



Office of Engineering and Technology

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Reply to an OET Inquiry Response

Currently Displaying Inquiry Tracking Number: **747977**

Contact Information:

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Zip Code:
Country:

Inquiry Details on 01/04/2015:

First category: RF Exposure *
Second category: Test Procedures (RF Exposure)
Third category:
Subject: RF exposure evaluation for wireless charger
Inquiry: Dear Sir

I'd like to know if RF exposure evaluation is necessary for the wireless charging product below, and what the test requirements are if it is necessary:

detail information of the product:

1.complete product description:

There's only single primary coil.

There are 9 turns for each coil.

About 3A capability for each coil.

see attached please

2.the rule part(s) the device will operate in:
FCC Part 18

3.planned equipment authorization procedure:
FCC Certification

4.drawings:
see attached please

5.frequencies:
110-205kHz

6. power:
15W rated

7.operating configurations: ?

The product will be used on the desktop normally.

The coupling surface area of the device is about 7cm²)

The EUT consists of two main major functional units, namely Power Conversion Unit and a Communications and Control Unit.

- The Power Conversion Unit mainly comprises full bridge Inverter.

The Inverter converts the DC input to an AC waveform that drives a resonant circuit.

- The Communications and Control Unit comprises the digital logic part of the EUT.

This unit receives and decodes unidirectional messages from the Power Receiver, configures the Coil Selection block to connect the appropriate Primary Coil, executes the relevant power control algorithms and protocols, and drives the frequency of the AC waveform to control the power transfer. Meantime the transmitter sends the messages to power receiver by FSK.

I'd like to know if RF exposure evaluation is necessary and what the test requirements are if it is.
Thank you.

---Reply from Customer on 01/07/2015---

Dear Sir,

send attachment again

FCC Response on 01/07/2015:

Please answer the following questions:

1. Does this EUT utilizing an existing wireless power transfer specification? If so, which one?
2. Can you discuss how many receivers are capable of being charged from this device simultaneously?
3. The maximum output is 15W. Does this imply that a single receiver may receive 15W? If so, can you give examples of such receivers?

---Reply from Customer on 01/09/2015---

Dear Sir,

Please check the following comments

1. Does this EUT utilizing an existing wireless power transfer specification? If so, which one?
Yes, the EUT utilizes Qi specification(Wireless Power Transfer Volume II: Medium Power).
2. Can you discuss how many receivers are capable of being charged from this device simultaneously?
The EUT has only one primary coil and charge only one device simultaneously.
3. The maximum output is 15W. Does this imply that a single receiver may receive 15W? If so, can you give examples of such receivers?
The EUT can used to charge medium power wireless receiver and receiver can receive up to 15W output power. For example, AVID Qi Receiver Simulator attached can receive 15W output power.

Thank you!

FCC Response on 01/09/2015:

Consistent with KDB Publication 680106 D01, this EUT will require an RF exposure evaluation report due to non-compliance with Section 5 of the aforementioned publication. Per Section 3(3), this EUT should be measured on all sides (including top) using an isotropic field probe under maximum power transfer conditions. Evaluation should be conducted assuming a user separation distance of 10 cm. Please provide documentary evidence that the E and H field measurements are taking place under maximum power transfer conditions.

---Reply from Customer on 01/14/2015---

Dear Sir,

Please review the RF exposure report.
The report is attached.

Thank you

FCC Response on 01/14/2015:

Please clarify how the EUT was configuration for maximum power transfer during the testing process (i.e. what was power input into the EUT, was a dummy load used, etc.).

---Reply from Customer on 01/15/2015---

Dear Sir,

I have retest with full load. Power input the EUT is 22W.
The report has been updated.

Thank you

FCC Response on 01/15/2015:

This EUT may be processed according to normal procedures by a TCB, if certification is required; or a recognized laboratory, if Declaration of Conformity is appropriate.

Attachment List:

[Load Receiver
picture of the product](#)

[Enter any additional comments below:](#)

* (This is a text only field. Users will be able to upload attachments after clicking on the "Proceed" button

The image shows the Microsoft Word ribbon interface. The 'Paragraph' group is selected, displaying various formatting options. The 'Bulleted List' button, represented by a list icon with a red dot, is highlighted with a red rectangular box. Other visible buttons include Paragraph, Font Name, Size, Bold (B), Italic (i), Underline (U), Numbered List, Decrease Indent, and Increase Indent. The background of the ribbon is light blue, and the buttons have a light gray gradient.

<BODY>

Proceed

Clear

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