

**KDB 680106 D01 V02**  
**47 C.F.R. Part 1, Subpart I, Section 1.1310**  
**47 C.F.R. Part 1, Subpart I, Section 1.1307**  
**47 C.F.R. Part 2, Subpart J, Section 2.1093**

## **MPE Test REPORT**

**For**

**Tablet**

**Model: C1502W**

**Trade Name: N/A**

*Issued to*

**Quanta Computer Inc.**  
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*Issued by*

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## Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	2015/08/31	Initial Issue	ALL	Scott Hsu

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## 1. EUT Specification

Equipment under Test: Tablet

Trade Name: N/A

Model Number: C1502W

Operating Frequency: 1 MHz  $\pm$  10%

Date of Test: August 13 ~ 22, 2015

Applicable Standards
KDB 680106 D01 V02 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 1, Subpart I, Section 1.1307 47 C.F.R. Part 2, Subpart J, Section 2.1093
Test Result
Pass

The test results in this report apply only to the tested sample of the stated device/equipment. Other similar device/equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

**Approved by:**

**Tested by:**



Alex Wu  
Section Manager  
Compliance Certification Services Inc.



Scott Hsu  
SAR Engineer  
Compliance Certification Services Inc.

## 2. Test limit

FCC Rules and Regulations Part 1 Section 1.1310 and KDB 680106 D01 v02

§1.1310 : The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of FCC part 2.1093 of this chapter.

Table 1 – Limits for Maximum Permissible Exposure (MPE)  
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 (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/500	30
1500-100,000			1.0	30

f = frequency in MHz

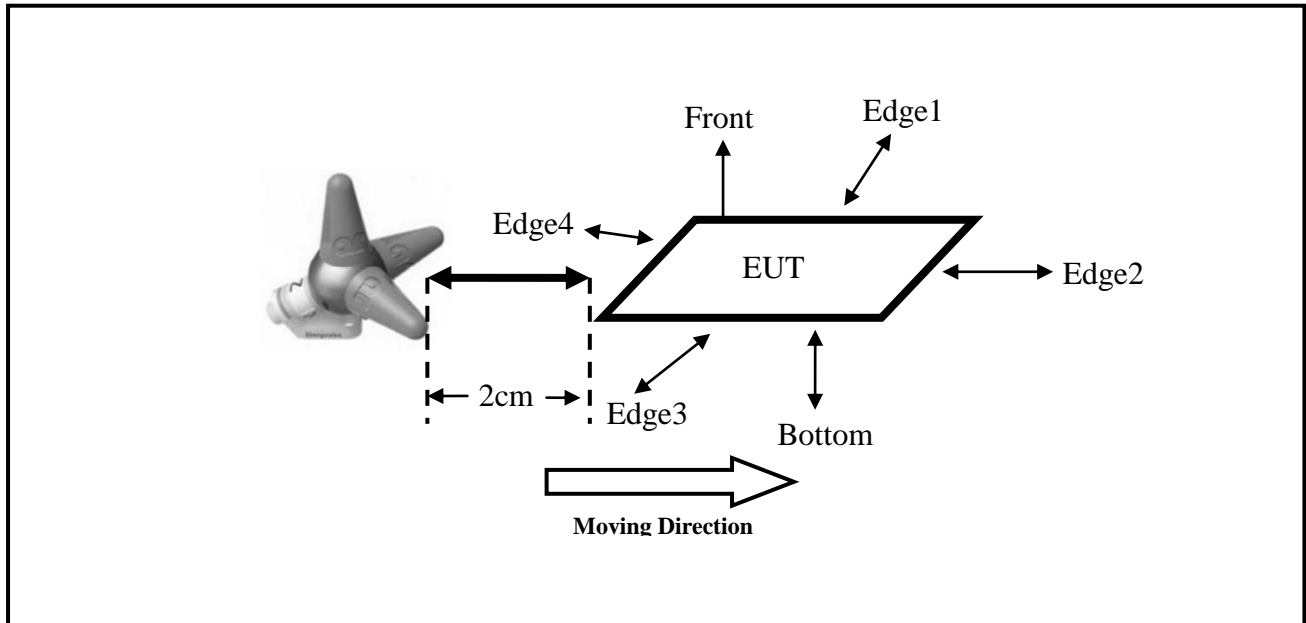
\* = Plane-wave equivalent power density

Note to Table 1 : General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

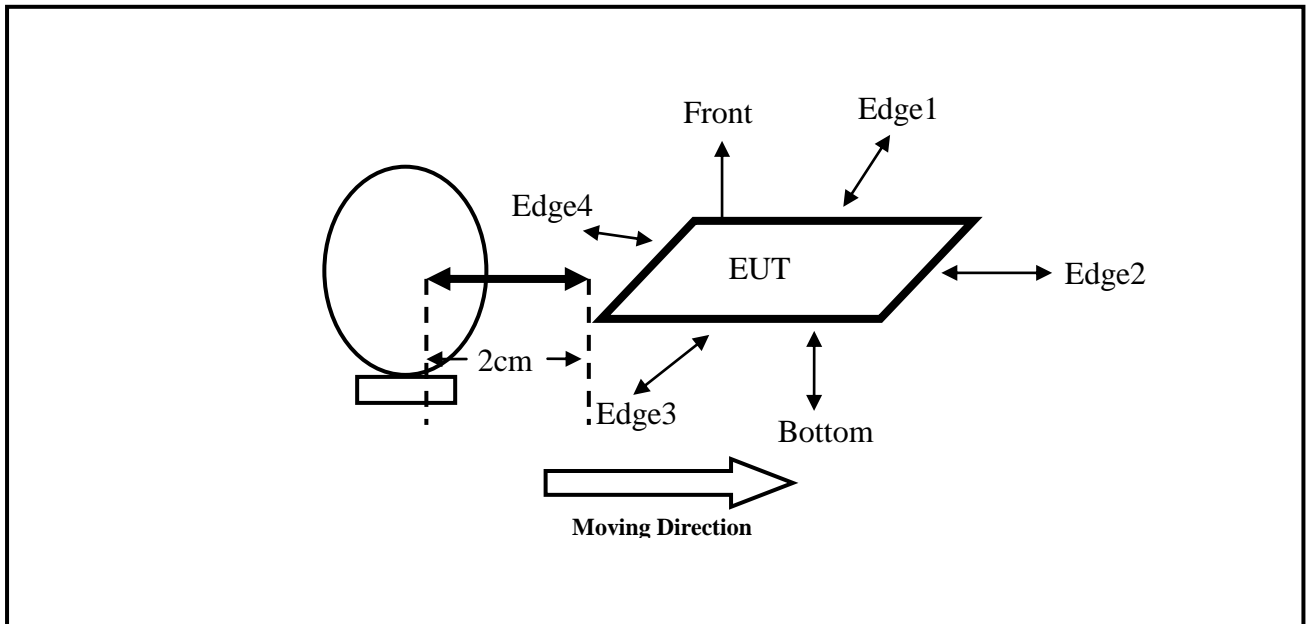
### 3. Test Method

#### Test setup

##### E-Field



- The measurement probe was placed at test distance as close as while moving outward (every 2cm out to 10cm) which is between the edge of the charger and the probe.
- The highest emission level was recorded and compared with the limit as soon as measurement of each point (Edge1, Edge2, Edge3, Edge4, Front, and Bottom) was completed.

**H-Field**

- a) The Loop antenna was placed at test distance as close as while moving outward (every 2cm out to 10cm) which is between the edge of the charger and the Loop antenna.
- b) The highest emission level was recorded and compared with the limit as soon as measurement of each point (Edge1, Edge2, Edge3, Edge4, Front, and Bottom) was completed.

#### 4. Test Results

##### E-Field Strength

Test result (V/m)	Test Distance (cm)					FCC Limit (V/m)
Test Position	2 cm	4 cm	6 cm	8 cm	10 cm	
Edge1	1.7	1.2	0.9	0.6	0.5	614
Edge2	1.6	1.0	0.8	0.5	0.5	614
Edge3	1.4	0.7	0.5	0.4	0.4	614
Edge4	1.3	0.6	0.5	0.4	0.4	614
Front	1.5	0.6	0.6	0.4	0.4	614
Bottom	1.5	0.6	0.6	0.5	0.4	614

##### H-Field Strength

Test result (A/m)	Test Distance (cm)					FCC Limit (A/m)
Test Position	2 cm	4 cm	6 cm	8 cm	10 cm	
Edge1	0.0125	0.0092	0.0074	0.0056	0.0043	1.63
Edge2	0.0102	0.0067	0.0061	0.0053	0.0041	1.63
Edge3	0.0087	0.0059	0.0046	0.0046	0.0042	1.63
Edge4	0.0084	0.0048	0.0043	0.0044	0.0041	1.63
Front	0.0072	0.0046	0.0055	0.0045	0.0039	1.63
Bottom	0.0069	0.0046	0.0053	0.0045	0.0041	1.63



## 5. Simultaneous Transmission for the Wi-Fi and Wireless Charger

According to KDB 447498 section 7.2 simultaneous transmission evaluations can be excluded when :

The  $[\Sigma \text{ of (the highest measured or estimated SAR for each standalone antenna configuration, adjusted for maximum tune-up tolerance) / 1.6 W/kg}] + [\Sigma \text{ of MPE ratios}] \leq 1.0$ .

Wi-Fi SAR values are taken from FCC ID:TLZ-CM2XXNF, SAR report No:T150723L03-MF.

### Simultaneous Transmission analysis

#### 1.

The maximum reported SAR is 0.896 W/Kg at the edge4 (Wi-Fi Aux antenna).

The maximum estimated SAR is 0.122 W/Kg at the edge4 (Bluetooth).

The maximum MPE ratio of limit for the Wireless Charger at the edge4 is 0.002. (1.3 V/m / 614V/m)

$$[(0.896 / 1.6) + (0.122 / 1.6)] + (0.002) = 0.6382 \text{ which is } \leq 1.0.$$

#### 2.

The maximum reported SAR is 0.637 W/Kg at the edge2 (Wi-Fi Main antenna).

The maximum estimated SAR is 0.122 W/Kg at the edge2 (Bluetooth).

The maximum MPE ratio of limit for the Wireless Charger at the edge2 is 0.002. (1.6 V/m / 614V/m)

$$[(0.637 / 1.6) + (0.400 / 1.6)] + (0.002) = 0.65 \text{ which is } \leq 1.0.$$

**6. Equipment List**

<b>Name of Equipment</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Serial Number</b>	<b>Calibration Due Date</b>
Laser Powered Field Probe	AR	FL7006	0330722	2016/06/27
Loop Antenna	COM-POWER	AL-130	121051	2016/01/26
Spectrum Analyzer	Agilent	E4446A	US42510268	2016/01/25

Note: The calibration period equipment is 1 year.