

# Maximum Permissible Exposure

**FCC ID** : HV4DTK1660  
**Equipment** : LCD TABLET  
**Brand Name** : Wacom  
**Model Name** : DTK-1660 , DTK-1661  
**Applicant** : Wacom Co., Ltd.  
2-510-1, Toyonodai, Kazo-shi, Saitama, 349-1148  
Japan  
**Manufacturer** : Wacom Co., Ltd.  
2-510-1, Toyonodai, Kazo-shi, Saitama, 349-1148  
Japan  
**Standard** : 47 CFR Part 2.1091

The product was received on Sep. 13, 2018, and testing was started from Sep. 18, 2018 and completed on Sep. 18, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in KDB680106 D01 RF Exposure Wireless Charging Apps v03 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of United States government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Allen Lin

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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# 1 Human Exposure Assessment

## 1.1 Maximum Permissible Exposure

### 1.1.1 Limit of Maximum Permissible Exposure

Limits for Occupational / Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f <sup>2</sup> )*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	F/300	6
1500-100,000	-	-	5	6
Limits for General Population / Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	F/1500	30
1500-100,000	-	-	1.0	30
Note 1: f = frequency in MHz ; *Plane-wave equivalent power density				
Note 2: For the applicable limit, see FCC 1.1310				

### 1.1.2 Table for Multiple Listing

The brand/model names in the following table are all refer to the identical product.

Brand Name	Model Name	Description
Wacom	DTK-1660	All the models are identical, the difference model for difference brand served as marketing strategy.
Wacom	DTK-1661	

## 1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 2.1091
- ♦ KDB680106 D01 RF Exposure Wireless Charging Apps v03

### 1.3 Testing Location Information

Testing Location				
<input checked="" type="checkbox"/>	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.		
		TEL : 886-3-327-3456 FAX : 886-3-327-0973		
Test site Designation No. TW1190 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-HY	Barry	25.4°C / 62.4%	18/Sep/2018

### 1.4 Accessories

Accessories				
AC Adapter	Brand Name	ADAPTER TECH	Model Name	ATS036T-P120
	Power Rating	I/P: 100-240Vac, 1A, O/P: 12Vdc, 3A		
	AC Power Cord	1.8meter, non-shielded cable, w/o ferrite core		
	DC Power Cord	1.5meter, B-shielded cable, with ferrite core		
DC+USB+HDMI composite cable	Brand Name	-	Model Name	-
	Signal Line	1.8meter, D-shielded cable, with ferrite core		
Digital Pen	Brand Name	Wacom	Model Name	KP-504E-00B

Note: Regarding to more detail and other information, please refer to user manual.

### 1.5 Support Equipment

Support Equipment - RF Conducted			
No.	Equipment	Brand Name	Model Name
1	Notebook	DELL	E5410
2	Adapter for NB	DELL	HA65NM130
3	AC Power Source	GW	APS-9102

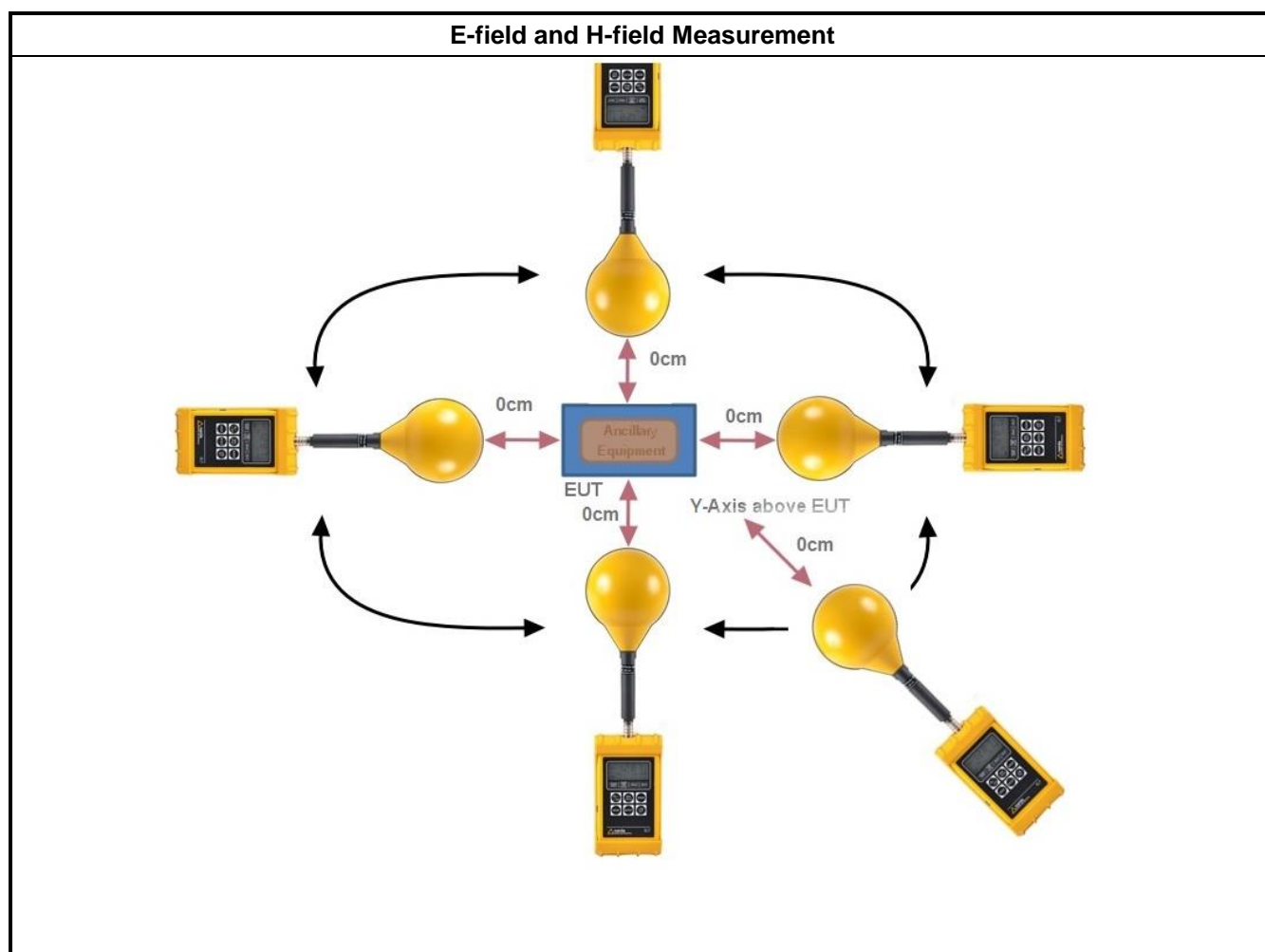
## 1.6 The Worst Condition

Ancillary Equipment	Charging Condition	Worst Charging Condition
Touch Pen	Operating Mode	Operating Mode

### 1.6.1 Test Method

Test Method	
<input checked="" type="checkbox"/>	Performed aggregate both leakage E-field and H-field at surrounding the device from all simultaneous transmitting coils.
<input checked="" type="checkbox"/>	During testing, the EUT was placed on a non-conductive table top and the ancillary equipment (e.g., mobile phone) was placed on the EUT for charging. Maximum E-field and H-field measurements were tested 10cm from each side of the EUT. Along the side of the EUT to center of E-field probe and H-field probe were positioned at the location to search maximum field strength.
<input checked="" type="checkbox"/>	E-field transfer to H-field
-	$E\text{-field} = Z_0 \times H\text{-field}$ $H\text{-field} = E\text{-field} \div Z_0$ Where $Z_0 = \text{Free Space Impedance} = 377\Omega$

## 1.7 Test Setup



Note1 : find worst position for each axis.

**1.7.1 Result of Maximum Permissible Exposure**

<b>Maximum Permissible Exposure</b>				
<b>Charging Condition</b>	<b>Separation</b>	<b>Axis</b>	<b>E-field (V/m)</b>	<b>H-field (A/m)</b>
Operating	0cm	Left	2.51	0.007
Operating	0cm	Right	2.13	0.006
Operating	0cm	Top	1.76	0.005
Operating	0cm	Bottom	1.81	0.005
Operating	0cm	Y-axis above EUT	1.75	0.005
<b>Limit</b>			614	1.63
<b>Margin Limit (%)</b>			0.41%	0.41%



## **2 Test Equipment and Calibration Data**

### **Instrument for Conducted Test**

<b>Instrument</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Spec.</b>	<b>Calibration Date</b>	<b>Calibration Due Date</b>
Probe	ETS-LINDGREN	HI-6005	00052473	0.1 MHz - 6 GHz	23/Apr/2018	22/Apr/2019