



# FCC Test Report

**FCC ID** : 2AMRO-CHWRIO107  
**Product Designation** : iON STAND DUO  
**Trade mark** : N/A  
**Model Name** : CHWRIO107  
**Serial Model** : N/A  
**Applicant** : iOttie,Inc  
**Date of Issue** : June 21, 2020  
**Standard(s)** : FCC Part 15 Subpart C  
**Report No** : S20070300802001

**Prepared for**

iOttie,Inc

20W 37th 6th floor 10018,New York, United states

**Prepared by**

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**TEST RESULT CERTIFICATION**

**Applicant's name**..... : iOttie,Inc  
 Address..... : 20W 37th 6th floor 10018,New York, United states  
**Manufacturer's Name**..... : Shenzhen Hengtai Ying Technology Co., Ltd  
 Address..... : 2F,11Block,Kaetat Industrial Park,Liaokeng Village, Shiyao Street,  
 Bao' an District,Shenzhen,Guangdong,China

**Product description**

Product name..... : iON STAND DUO  
 Model and/or type reference . : CHWRIO107

**Standards**..... : FCC Rules and Regulations Part 15 Subpart C Section 15.207, 15.209,  
 15.203  
 ANSI C63.10:2013

This device described above has been tested by Shenzhen NTEK Testing Technology Co., Ltd., and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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The test results of this report relate only to the tested sample identified in this report.

**Date of Test**..... :  
 Date (s) of performance of tests..... : May 09.2020 ~ June 21.2020  
 Date of Issue..... : June 21.2020  
 Test Result..... : **Pass**

Testing Engineer : Eileen Liu.  
 (Eileen Liu)

Technical Manager : Jason chen  
 (Jason Chen)

Authorized Signatory : Sam . chen  
 (Sam Chen)

**Report Revise Record**

<b>Report No</b>	<b>Revise Time</b>	<b>Issued Date</b>	<b>Valid Version</b>	<b>Notes</b>
S20070300802001	/	June 21, 2020	Valid	Initial Release

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**1. TEST SUMMARY**

Test procedures according to the technical standards:

EMC Emission					
Standard	Test Item	FCC Rules	Limit	Judgment	Remark
FCC part 15C ANSI C63.10:2013	Conducted Emission	§15.207	Class B	PASS	
	Radiated Emission	§15.209	Class B	PASS	
	ANTENNA APPLICATION	§15.203	/	PASS	

NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report
- (2) For client's request and manual description, the test will not be executed.

1.1 FACILITIES AND ACCREDITATIONS

All measurement facilities used to collect the measurement data are located at  
1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126  
P.R. China.

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10 and CISPR  
Publication 22.

1.2 LABORATORY ACCREDITATIONS AND LISTINGS

Site Description

- CNAS-Lab. : The Laboratory has been assessed and proved to be in compliance with  
CNAS-CL01:2006 (identical to ISO/IEC 17025:2005)  
The Certificate Registration Number is L5516.
- IC-Registration : The Certificate Registration Number is 9270A-1.
- FCC- Accredited : Test Firm Registration Number: 463705.  
Designation Number: CN1184
- A2LA-Lab. : The Certificate Registration Number is 4298.01  
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.  
This accreditation demonstrates technical competence for a defined  
scope and the operation of a laboratory quality management system  
(refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).
- Name of Firm : Shenzhen NTEK Testing Technology Co., Ltd.
- Site Location : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang  
Street, Bao'an District, Shenzhen 518126 P.R. China.

1.3 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard  
uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately **95**  
%.

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
NTEKC01	ANSI	150 KHz ~ 30MHz	3.2	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
NTEKA01	ANSI	30MHz ~ 1000MHz	4.7	
		1GHz ~12.4GHz	5.0	

**2. GENERAL INFORMATION**

**2.1 GENERAL DESCRIPTION OF EUT**

Product Feature and Specification	
Equipment	iON STAND DUO
Test Model	CHWRIO107
Operating Frequency	136.7KHz
Modulation Technique	Induction
Antenna Type	Induction coil
Power supply	Input:AC 100V~240V 50/60Hz 0.8A Max ;Output:DC 9V 2.66A by adaptor. (total)Wireless Charger Output: 20W Max
HW Version	1.0
SW Version	1.0

**2.2 DESCRIPTION OF TEST MODES**

EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

EUT Exercise

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

The following summary table is showing all test modes to demonstrate in compliance with the standard.

MODE	TEST MODE DESCRIPTION
1	Wireless charging Mode(Full load)
2	Wireless charging Mode(half load)
3	Wireless charging Mode(Null load)

Note:

1. The mode 1 was the worst case and only the data of the worst case record in this report.

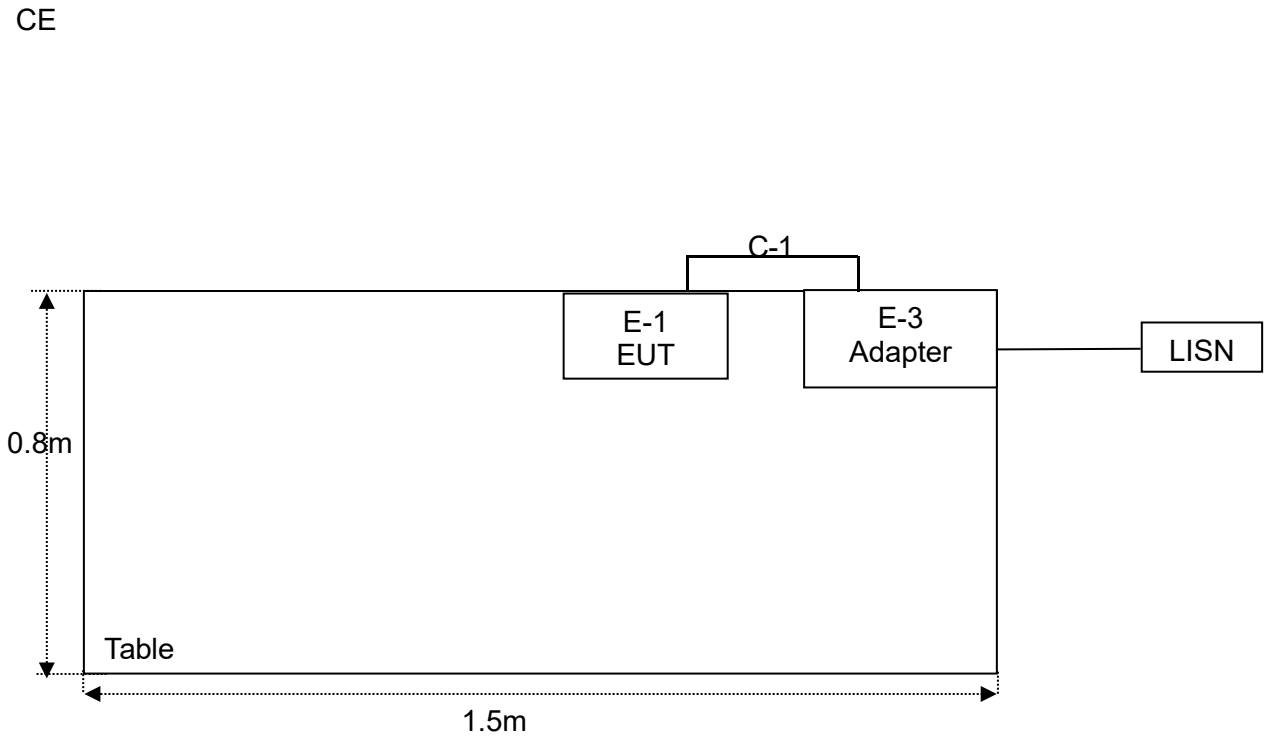
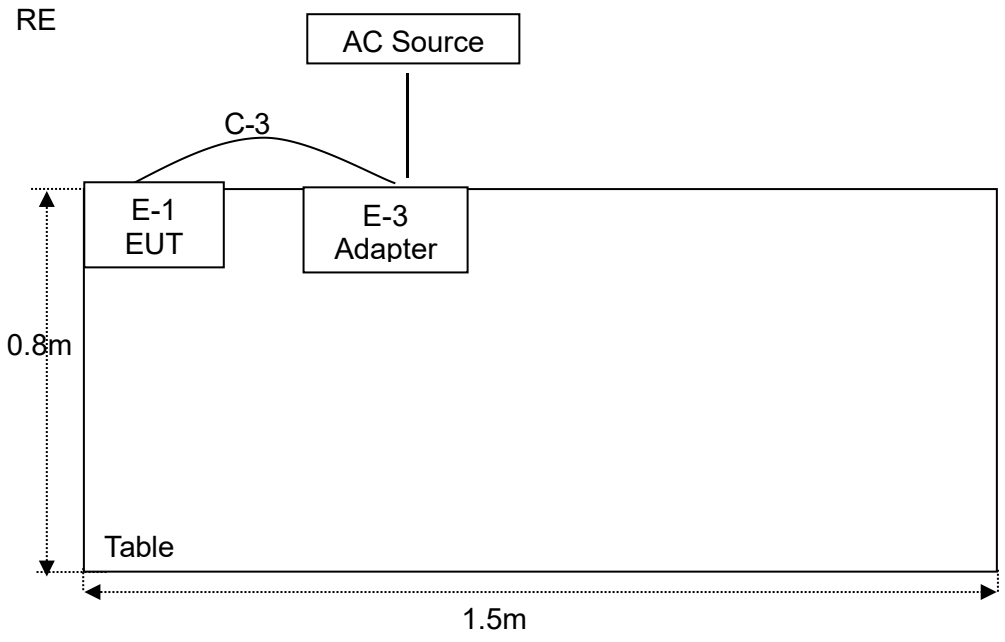
**(\*)EUT can only access the specified load, can not adjust the size of the load**

Carrier Frequency and Channel list:

Channel	Frequency(MHz)
1	0.1102
2	0.1367
3	0.2049



### 2.3 DESCRIPTION OF TEST SETUP



**2.4 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL**

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model/Type No.	Series No.	Note
E-1	iON STAND DUO	N/A	CHWRIO107	N/A	EUT
E-2	Adapter	N/A	HTY24-0902660U	DC 9V/2.66A	Accessory
E-3	Load	N/A	N/A	N/A	AE

Item	Cable Type	Shielded Type	Ferrite Core	Length	Note

**Note:**

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” means “shielded” “with core”; “NO” means “unshielded” “without core”.

**2.5 MEASUREMENT INSTRUMENTS LIST**

Radiation Test equipment

	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45108040	2020.06.05	2021.06.04	1 year
2	Spectrum Analyzer	Agilent	N9020A	MY49100060	2019.10.26	2020.10.25	1 year
4	Test Receiver	R&S	ESPI	101318	2020.06.05	2021.06.04	1 year
5	Bilog Antenna	TESEQ	CBL6111D	31216	2020.04.08	2021.04.07	1 year
6	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2020.06.05	2021.06.04	1 year
7	Amplifier	EMC	EMC051835 SE	980246	2019.08.09	2020.08.08	1 year
8	Amplifier	MITEQ	TTA1840-35-HG	177156	2020.06.05	2021.06.04	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2020.06.05	2021.06.04	1 year
10	Test Cable (9KHz-30MHz)	N/A	R-01	N/A	2020.04.21	2023.04.20	3 year
11	Test Cable (30MHz-1GHz)	N/A	R-02	N/A	2020.04.21	2023.04.20	3 year

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2020.06.05	2021.06.04	1 year
2	LISN	R&S	ENV216	101313	2020.04.18	2021.04.17	1 year
3	LISN	SCHWARZBECK	NNLK 8129	8129245	2020.06.05	2021.06.04	1 year
4	50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200983704	2020.06.05	2021.06.04	1 year
5	Test Cable (9KHz-30MHz)	N/A	C01	N/A	2020.04.21	2023.04.20	3 year
6	Test Cable (9KHz-30MHz)	N/A	C02	N/A	2020.04.21	2023.04.20	3 year
7	Test Cable (9KHz-30MHz)	N/A	C03	N/A	2020.04.21	2023.04.20	3 year

**3. EMC EMISSION TEST**

**3.1 CONDUCTED EMISSION MEASUREMENT**

POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	limit	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

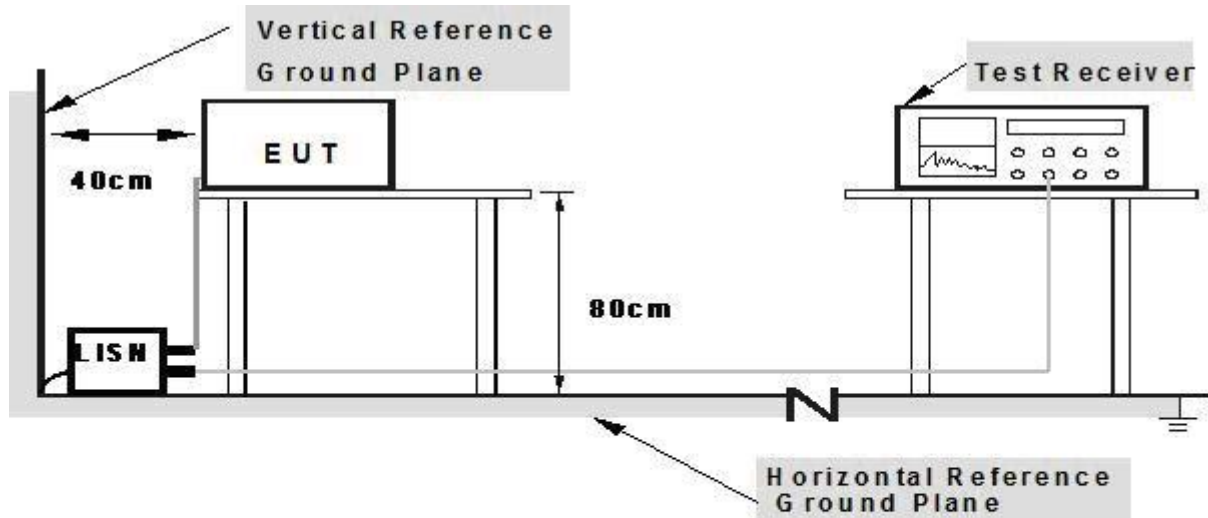
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

### 3.1.1 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

### 3.1.2 TEST SETUP



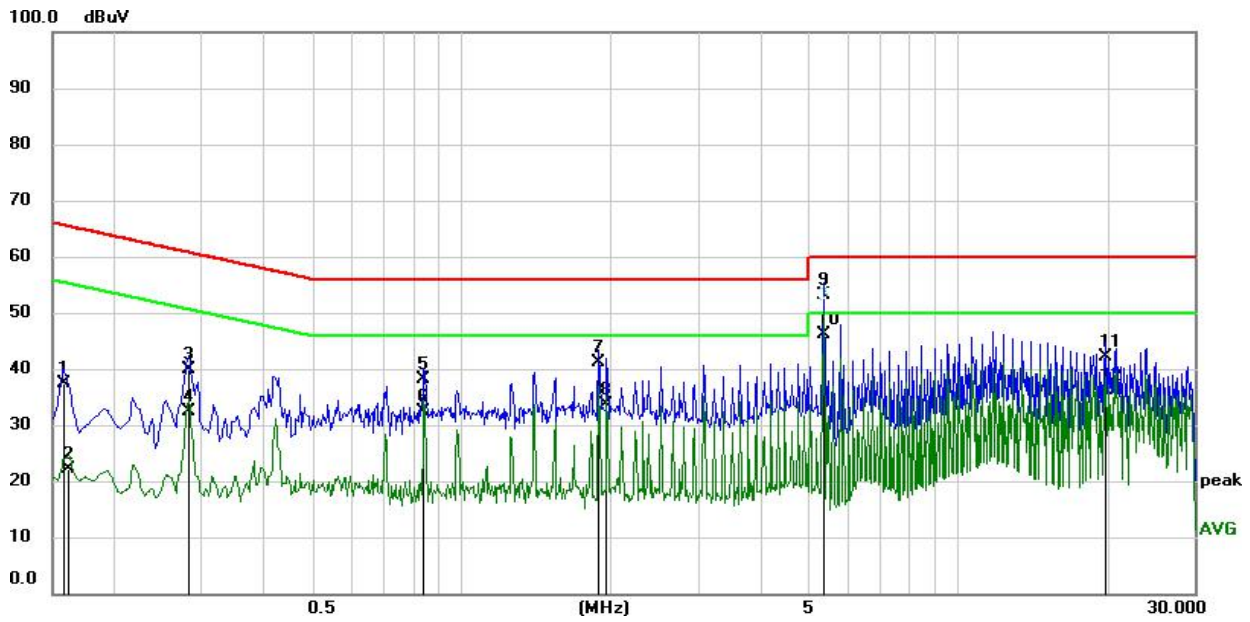
- Note: 1. Support units were connected to second LISN.**  
**2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes**

### 3.1.3 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.

3.1.4 TEST RESULTS

EUT :	iON STAND DUO	Model Name. :	CHWRIO107
Temperature:	25.3 °C	Relative Humidity:	53.6%
Pressure:	1010hPa	Test Date:	2020-05-16
Test Mode:	Mode 1	Phase :	L
Test Voltage:	Output: DC 9V,Input: Adapter AC 120V 50/60Hz		

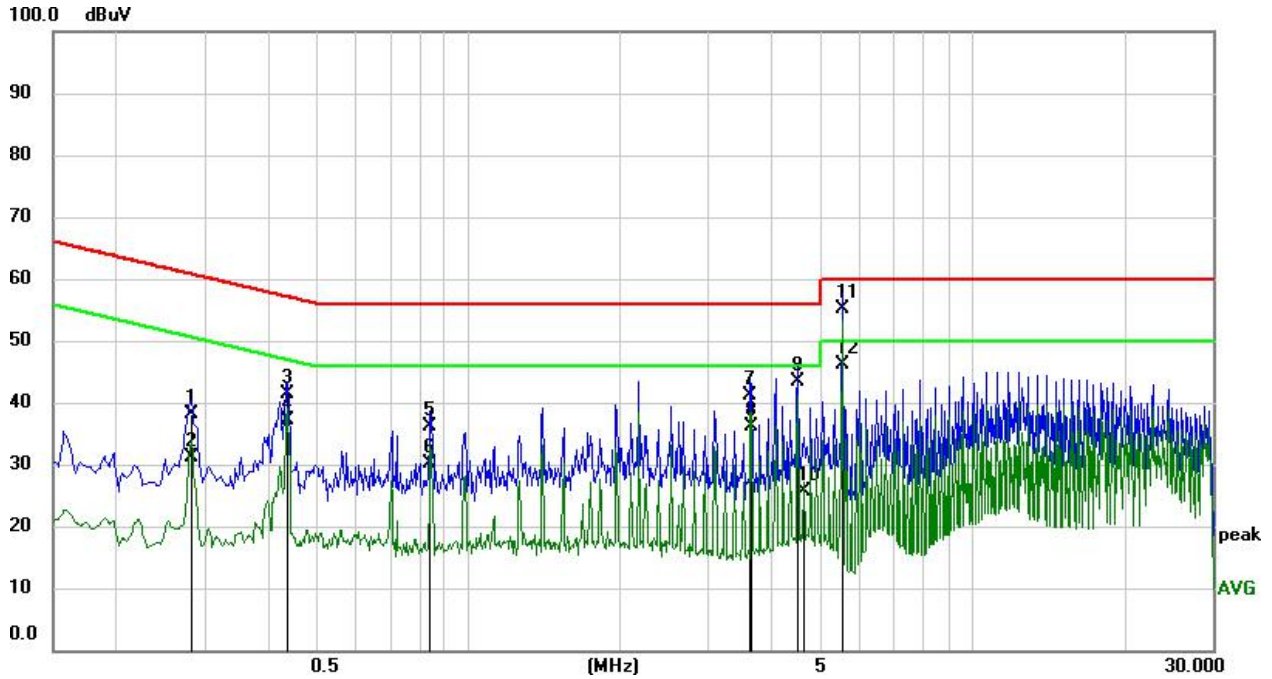


Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1582	27.51	9.94	37.45	65.56	-28.11	QP	
2	0.1620	12.18	9.94	22.12	55.36	-33.24	AVG	
3	0.2819	30.08	9.92	40.00	60.76	-20.76	QP	
4	0.2819	22.53	9.92	32.45	50.76	-18.31	AVG	
5	0.8420	28.17	9.95	38.12	56.00	-17.88	QP	
6	0.8420	22.50	9.95	32.45	46.00	-13.55	AVG	
7	1.8940	31.09	10.03	41.12	56.00	-14.88	QP	
8	1.9660	23.72	10.03	33.75	46.00	-12.25	AVG	
9	5.3859	42.81	10.31	53.12	60.00	-6.88	QP	
10 *	5.3859	35.92	10.31	46.23	50.00	-3.77	AVG	
11	19.9420	28.99	13.13	42.12	60.00	-17.88	QP	
12	19.9420	22.99	13.13	36.12	50.00	-13.88	AVG	

EUT :	iON STAND DUO	Model Name. :	CHWRIO107
Temperature:	23 °C	Relative Humidity:	52%
Pressure:	1010hPa	Test Date:	2020-05-16
Test Mode:	Mode 1	Phase :	N
Test Voltage:	Output: DC 9V,Input: Adapter AC 120V 50/60Hz		



Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.2819	28.20	9.92	38.12	60.76	-22.64	QP	
2		0.2819	21.20	9.92	31.12	50.76	-19.64	AVG	
3		0.4380	31.51	9.93	41.44	57.10	-15.66	QP	
4		0.4380	27.19	9.93	37.12	47.10	-9.98	AVG	
5		0.8420	26.16	9.96	36.12	56.00	-19.88	QP	
6		0.8420	20.16	9.96	30.12	46.00	-15.88	AVG	
7		3.6380	30.95	10.17	41.12	56.00	-14.88	QP	
8		3.6420	25.95	10.17	36.12	46.00	-9.88	AVG	
9		4.5140	33.21	10.24	43.45	56.00	-12.55	QP	
10		4.6380	15.45	10.25	25.70	46.00	-20.30	AVG	
11		5.5340	44.78	10.34	55.12	60.00	-4.88	QP	
12	*	5.5340	35.78	10.34	46.12	50.00	-3.88	AVG	

**3.2 RADIATED EMISSION MEASUREMENT**

**3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT**

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table 15.209(a):

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

**15.205 Restricted bands of operation**

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

Notes:

- (1) Measurement was performed at an antenna to the closed point of EUT distance of meters.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).
- (3) Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of 15.205, and the emissions located in restricted bands also comply with 15.209 limit.
- (4) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector



### 3.2.2 TEST PROCEDURE

#### Test Arrangement for Radiated Emissions up to 1 GHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited test facility. 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 is a broadband antenna (Blow 30M, use loop antenna), and its 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.

Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for quasi-peak detection (QP) at frequency below 1GHz.

#### Test Arrangement for Radiated Emissions above 1 GHz.

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited chamber room. 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 height of antenna can be varied from one meter to four meters, the height of adjustment depends on the EUT height and the antenna 3dB beamwidth both, to detect 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Use the following receiver/spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW=200Hz for 9KHz to 150KHz,

RBW=9kHz for 150KHz to 30MHz,

RBW=120KHz for 30MHz to 1GHz

VBW  $\geq$  3\*RBW

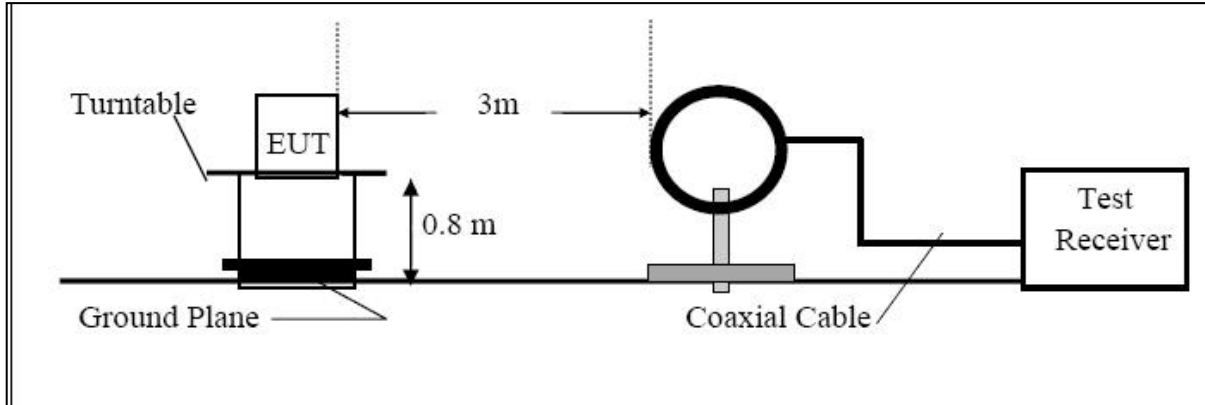
Sweep = auto

Detector function = QP

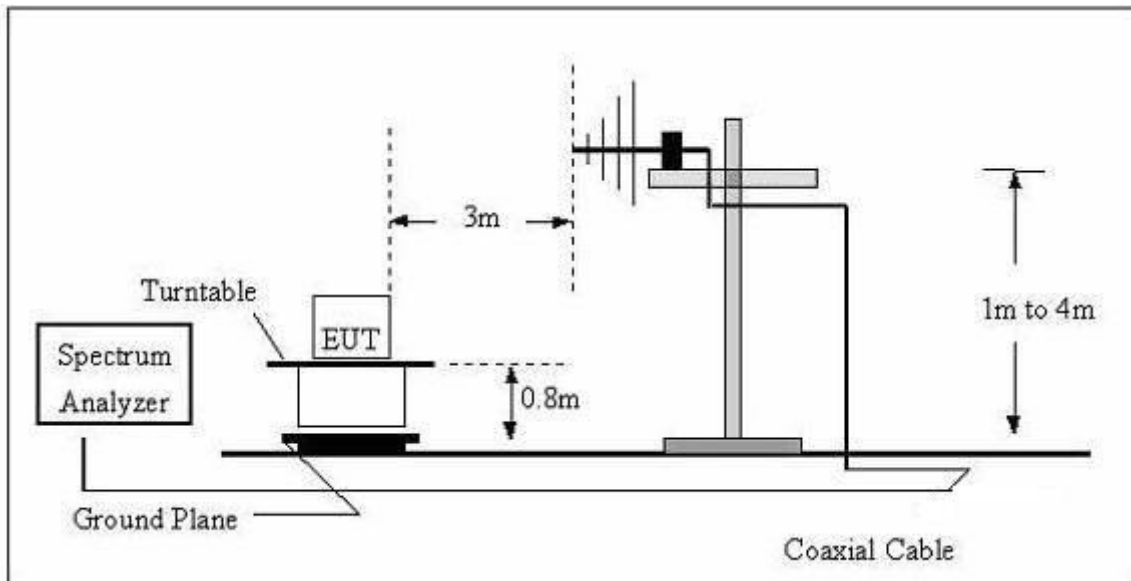
Trace = max hold

### 3.2.3 TEST SETUP

For Radiated Emission Test Set-Up, Frequency Below 30MHz



For Radiated Emission 30~1000MHz



3.2.4 TEST RESULTS

TEST RESULTS (9KHz~30MHz)

EUT :	iON STAND DUO	Model Name. :	CHWRIO107
Temperature:	23 .3℃	Relative Humidity:	53.9%
Pressure:	1010 hPa	Test Date :	2020-05-16
Test Mode :	Mode 3	Polarization :	X
Test Power :	Output: DC 9V,Input: Adapter AC 120V 50/60Hz		

Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.

Frequency (MHz)	Ant.Pol.	Reading Level (dBuV/m)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
0.056	X	36.32	9.69	46.01	112.656	-66.65	PK
0.111	X	52.6	10.36	62.96	106.698	-43.74	PK(fundament al frequency)
0.825	X	35.74	10.980	46.720	69.275	-22.56	QP
4.468	X	28.184	11.969	40.153	54.602	-14.45	QP
7.659	X	31.709	12.311	44.020	69.542	-25.52	QP
20.096	X	22.808	14.882	37.690	69.542	-31.85	QP

Note:

Below 30MHz, Pre-test the X, Y, Z axis to find X axis is worst case, so only record X axis test data.

X: Field strength which this device generates since the position of the charging coil and loop antenna differ by 0 degrees.

Y: Field strength which this device generates since the position of the charging coil and loop antenna differ by 90 degrees.

Z: Field strength which this device generates since the position of the charging coil and loop antenna differ by 180 degrees.

EUT :	iON STAND DUO	Model Name. :	CHWRIO107
Temperature:	23.3 °C	Relative Humidity:	53.8%
Pressure:	1010 hPa	Test Date :	2020-05-16
Test Mode :	Mode 1	Polarization :	X
Test Power :	Output: DC 9V,Input: Adapter AC 120V 50/60Hz		

Remark:  
Factor = Antenna Factor + Cable Loss - Amplifier.

Frequency (MHz)	Ant.Pol.	Reading Level (dBuV/m)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
0.0980	X	36.66	10.22	46.88	107.7797	-60.90	QP
0.1367	X	79.87	10.38	90.25	104.8889	-14.64	PK(fundamental frequency)
0.4101	X	34.72	10.590	45.310	75.346	-30.04	QP
2.0505	X	27.31	11.380	38.690	61.367	-22.68	QP
3.2808	X	22.91	12.860	35.770	69.542	-33.77	QP
9.5690	X	20.613	13.067	33.680	69.542	-35.86	QP

Note:

Below 30MHz, Pre-test the X, Y, Z axis to find X axis is worst case, so only record X axis test data.

X: Field strength which this device generates since the position of the charging coil and loop antenna differ by 0 degrees.

Y: Field strength which this device generates since the position of the charging coil and loop antenna differ by 90 degrees.

Z: Field strength which this device generates since the position of the charging coil and loop antenna differ by 180 degrees.

EUT :	iON STAND DUO	Model Name. :	CHWRIO107
Temperature:	23.3 °C	Relative Humidity:	53.8%
Pressure:	1010 hPa	Test Date :	2020-03-05
Test Mode :	Mode 2	Polarization :	X
Test Power :	Output: DC 9V, Input: Adapter AC 120V 50/60Hz		

Remark:  
Factor = Antenna Factor + Cable Loss - Amplifier.

Frequency (MHz)	Ant.Pol.	Reading Level (dBuV/m)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
0.071	X	34.281	9.35	43.631	110.5791	-66.95	PK
0.204	X	69.626	9.95	79.576	101.3989	-21.82	PK(fundamental frequency)
1.025	X	33.044	10.863	43.907	67.394	-23.49	QP
2.049	X	24.702	11.901	36.603	61.373	-24.77	QP
5.123	X	24.907	12.189	37.096	69.542	-32.45	QP
10.245	X	24.582	12.809	37.391	69.542	-32.15	QP

Note:

Below 30MHz, Pre-test the X, Y, Z axis to find X axis is worst case, so only record X axis test data.

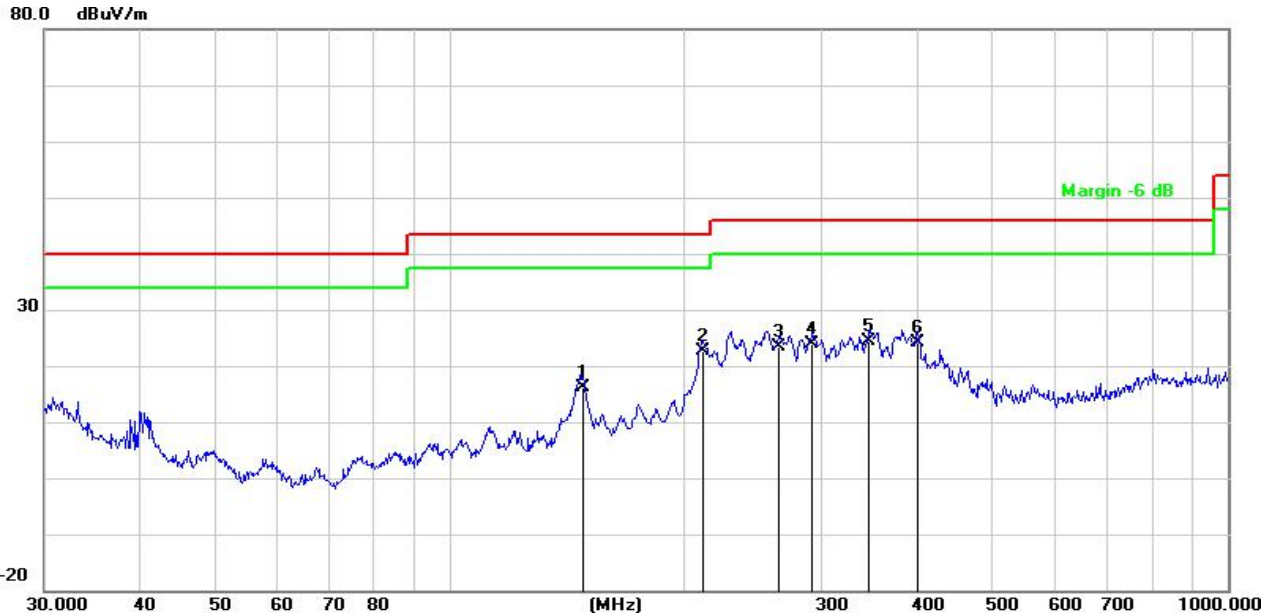
X: Field strength which this device generates since the position of the charging coil and loop antenna differ by 0 degrees.

Y: Field strength which this device generates since the position of the charging coil and loop antenna differ by 90 degrees.

Z: Field strength which this device generates since the position of the charging coil and loop antenna differ by 180 degrees.

TEST RESULTS (30MHz ~1000MHz)

EUT :	iON STAND DUO	Model Name. :	CHWRIO107
Temperature:	24.3 °C	Relative Humidity:	54.6%
Pressure:	1010 hPa	Test Date :	2020-05-16
Test Mode :	Mode1	Polarization :	Horizontal
Test Power :	Output: DC 9V,Input: Adapter AC 120V 50/60Hz		



Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1	148.0512	42.28	-26.10	16.18	43.50	-27.32	QP			
2 *	210.8784	49.06	-26.39	22.67	43.50	-20.83	QP			
3	264.1661	48.14	-24.65	23.49	46.00	-22.51	QP			
4	292.5708	47.68	-23.69	23.99	46.00	-22.01	QP			
5	346.5053	47.01	-22.65	24.36	46.00	-21.64	QP			
6	399.5552	45.03	-20.79	24.24	46.00	-21.76	QP			

EUT :	iON STAND DUO	Model Name. :	CHWRIO107
Temperature:	25.2 °C	Relative Humidity:	53%
Pressure:	1010 hPa	Test Date :	2020-05-16
Test Mode :	Mode 1	Polarization :	Vertical
Test Power :	Output: DC 9V,Input: Adapter AC 120V 50/60Hz		



Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB Detector	cm	degree	Comment
1	*	147.4682	50.55	-25.68	24.87	43.50	-18.63 QP			
2		175.4977	42.97	-26.08	16.89	43.50	-26.61 QP			
3		211.4338	44.36	-26.46	17.90	43.50	-25.60 QP			
4		247.8991	48.67	-24.86	23.81	46.00	-22.19 QP			
5		292.1863	40.81	-23.14	17.67	46.00	-28.33 QP			
6		354.1831	39.40	-22.21	17.19	46.00	-28.81 QP			

**4. BANDWIDTH**

**4.1. MEASUREMENT PROCEDURE**

1. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Set the EUT Work on operation frequency.
3. Set Span = approximately 2 to 5 times the 20 dB bandwidth, centered on a channel  
The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW; Sweep = auto; Detector function = peak
4. Set SPA Trace 1 Max hold, then View.

**4.2. MEASUREMENT RESULTS**

Frequency (KHz)	Test Data (Hz) 99% Bandwidth	Test Data (Hz) -20dB Bandwidth	Criteria
136.7	827	821	PASS



Note: All channels have been tested and the worst mode data is recorded in the report



## 5. ANTENNA APPLICATION

### 5.1. Antenna Requirement

15.203 requirement: For intentional device, according to 15.203: 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.

### 5.2. Result

The EUT antenna is permanent attached antenna. It comply with the standard requirement.

-----END REPORT-----