Field strength of the fundamental signal	15.209	RSS-GEN Section 6.13	Pass
Radiated Spurious Emission	15.209	RSS-GEN Section 6.13	Pass

Remark:
Pass: The EUT complies with the essential requirements in the standard.

Test Method:	ANSI C63.10-2013 FCC PART 2 RSS-GEN Issue 5
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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 ² LF AGRIDENT
Model No.:	C-One
Operation Frequency:	134.2KHz
Channel numbers:	1
Modulation type:	ASK
Antenna Type:	Stick and Ferrite Antenna
Power supply:	Rechargeable Li-ion Battery DC3.7V-3300mAh
AC adapter:	Model: SYS1561-1105-1 Input: AC100-240V, 50/60Hz, 1A Output: DC 5.35V, 2A
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

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							
	Ferrite Antenna	Stick Antenna	Ferrite Antenna	Stick Antenna	Ferrite Antenna	Stick Antenna						
Field Strength(dBuV/m)	76.40	83.06	73.22	79.25	72.59	78.81						
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

The EUT has been tested as an independent unit.

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 Zhongjian Nanfang 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 Zhongjian Nanfang 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 Zhongjian Nanfang 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 17025:2005 General 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 Zhongjian Nanfang 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	11-18-2018	11-17-2019
Loop Antenna	SCHWARZBECK	FMZB 1519 B		11-18-2019	11-17-2020
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	11-18-2018	11-17-2019
EMI Test Receiver	Rohde & Schwarz	ESRP7		11-18-2019	11-17-2020
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

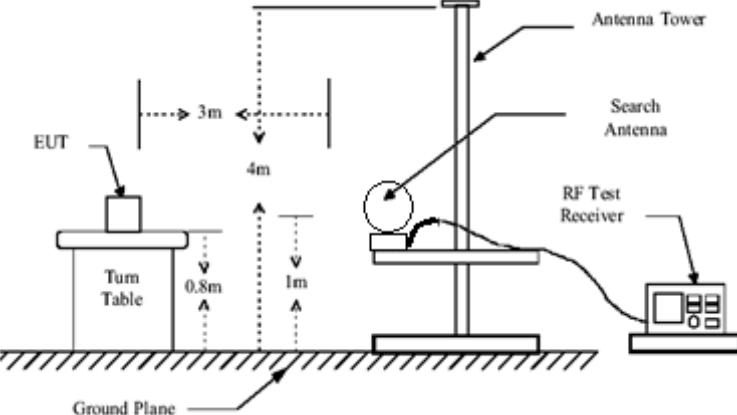
Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	07-22-2017	07-21-2020
EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	03-18-2019	03-17-2020
LISN	CHASE	MN2050D	CCIS0074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

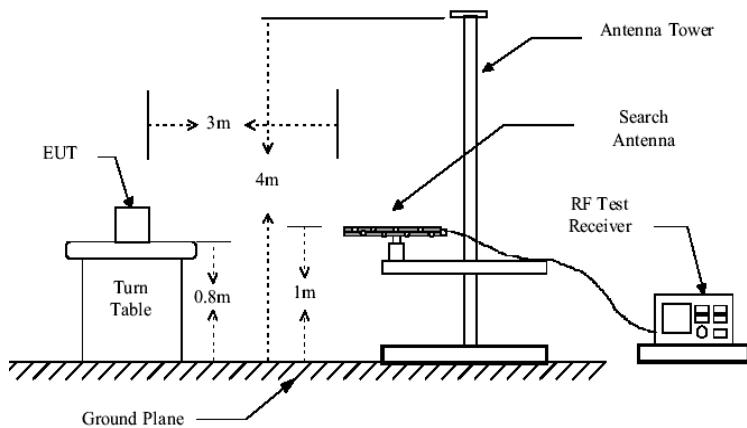
6.1 Antenna requirement

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.	
Ferrite Antenna	Stick Antenna
 A photograph of the internal components of the device, showing a red ribbon cable labeled 'RFID-Ferrite ANT' connected to a blue printed circuit board. A ruler is visible on the right for scale.	 A photograph of a long, thin, extendable antenna (stick antenna) with a yellow tip. A red arrow points to the antenna with the label 'RFID-Stick ANT'.

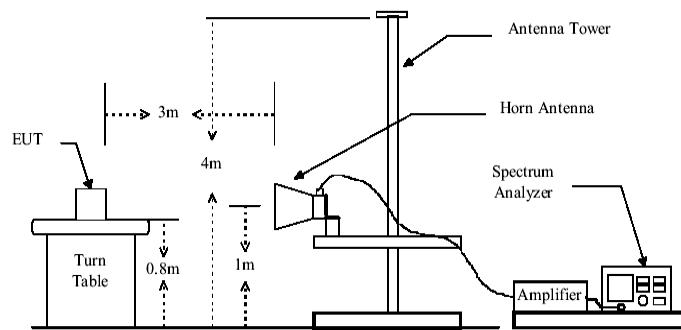
6.2 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.209 RSS-GEN Section 6.13, RSS-210										
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						
Limit:	Above 1GHz	Peak	1MHz	3MHz	Peak Value						
	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							
Test Procedure:	Above 1GHz	500		3							
	a.	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.									
	b.	The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.									
	c.	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.									
	d.	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.									
	e.	The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.									
	f.	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										
											

30MHz-1GHz



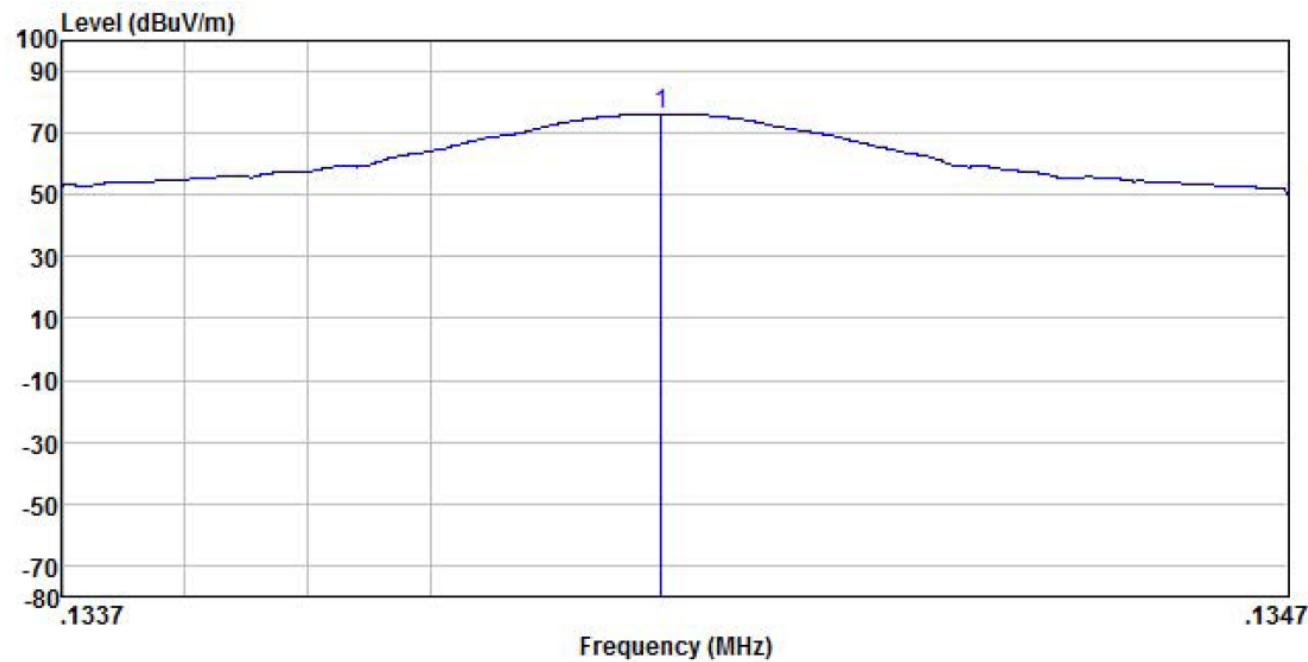
Above 1GHz



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

Spurious Emissions:**Ferrite Antenna:****Field Strength of fundamental signal:**

Product Name:	C-One ² LF AGRIDENT	Product Model:	C-One
Test By:	Carey	Test mode:	RFID Tx mode
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



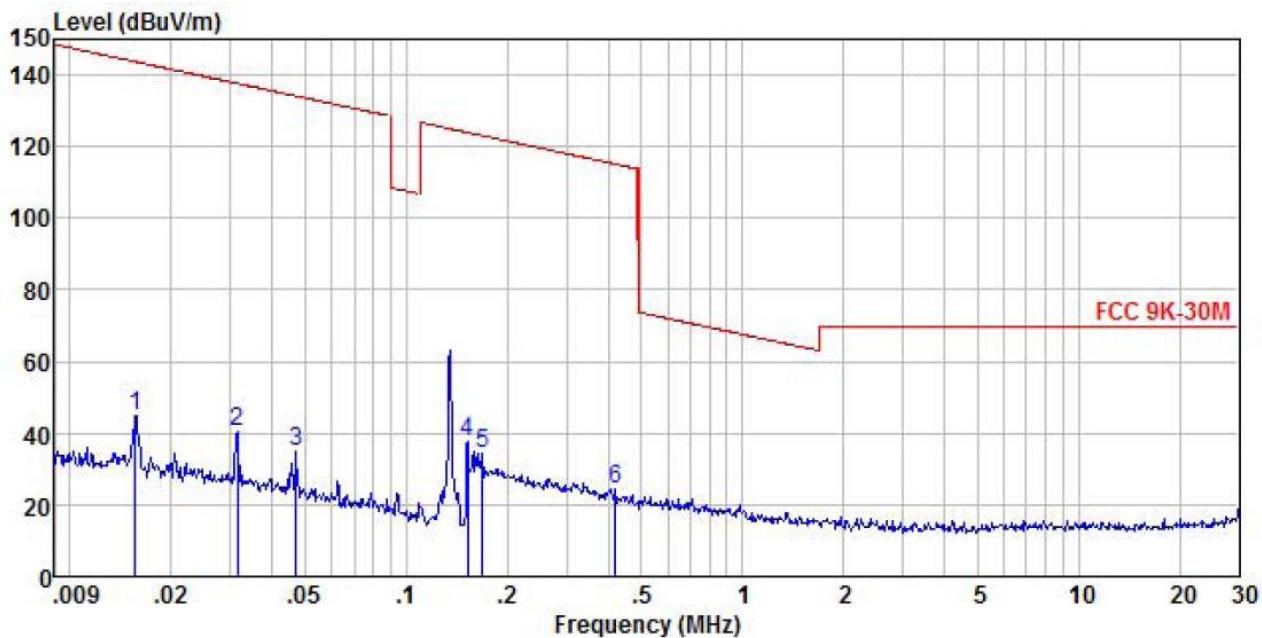
Freq	Read	Antenna	Cable	Preamp	Limit	Line	Over	Limit	Remark
	Freq	Level	Factor	Loss					
MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	0.134	68.30	-26.14	0.24	17.50	76.40	-----	-----	

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

Test frequency range: 9 kHz- 30 MHz

Product Name:	C-One ² LF AGRIDENT	Product Model:	C-One
Test By:	Carey	Test mode:	RFID Tx mode
Test Frequency:	9 kHz ~ 30 MHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%

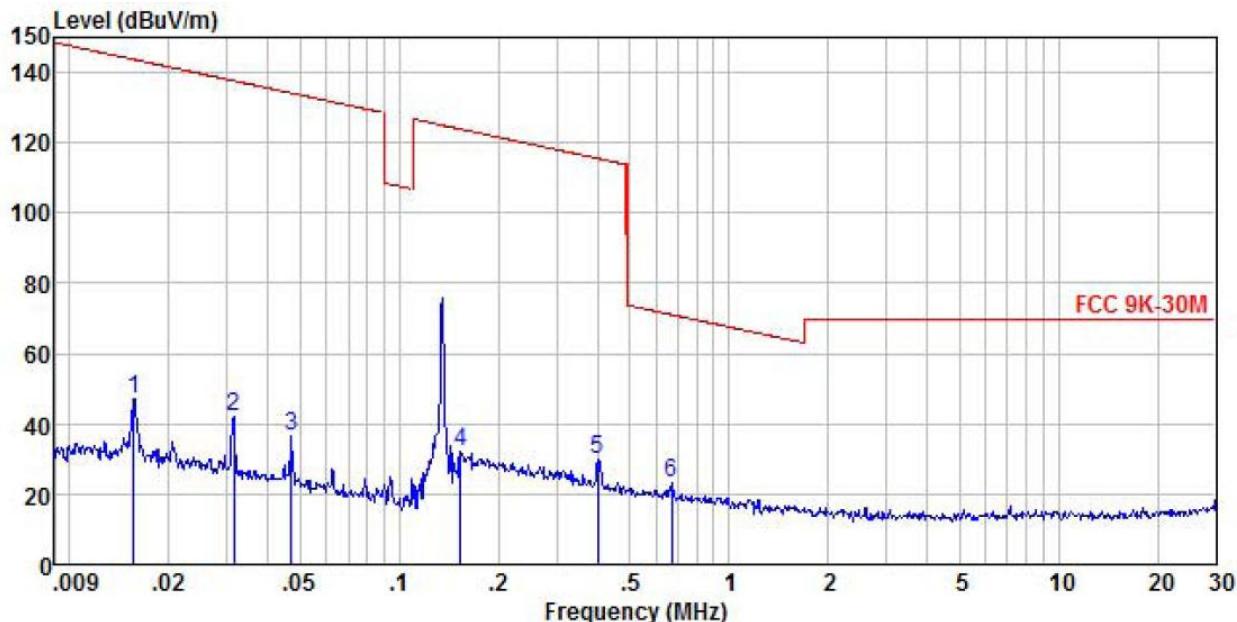


Freq	ReadAntenna Level Factor	Cable Loss Factor	Preamp Level	Limit		Over Line Limit	Over Remark
				MHz	dBuV	dB/m	dB
1	0.016	36.68	-25.86	0.05	17.50	44.87	143.71 -98.84 Peak
2	0.031	32.51	-25.95	0.12	17.50	40.68	137.65 -96.97 Peak
3	0.047	26.61	-25.99	0.17	17.50	34.79	134.13 -99.34 Peak
4	0.153	29.72	-26.16	0.27	17.50	37.83	123.95 -86.12 Peak
5	0.168	26.11	-26.18	0.29	17.50	34.22	123.10 -88.88 Peak
6	0.421	16.48	-26.28	0.39	17.50	24.59	115.12 -90.53 Peak

Remark:

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

Product Name:	C-One ² LF AGRIDENT	Product Model:	C-One
Test By:	Carey	Test mode:	RFID Tx mode
Test Frequency:	9 kHz ~ 30 MHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



Freq	Read		Antenna		Cable		Preamp		Limit	Over	Line	Limit	Remark
	Level	Antenna	Level	Factor	Loss	Factor	Preamp	Level					
MHz	dBuV	dB/m			dB	dB	dBuV/m	dBuV/m					
1	0.016	39.07	-25.86	0.05	17.50	47.26	143.71	-96.45	Peak				
2	0.031	34.04	-25.95	0.12	17.50	42.21	137.65	-95.44	Peak				
3	0.047	28.36	-25.99	0.17	17.50	36.54	134.13	-97.59	Peak				
4	0.154	24.00	-26.16	0.27	17.50	32.11	123.88	-91.77	Peak				
5	0.401	21.78	-26.28	0.37	17.50	29.87	115.55	-85.68	Peak				
6	0.668	15.01	-26.30	0.55	17.50	23.26	71.11	-47.85	Peak				

Remark:

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

Test frequency range: 30MHz-1000MHz

Product Name:	C-One ² LF AGRIDENT		Product Model:	C-One	
Test By:	Carey		Test mode:	RFID Tx mode	
Test Frequency:	30 MHz ~ 1 GHz		Polarization:	Vertical	
Test Voltage:	AC 120/60Hz		Environment:	Temp: 24°C Huni: 57%	

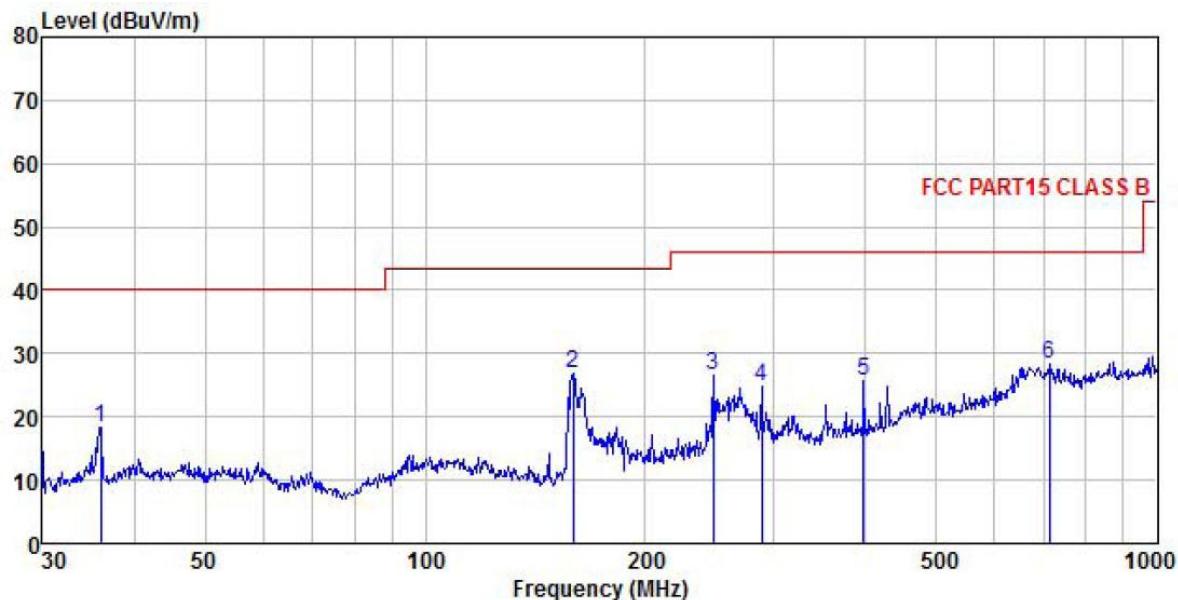
FCC PART15 CLASS B

Freq MHz	Read Level dBuV	Antenna Factor dB/m	Cable Loss Factor dB	Preamp Level dB	Line Limit dBuV/m	Over Line Limit dBuV/m	Over Line Limit dB	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	106.759	34.87	11.94	2.02	29.48	19.35	43.50	-24.15 QP
2	123.699	38.34	10.62	2.21	29.37	21.80	43.50	-21.70 QP
3	158.668	44.70	9.24	2.57	29.14	27.37	43.50	-16.13 QP
4	182.559	38.55	10.06	2.75	28.95	22.41	43.50	-21.09 QP
5	303.544	41.91	13.68	2.95	28.46	30.08	46.00	-15.92 QP
6	345.595	42.07	14.52	3.08	28.55	31.12	46.00	-14.88 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.

Product Name:	C-One ² LF AGRIDENT	Product Model:	C-One
Test By:	Carey	Test mode:	RFID Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



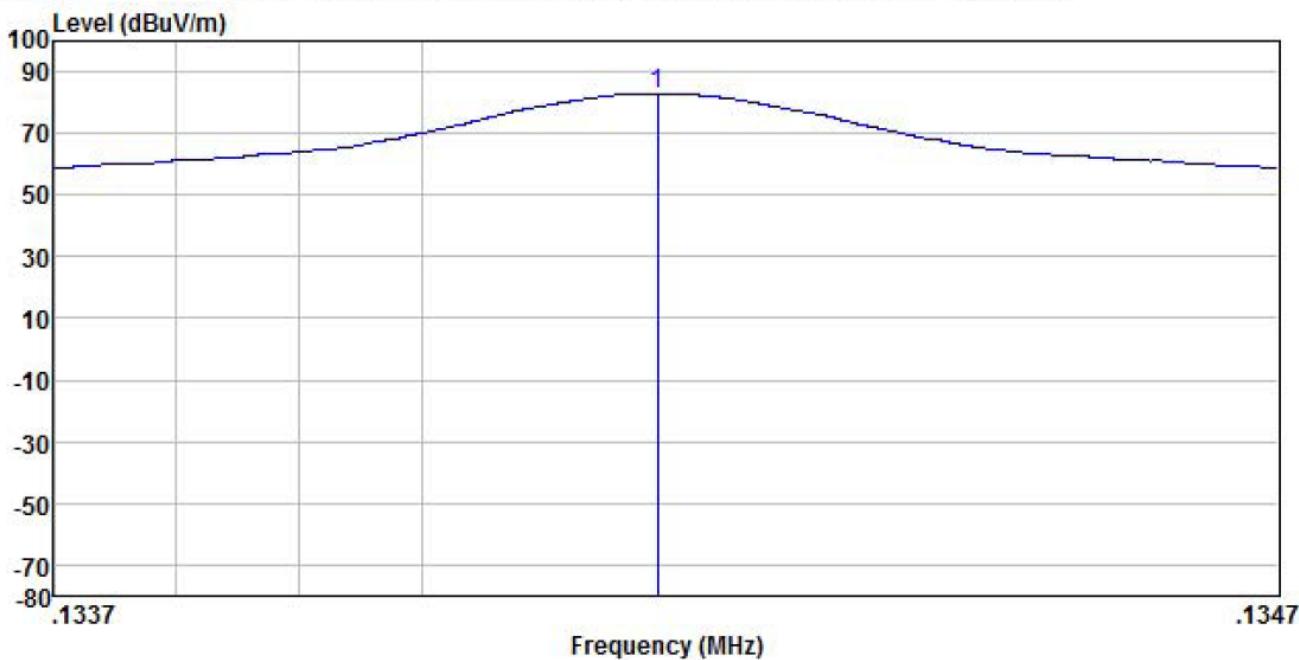
Freq	Read	Antenna	Cable	Preamp	Limit	Over	Over	
	Line	Level	Factor	Loss				Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	36.001	35.74	11.43	1.07	29.94	18.30	40.00	-21.70 QP
2	159.225	44.24	9.24	2.58	29.14	26.92	43.50	-16.58 QP
3	247.682	39.79	12.62	2.81	28.55	26.67	46.00	-19.33 QP
4	287.990	37.07	13.41	2.91	28.47	24.92	46.00	-21.08 QP
5	397.633	36.08	15.26	3.08	28.77	25.65	46.00	-20.35 QP
6	711.674	32.34	20.45	4.22	28.62	28.39	46.00	-17.61 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.

Stick Antenna:**Field Strength of fundamental signal:**

Product Name:	C-One ² LF AGRIDENT	Product Model:	C-One
Test By:	Carey	Test mode:	RFID Tx mode
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



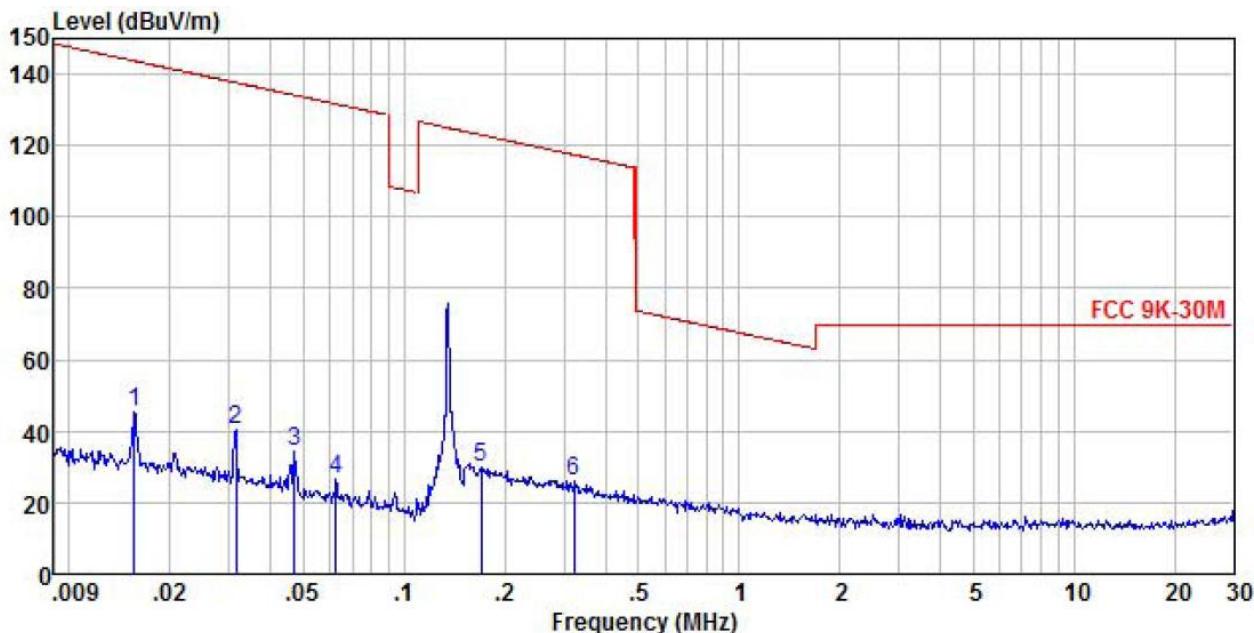
	ReadAntenna Freq	Level MHz	Antenna Factor	Cable Loss Factor	Preamp dB	Level dB	Limit dBuV/m	Line dBuV/m	Over dB	Over Limit	Remark
1	0.134	74.96	-26.14	0.24	17.50	83.06	-----	-----	-----	-----	

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

Test frequency range: 9 kHz- 30 MHz

Product Name:	C-One ² LF AGRIDENT	Product Model:	C-One
Test By:	Carey	Test mode:	RFID Tx mode
Test Frequency:	9 kHz ~ 30 MHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%

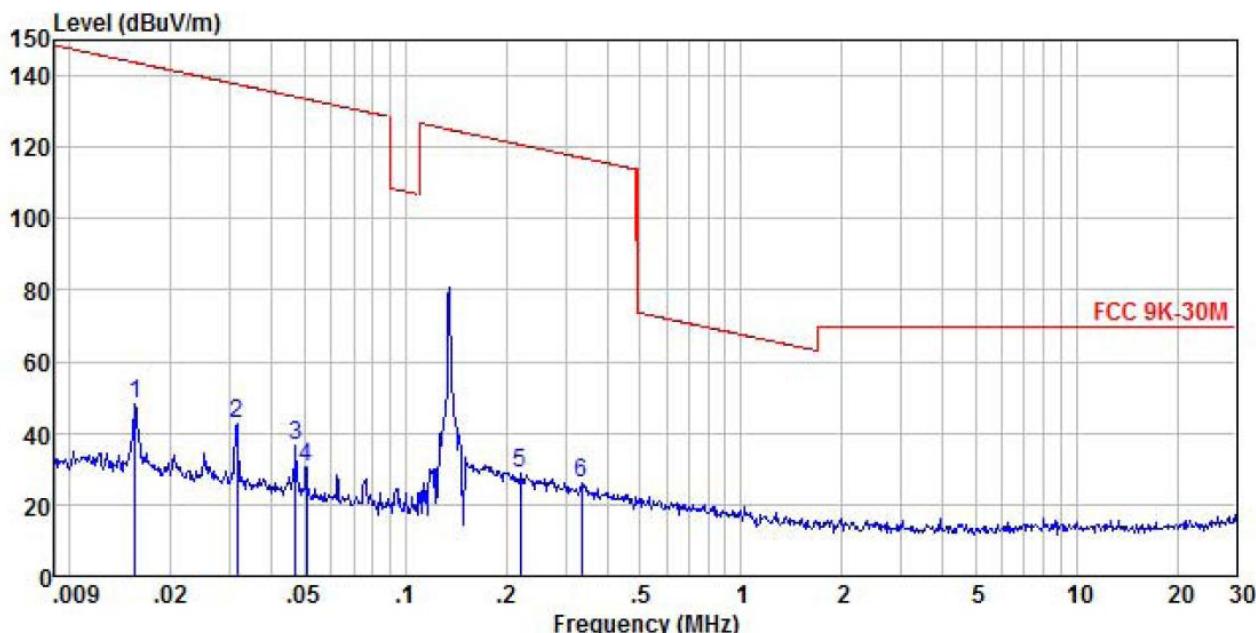


Freq MHz	Read	Antenna Level Factor	Cable Loss Factor	Preamp Level dB	Limit dBuV/m	Line dBuV/m	Over Line dB	Over Limit Remark
	MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
1	0.016	37.30	-25.86	0.05	17.50	45.49	143.71	-98.22 Peak
2	0.031	32.12	-25.95	0.12	17.50	40.29	137.65	-97.36 Peak
3	0.047	25.92	-25.99	0.17	17.50	34.10	134.13	-100.03 Peak
4	0.063	18.34	-26.03	0.19	17.50	26.50	131.66	-105.16 Peak
5	0.170	21.81	-26.18	0.29	17.50	29.92	123.03	-93.11 Peak
6	0.322	17.91	-26.25	0.36	17.50	26.02	117.45	-91.43 Peak

Remark:

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

Product Name:	C-One ² LF AGRIDENT	Product Model:	C-One
Test By:	Carey	Test mode:	RFID Tx mode
Test Frequency:	9 kHz ~ 30 MHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%

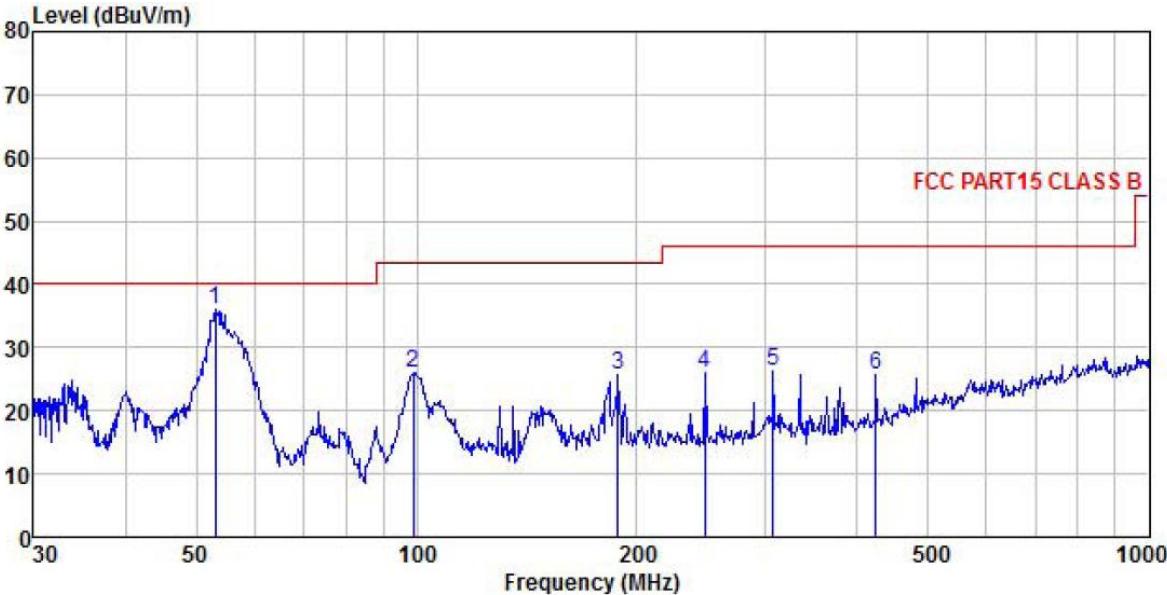


Freq MHz	Read	Antenna	Cable	Preamp	Limit Line	Over Limit	Remark	
	Freq	Level dBuV	Factor	Loss dB				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	0.016	39.99	-25.86	0.05	17.50	48.18	143.71	-95.53 Peak
2	0.031	34.22	-25.95	0.12	17.50	42.39	137.65	-95.26 Peak
3	0.047	28.41	-25.99	0.17	17.50	36.59	134.13	-97.54 Peak
4	0.051	22.15	-26.00	0.17	17.50	30.32	133.49-103.17	Peak
5	0.220	20.68	-26.21	0.34	17.50	28.81	120.77	-91.96 Peak
6	0.335	18.00	-26.26	0.36	17.50	26.10	117.10	-91.00 Peak

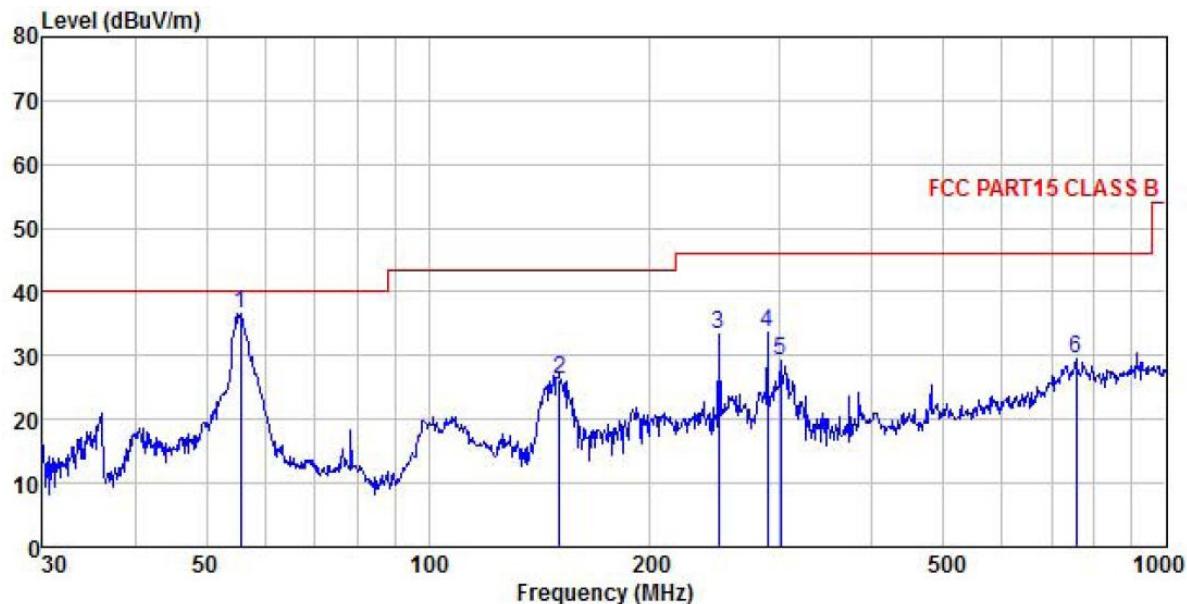
Remark:

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

Test frequency range: 30MHz-1000MHz

Product Name:	C-One ² LF AGRIDENT			Product Model:	C-One																																																																	
Test By:	Carey			Test mode:	RFID Tx mode																																																																	
Test Frequency:	30 MHz ~ 1 GHz			Polarization:	Vertical																																																																	
Test Voltage:	AC 120/60Hz			Environment:	Temp: 24°C Huni: 57%																																																																	
																																																																						
<table border="1"> <thead> <tr> <th rowspan="2">Freq MHz</th> <th>Read Level dBuV</th> <th>Antenna Factor dB/m</th> <th>Cable Loss Factor dB</th> <th>Preamp Level dB</th> <th>Line Limit dBuV/m</th> <th>Over Line Limit dB</th> <th>Remark</th> </tr> <tr> <th>MHz</th> <th>dBuV</th> <th>dB/m</th> <th>dB</th> <th>dBuV/m</th> <th>dBuV/m</th> <th>dB</th> </tr> </thead> <tbody> <tr> <td>1 53.131</td> <td>52.63</td> <td>11.78</td> <td>1.32</td> <td>29.81</td> <td>35.92</td> <td>40.00</td> <td>-4.08</td> </tr> <tr> <td>2 98.833</td> <td>41.33</td> <td>12.22</td> <td>1.97</td> <td>29.53</td> <td>25.99</td> <td>43.50</td> <td>-17.51</td> </tr> <tr> <td>3 188.413</td> <td>41.57</td> <td>10.26</td> <td>2.79</td> <td>28.91</td> <td>25.71</td> <td>43.50</td> <td>-17.79</td> </tr> <tr> <td>4 247.682</td> <td>39.18</td> <td>12.62</td> <td>2.81</td> <td>28.55</td> <td>26.06</td> <td>46.00</td> <td>-19.94</td> </tr> <tr> <td>5 306.754</td> <td>37.89</td> <td>13.76</td> <td>2.96</td> <td>28.47</td> <td>26.14</td> <td>46.00</td> <td>-19.86</td> </tr> <tr> <td>6 423.540</td> <td>35.59</td> <td>15.86</td> <td>3.14</td> <td>28.82</td> <td>25.77</td> <td>46.00</td> <td>-20.23</td> </tr> </tbody> </table>								Freq MHz	Read Level dBuV	Antenna Factor dB/m	Cable Loss Factor dB	Preamp Level dB	Line Limit dBuV/m	Over Line Limit dB	Remark	MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	1 53.131	52.63	11.78	1.32	29.81	35.92	40.00	-4.08	2 98.833	41.33	12.22	1.97	29.53	25.99	43.50	-17.51	3 188.413	41.57	10.26	2.79	28.91	25.71	43.50	-17.79	4 247.682	39.18	12.62	2.81	28.55	26.06	46.00	-19.94	5 306.754	37.89	13.76	2.96	28.47	26.14	46.00	-19.86	6 423.540	35.59	15.86	3.14	28.82	25.77	46.00	-20.23
Freq MHz	Read Level dBuV	Antenna Factor dB/m	Cable Loss Factor dB	Preamp Level dB	Line Limit dBuV/m	Over Line Limit dB	Remark																																																															
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<p>Remark:</p> <ol style="list-style-type: none"> 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 ² LF AGRIDENT	Product Model:	C-One
Test By:	Carey	Test mode:	RFID Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%

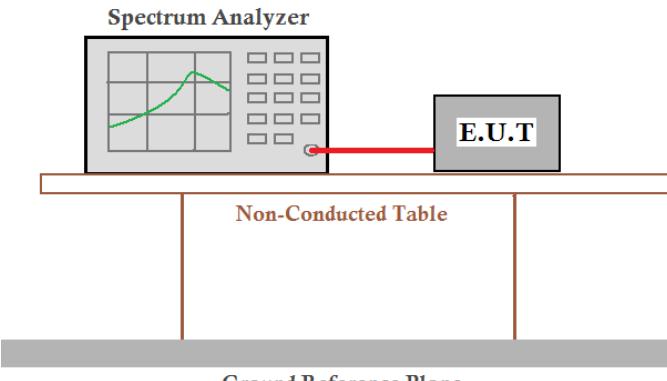


Freq	ReadAntenna		Cable Preamp		Limit Level	Over Line	Over Limit	Remark
	MHz	Level dBuV	Antenna Factor dB	Cable Loss dB	Preamp Factor dB			
1	55.609	53.55	11.57	1.36	29.80	36.68	40.00	-3.32
2	150.538	43.93	8.92	2.52	29.22	26.15	43.50	-17.35
3	247.682	46.37	12.62	2.81	28.55	33.25	46.00	-12.75
4	287.990	45.90	13.41	2.91	28.47	33.75	46.00	-12.25
5	300.367	41.09	13.63	2.94	28.45	29.21	46.00	-16.79
6	755.387	32.78	20.71	4.36	28.45	29.40	46.00	-16.60

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.

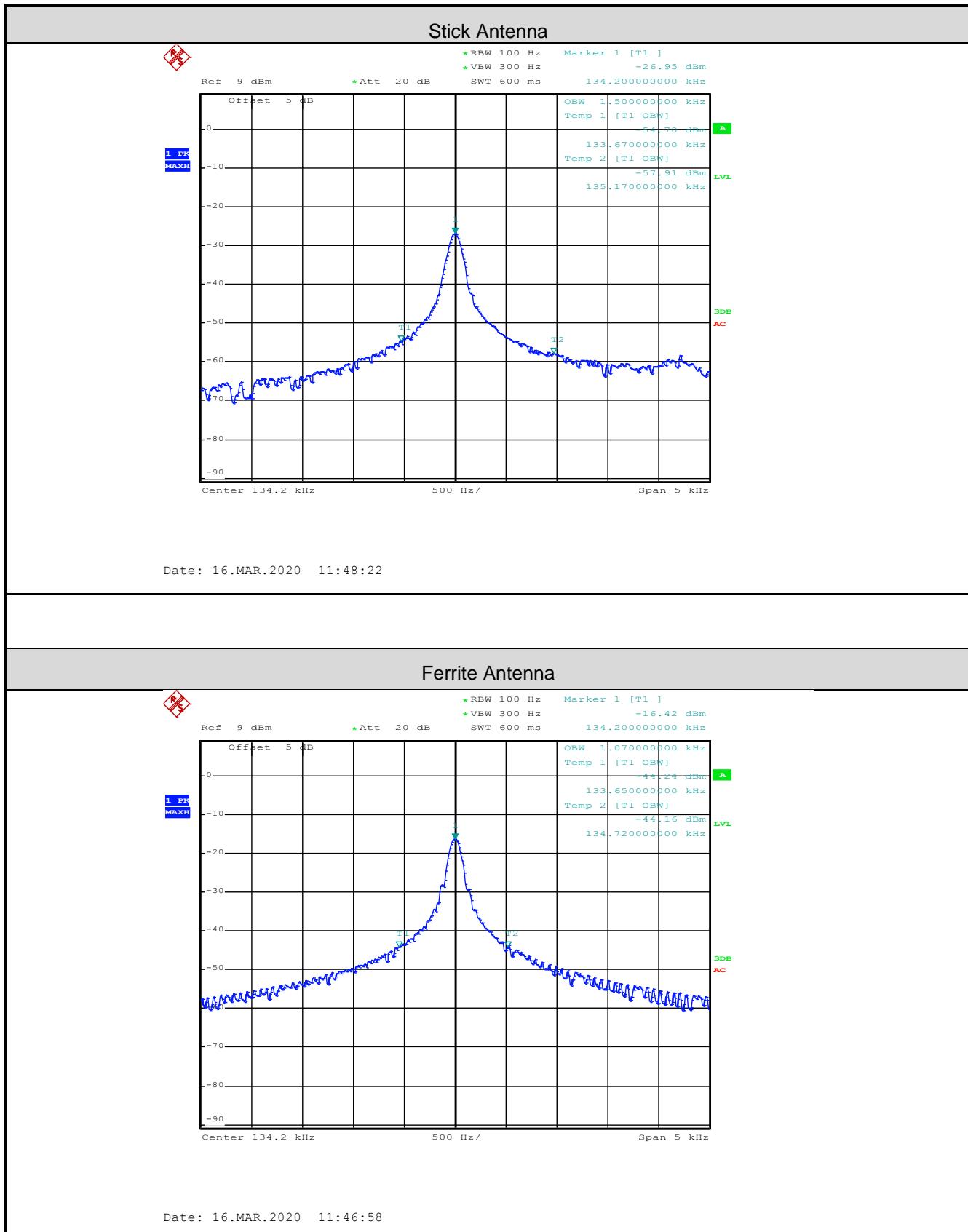
6.3 99% Bandwidth

Test Requirement:	FCC Part 2.202(a) RSS-GEN Section 6.7
Limit:	N/A
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

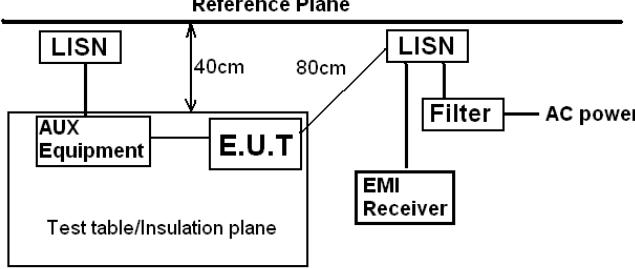
Measurement Data

99% bandwidth		Limit	Results
Stick Antenna	Ferrite Antenna		
1.50 kHz	1.07 kHz	N/A	Passed

Test plot as follows:



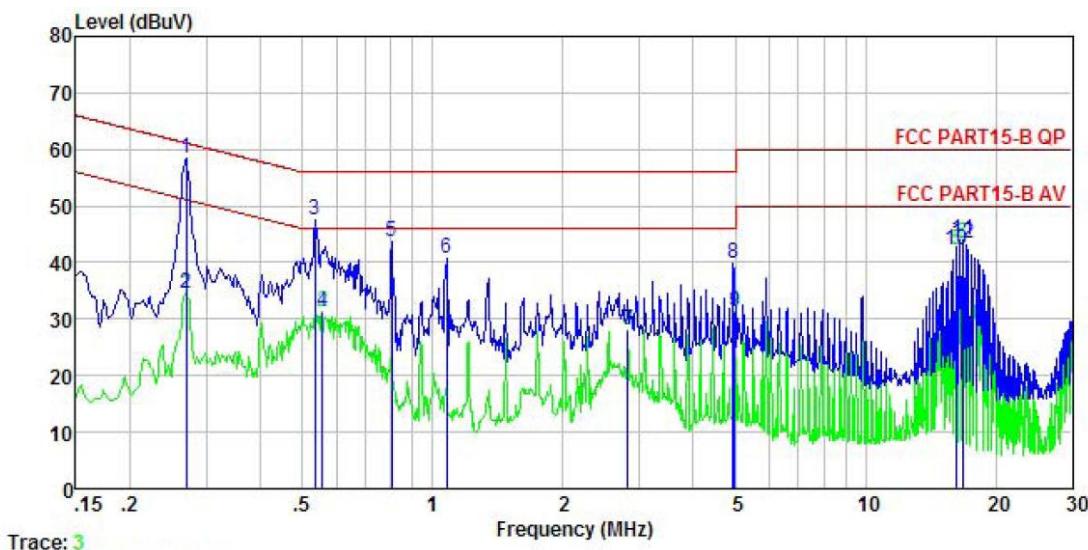
6.4 Conducted Emission

Test Requirement:	FCC Part15 B Section 15.207 RSS-210 RSS-GEN Section 8.8		
Test Frequency Range:	150kHz to 30MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9kHz, VBW=30kHz		
Limit:	Frequency range (MHz)		Limit (dB μ V)
			Quasi-peak Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
0.5-30		60	50
* Decreases with the logarithm of the frequency.			
Test setup:	 <p>Remark: <i>E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network 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 ² LF AGRIDENT			Product model:	C-One																																																																																																																																
Test by:	Carey			Test mode:	RFID Tx mode																																																																																																																																
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Test voltage:	AC 120 V/60 Hz			Environment:	Temp: 22.5°C Huni: 55%																																																																																																																																
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<p>Notes:</p> <ol style="list-style-type: none"> An initial pre-scan was performed on the line and neutral lines with peak detector. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission. Final Level = Receiver Read level + LISN Factor + Cable Loss. 																																																																																																																																					

Product name:	C-One ² LF AGRIDENT	Product model:	C-One
Test by:	Carey	Test mode:	RFID Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5°C Huni: 55%



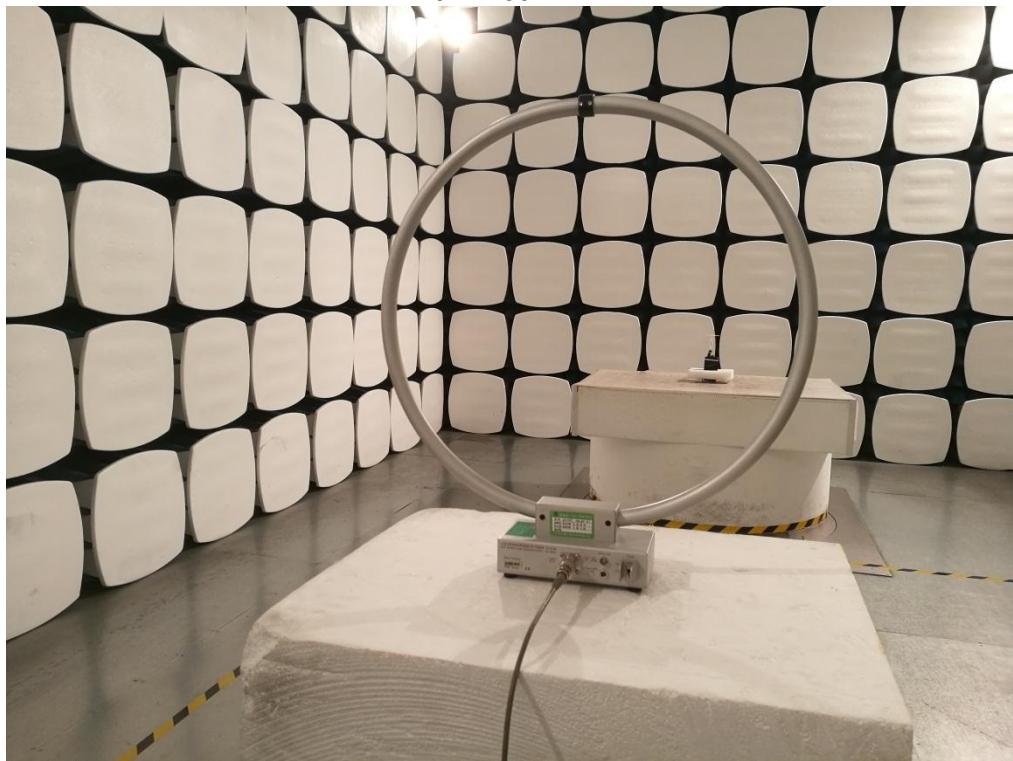
Freq	Read	LISM	Aux	Cable	Limit	Over	Over	
	Freq	Level	Factor	Factor				Remark
1	0.270	48.35	-0.65	0.01	10.75	58.46	61.12	-2.66 QP
2	0.270	24.51	-0.65	0.01	10.75	34.62	51.12	-16.50 Average
3	0.535	37.45	-0.65	0.03	10.76	47.59	56.00	-8.41 QP
4	0.555	21.28	-0.65	0.03	10.76	31.42	46.00	-14.58 Average
5	0.804	33.36	-0.64	0.06	10.81	43.59	56.00	-12.41 QP
6	1.077	30.35	-0.63	0.09	10.88	40.69	56.00	-15.31 QP
7	2.824	17.62	-0.67	0.29	10.93	28.17	46.00	-17.83 Average
8	4.952	28.93	-0.72	0.66	10.85	39.72	56.00	-16.28 QP
9	4.978	20.35	-0.72	0.67	10.85	31.15	46.00	-14.85 Average
10	16.226	30.00	-0.97	2.38	10.91	42.32	50.00	-7.68 Average
11	16.750	32.13	-1.04	2.05	10.91	44.05	60.00	-15.95 QP
12	16.750	31.58	-1.04	2.05	10.91	43.50	50.00	-6.50 Average

Notes:

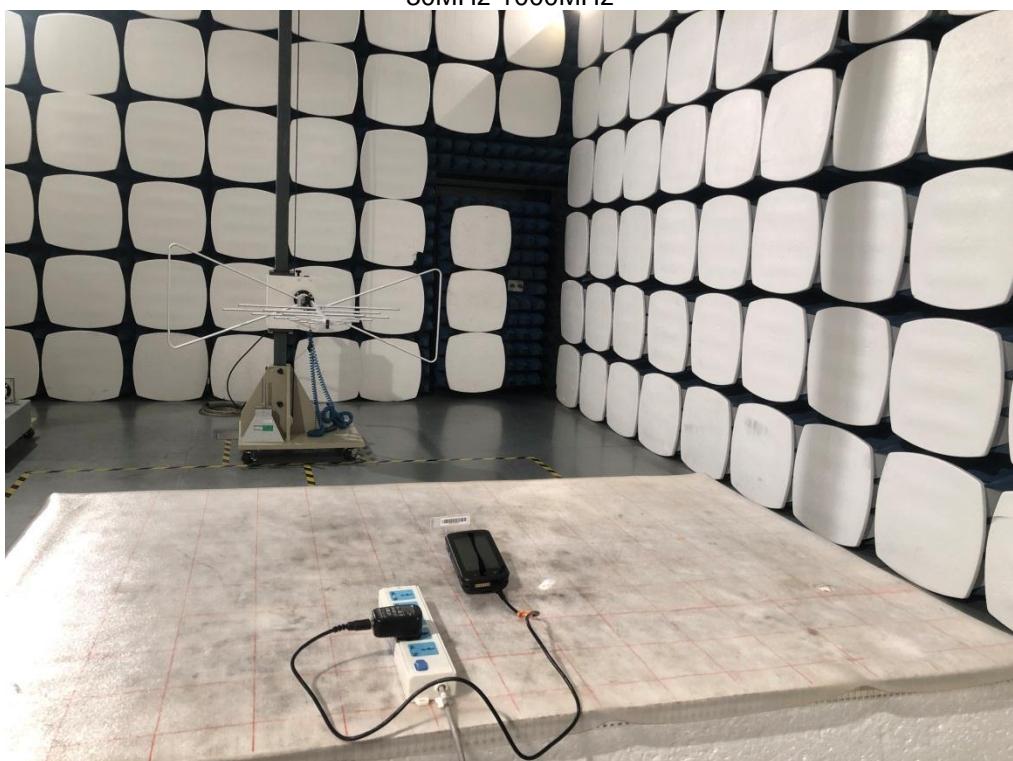
1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level =Receiver Read level + LISN Factor + Cable Loss.

7 Test Setup Photos

**Radiated Emission
Ferrite Antenna
9kHz-30MHz**

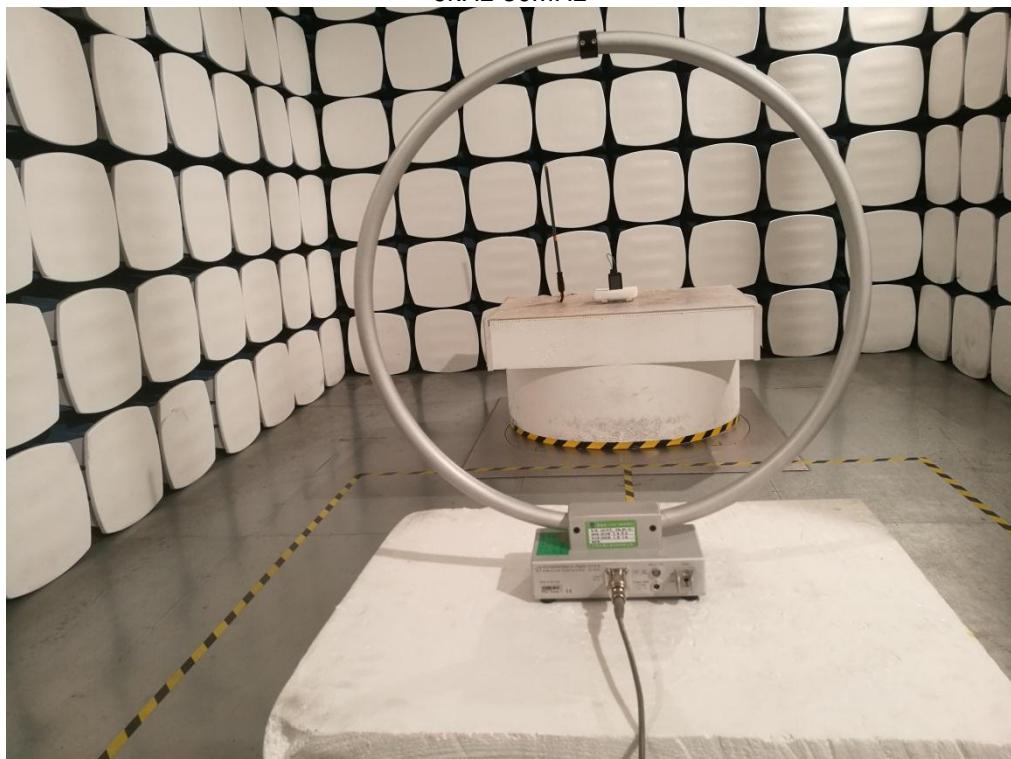


30MHz-1000MHz

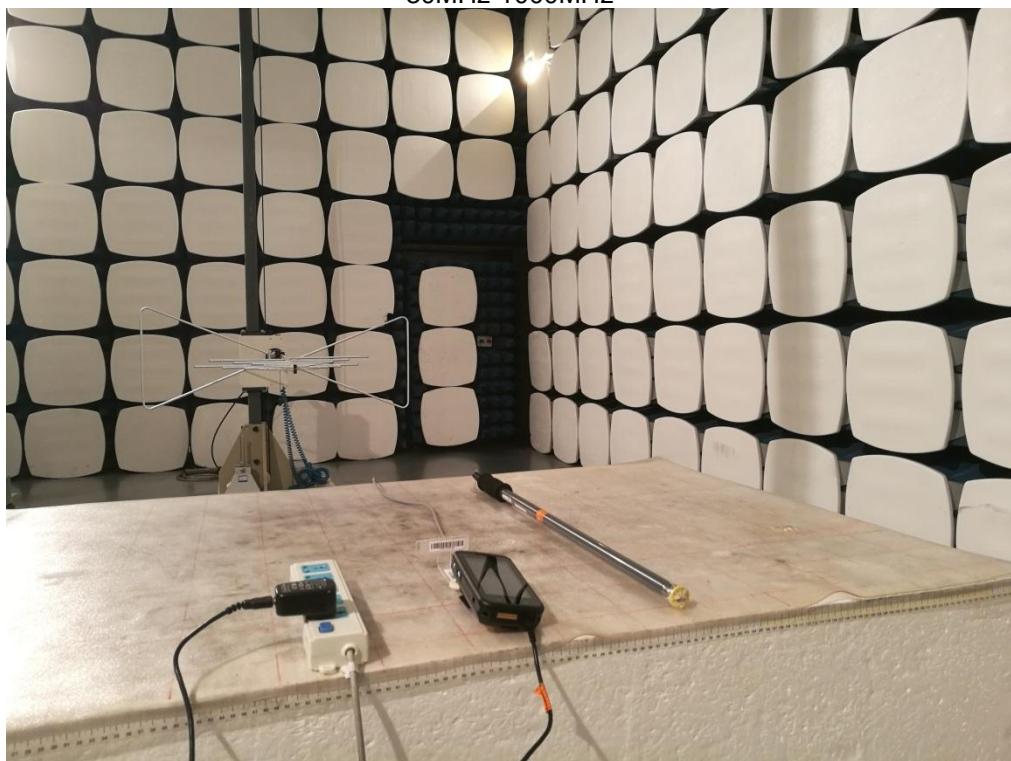


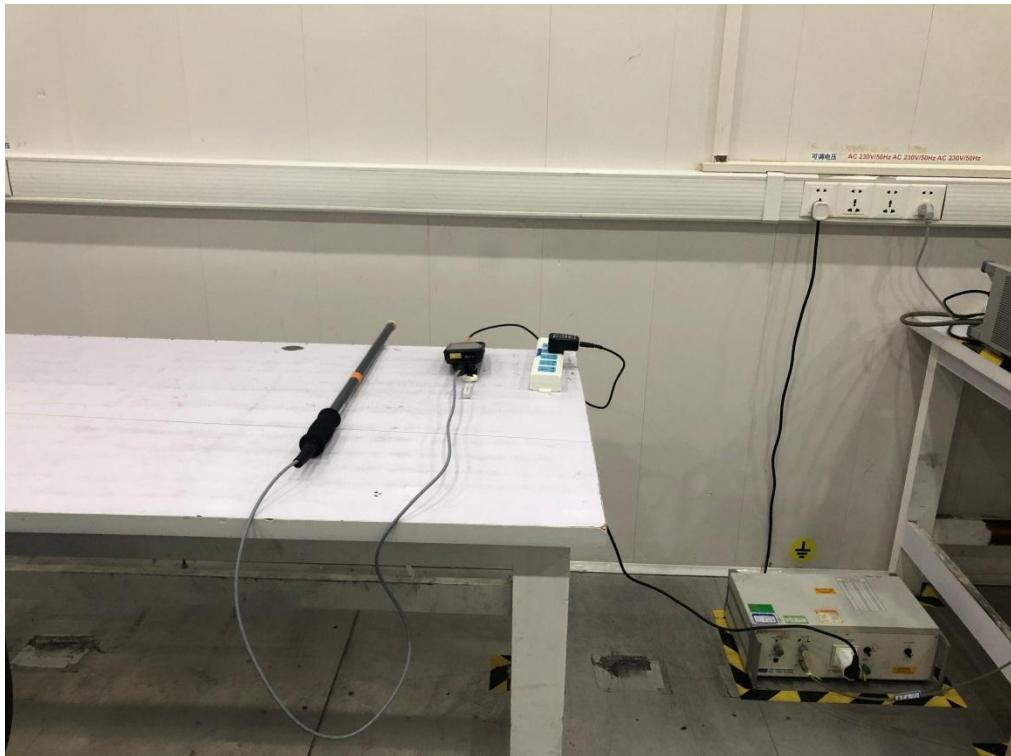
Radiated Emission**Stick Antenna**

9kHz-30MHz



30MHz-1000MHz



Conducted Emission**8 EUT Constructional Details**

Reference to the test report No. CCISE191107101

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