



Shenzhen CTL Testing Technology Co., Ltd.  
Tel: +86-755-89486194 E-mail: ctl@ctl-lab.com

# RF EXPOSURE REPORT

Report Reference No.: CTL1901176121-MPE

Compiled by: Happy Guo  
( position+printed name+signature) (File administrators)

Happy Guo

Tested by: Nice Nong  
( position+printed name+signature) (Test Engineer)

Nice Nong

Approved by: Ivan Xie  
( position+printed name+signature) (Manager)

Ivan Xie

Product Name ..... : wireless charging stand

Model/Type reference ..... : 144619-00

List Model(s)..... : 144619-01, 144619-02

PO No. .... : 393465

Trade Mark..... : TYPO

FCC ID ..... : 2AC9N-144619

Applicant's name ..... : Cotton On USA Inc

Address of applicant ..... : 16511, Trojan Way, La Miranda, California 90638, United States

Test Firm..... : Shenzhen CTL Testing Technology Co., Ltd.

Address of Test Firm ..... : Floor 1-A, Baisha Technology Park, No.3011, Shahexi Road,  
Nanshan District, Shenzhen, China 518055

Test specification..... :

Standard ..... : FCC Rules Part 15.207,15.209, 15.215(c)  
ANSI C63.10-2013

TRF Originator ..... : Shenzhen CTL Testing Technology Co., Ltd.

Master TRF..... : Dated 2011-01

Date of Receipt..... : Jan. 18, 2019

Date of Test Date..... : Jan. 19, 2019–Jan. 28, 2019

Data of Issue..... : Jan. 29, 2019

Result..... : Pass

**Shenzhen CTL Testing Technology Co., Ltd. All rights reserved.**

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen CTL Testing Technology Co., Ltd. is acknowledged as copyright owner and source of the material. Shenzhen CTL Testing Technology Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

# TEST REPORT

<b>Test Report No. :</b>	<b>CTL1901176121-WF</b>	Jan. 29, 2019
		Date of issue

Equipment under Test : wireless charging stand

Model /Type : 144619-00

Listed Models : 144619-01, 144619-02

**Applicant** : **Cotton On USA Inc**

Address : 16511, Trojan Way, La Miranda, California 90638,  
United States

**Manufacturer** : **Cotton On USA Inc**

Address : 16511, Trojan Way, La Miranda, California 90638,  
United States

<b>Test result</b>	<b>Pass *</b>
--------------------	---------------

\*In the configuration tested, the EUT complied with the standards specified page 5.

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

## **\*\* Modified History \*\***

[illegible]

**Table of Contents****Page**

<b>1. SUMMARY .....</b>	<b>5</b>
1.1. TEST FACILITY .....	5
1.2. STATEMENT OF THE MEASUREMENT UNCERTAINTY.....	5
<b>2. GENERAL INFORMATION .....</b>	<b>6</b>
2.1. ENVIRONMENTAL CONDITIONS .....	6
2.2. GENERAL DESCRIPTION OF EUT .....	6
2.3. TEST EQUIPMENT .....	6
<b>3. TEST CONDITIONS AND RESULTS .....</b>	<b>7</b>
3.1. APPLICABLE STANDARD.....	7
3.2. LIMIT .....	7
3.3. TEST SETUP.....	7
3.4. MEASUREMENT PROCEDURE .....	8
3.5. TEST RESULT OF E AND H FIELD STRENGTH .....	8
3.6. EQUIPMENT APPROVAL CONSIDERATIONS .....	9
3.7. CONCLUSION.....	9
<b>4. TEST SETUP PHOTOS OF THE EUT .....</b>	<b>10</b>

## 1. SUMMARY

### 1.1. Test Facility

#### 1.1.1 Address of the test laboratory

Shenzhen CTL Testing Technology Co., Ltd.

Floor 1-A, Baisha Technology Park, No. 3011, Shahexi Road, Nanshan, Shenzhen 518055 China

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.

#### 1.1.2 Laboratory accreditation

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

#### IC Registration No.: 9618B

The 3m alternate test site of Shenzhen CTL Testing Technology Co., Ltd. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration No.: 9618B on November 13, 2013.

#### FCC-Registration No.: 399832

Shenzhen CTL Testing Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 399832, December 08, 2017.

### 1.2. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the Shenzhen CTL Testing Technology Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for CTL laboratory is reported:

Test	Measurement Uncertainty	Notes
Transmitter power conducted	$\pm 0.57$ dB	(1)
Transmitter power Radiated	$\pm 2.20$ dB	(1)
Conducted spurious emission 9KHz-40 GHz	$\pm 2.20$ dB	(1)
Occupied Bandwidth	$\pm 0.01$ ppm	(1)
Radiated Emission 30~1000MHz	$\pm 4.10$ dB	(1)
Radiated Emission Above 1GHz	$\pm 4.32$ dB	(1)
Conducted Disturbance 0.15~30MHz	$\pm 3.20$ dB	(1)

- (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

## 2. GENERAL INFORMATION

### 2.1. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	25°C
Relative Humidity:	55 %
Air Pressure:	101 kPa

### 2.2. General Description of EUT

Product Name:	wireless charging stand
Model/Type reference:	144619-00
Input Voltage:	DC 5V 2A
Rated power:	5W
Operation frequency:	110KHz~200KHz
Antenna type:	Coil antennas
Antenna gain:	0dBi

Note: For more details, please refer to the user's manual of the EUT.

### 2.3. Test Equipment

Equipment	Manufacturer	Model	Serial no.	Calibrated date	Calibrated until
E-Field Probe	HOLADAY	HI3637	00052130	2018.5.20	2019.5.19
H-Field Probe	HOLADAY	HI3637	00052130	2018.5.20	2019.5.19

The calibration interval was one year

### 3. TEST CONDITIONS AND RESULTS

#### 3.1. Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

**According KDB 680106 D01 RF Exposure Wireless Charging App v03**

#### 3.2. Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	6
3.0 – 30	1842/f	4.89/f	(900/f)*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	/	/	f/300	6
1500 – 100,000	/	/	5	6

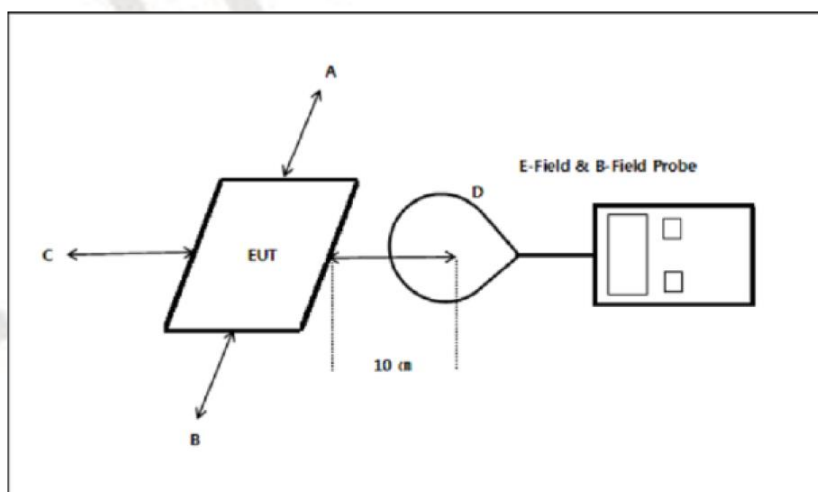
Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	30
3.0 – 30	824/f	2.19/f	(180/f)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	/	/	f/1500	30
1500 – 100,000	/	/	1.0	30

F=frequency in MHz

\*=Plane-wave equivalent power density

#### 3.3. Test Setup



**Note: A, B, C, D, E, F for six surfaces of the product.**



### 3.4. Measurement Procedure

- The RF exposure test was performed on 360 degree turn table in anechoic chamber.
- The measurement probe was placed at test distance (10cm) which is between the edge of the charger and the geometric centre of probe.
- The turn table was rotated 360 degree to search of highest strength.
- The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- The EUT were measured according to the dictates of KDB 680106 D01 RF Exposure Wireless Charging App v03.

### 3.5. Test Result of E and H field Strength

E-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

Charging Battery Level	Frequency Range (MHz)	Measured E-Field Strength Values (V/m)					FCC E-Field Strength 50% Limits (V/m)	FCC E-Field Strength Limits (V/m)
		Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
1%	0.145	6.59	6.57	6.64	6.25	6.15	307.0	614.0
50%	0.145	6.56	6.41	6.36	6.41	6.85	307.0	614.0
99%	0.145	5.68	6.15	5.56	5.42	5.36	307.0	614.0

H-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

Charging Battery Level	Frequency Range (MHz)	Measured E-Field Strength Values (A/m)					FCC H-Field Strength 50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
		Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
1%	0.145	0.352	0.347	0.115	0.256	0.232	0.815	1.63
50%	0.145	0.322	0.259	0.157	0.244	0.229	0.815	1.63
99%	0.145	0.254	0.228	0.136	0.211	0.214	0.815	1.63

H-Field Strength at 20cm from the top surface of the EUT

Charging Battery Level	Frequency Range (MHz)	Measured E-Field Strength Values (A/m)	FCC H-Field Strength 50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
		Test Position E		
1%	0.145	0.212	0.815	1.63
50%	0.145	0.198	0.815	1.63
99%	0.145	0.187	0.815	1.63



### 3.6. Equipment Approval Considerations

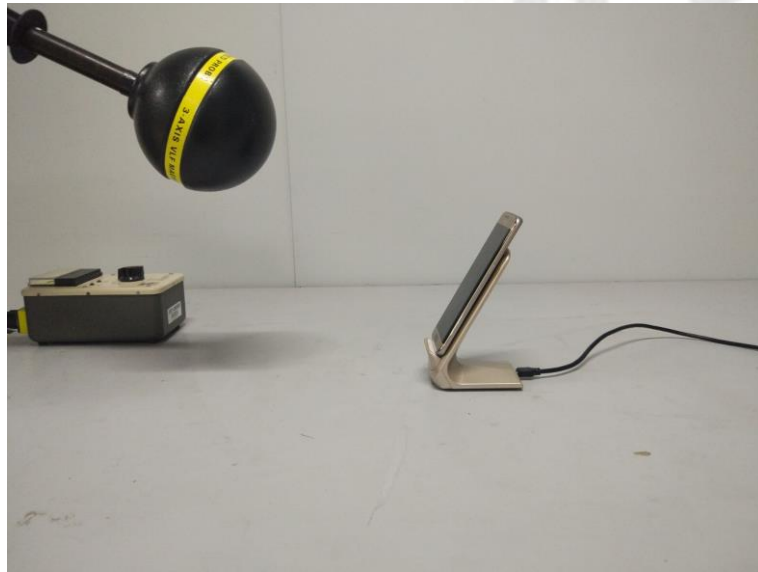
The EUT does comply with KDB 680106 D01 as follow table.

Requirements of KDB 680106 D01	Yes / No	Description
Power transfer frequency is less than 1 MHz	Yes	The device operate in the frequency range 110KHz~200KHz
Output power from each primary coil is less than 15 watts	Yes	The maximum output power for each primary coil is 5W.
The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.	Yes	The transfer system includes two primary coils and are able to detect and allow coupling only between individual pairs of coils.
Client device is placed directly in contact with the transmitter.	Yes	Client device is placed directly in contact with the transmitter.
Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).	Yes	Mobile exposure conditions only
The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.	Yes	The EUT H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

### 3.7. Conclusion

The detected emissions with a distance of 15cm surrounding the device and 20 cm above the top surface of the device are below the FCC E-Field Strength & H-Field Strength limits; and comply with the requirements of FCC KDB 680106 D01.

#### 4. Test Setup Photos of the EUT



\*\*\*\*\* End of Report \*\*\*\*\*