

Maximum Permissible Exposure

FCC ID : HV4PTH460
Equipment : Pen tablet
Brand Name : Wacom
Model Name : PTH-460*****(*) may be alphanumeric/symbol or blank" as usual.
Applicant/
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 Dec. 03, 2018, and testing was started from Dec. 13, 2018 and completed on Dec. 13, 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: Phoenix Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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Appendix A. Test Photos A1

Photographs of EUT V01



History of this test report

Report No.	Version	Description	Issued Date
FA8N2621	01	Initial issue of report	Jan. 11, 2019



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.6	-	Maximum Permissible Exposure	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

None.

Reviewed by: Sam Tsai

Report Producer: Jenny Yang

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 ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f ²)*	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 ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	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				

1.2 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	Streak	23.3°C / 63%	13/Dec/2018

1.4 Accessories

Accessories Information				
Battery	Brand Name	Wacom	Model Name	APP00203
	Manufacturer	APACK	SN	APP-12F-A45D4I-ACE-1
	Power Rating	3.7Vdc, 1350 mAh	Type	Li-ion, Y
Pen Stand	Brand Name	Wacom	Model Name	PST-A066
Digital Pen	Brand Name	Wacom	Model Name	KP-504E
USB Type-C Cable	In/Out door	In door		
	Power Cord	2meter, shielded cable, w/o ferrite core		

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

1.5 Support Equipment

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



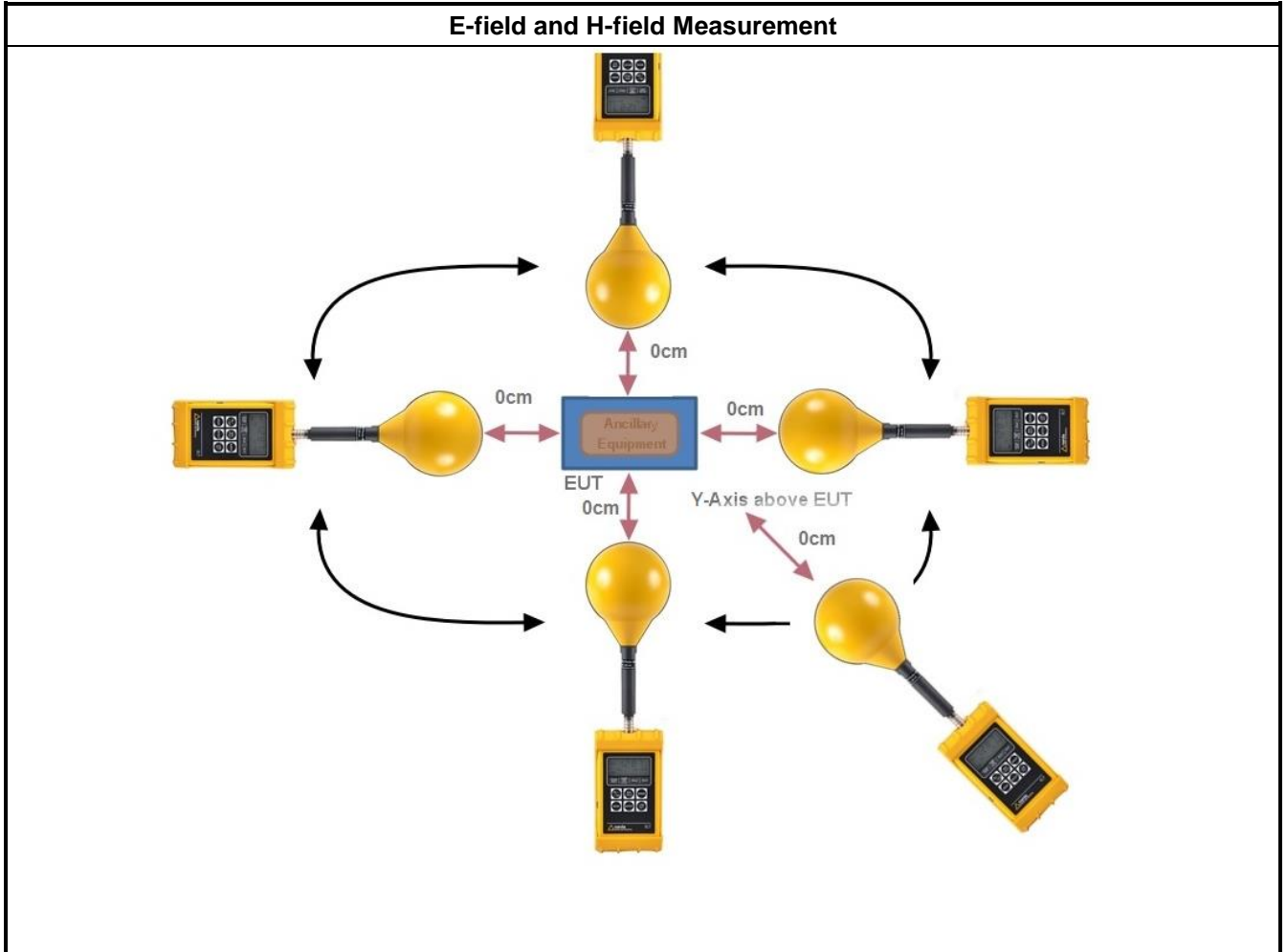
1.6 The Worst Condition

Ancillary Equipment	Charging Condition	Worst Charging Condition
Notebook	Operating	Operating

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-field = $Z_0 \times$ H-field H-field = E-field \div Z_0 Where Z_0 = Free Space Impedance = 377Ω

1.6.2 Test Setup



Note1 : find worst position for each axis.

Note2 : This shall be measured as the distance from the edge of the device to the center of the measurement probe.



1.6.3 Result of Maximum Permissible Exposure

Maximum Permissible Exposure				
Charging Condition	Separation	Probe from EUT Side	E-field (V/m)	H-field (A/m)
Operating	0cm	Left	0.67	0.002
Operating	0cm	Right	0.98	0.003
Operating	0cm	Top	1.58	0.004
Operating	0cm	Bottom	0.81	0.002
Operating	0cm	Y-axis above EUT	3.04	0.008
Limit			614	1.63
Margin Limit (%)			0.50%	0.50%



2 Test Equipment and Calibration Data

Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Probe EF	Narda Safety Test Solutions GmbH	0391 E-Field	D-0667	0.1MHz ~ 3GHz	20/Jul/2018	19/Jul/2020
Broadband Field Meter	Narda Safety Test Solutions GmbH	NBM-550	E-0847	0.1MHz ~ 3GHz	20/Jul/2018	19/Jul/2020