

Office of Engineering and Technology

FCC > FCC E-filing > Inquiry System Home Page > View Inquiry

FCC Site Map

OET Home Page

Site Options

Basic KDB Search

Advanced KDB Search

Submit an Inquiry

Reply to an Inquiry Response

Category List

FAQ Search

Major Guidance Publications

<u>Draft Laboratory Division</u> <u>Publications</u>

<u>Draft Laboratory Division</u> <u>Publications (Expired)</u>

Draft Publication Moderation

Related Sites

Equipment Authorization

Equipment Authorization System (EAS)

<u>Telecommunications</u> <u>Certification Bodies (TCB)</u>

Measurement Procedures

Reply to an OET Inquiry Response

Currently Displaying Inquiry Tracking Number: 777548

Contact Information:

Customer First Name: Leo Customer Last Name:

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Extension:

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P.O. Box:

City: Shenzhen

State: Zip Code: Country: China

Inquiry Details on 12/13/2023:

First RF Exposure *

category:

Second

Portable (2.1093) category:

Third category:

> Portable wireless charging equipment MAGPy test RF Exposure method Subject:

When the portable wireless charger uses Part 15C of the regulation for FCC ID certification, I use Inquiry:

the device MAGPy to test the RF Exposure. Does its probe meet the requirements?

Secondly, is it enough to use the device MAGPy to test 0mm and directly read the E/H value? Are

there any special testing methods that should be noted?

FCC Response on 12/20/2023:

The MAGPy may be used for determining compliance for WPT devices.

It is not sufficient to make a measurement at 0mm and directly read the E/H value because the MAGPy is not capable of making a direct measurement at 0mm. The MAGPy uses a field reconstruction technique to determine the fields at 0mm and, therefore, the general procedures in 680106 D01 section 3.3 need to be followed. The MAGPy reconstruction algorithm has not been validated by the FCC and will need to be validated for each test by showing congruence between the field reconstruction and direct measurement at a given distance for multiple points as outlined in section 3.3.

Since the MAGPy uses this reconstruction technique, the NUMSIM PAG item is required for Part 15 WPT devices.

---Reply from Customer on 12/21/2023---

Regarding your comment that the MAGPy test of our equipment is not a 0mm problem, I consulted our Swiss equipment manufacturer, and they replied that the equipment can be set and the compliance location is set to probe tip. When the measurement value is the result of extrapolation to 0mm, IC officials have accepted MAGPy using the probe. The tip tests 0mm. Does the FCC accept this method to test 0mm? We are very anxious, please reply to us as soon as possible, thank you?

FCC Response on 12/22/2023:

Correct, the MAGPy uses an extrapolation to determine the field at 0mm separation because the location of the receive elements is some distance further than 0mm. This technique for determining the field at 0mm requires additional measurements at further distances which to compare the extrapolated results with the measured field results to ensure that the extrapolation algorithm is functioning properly. This is no different than what is required for other field probes (e.g., Narda, etc.).

I also wanted to add some clarification for when a PAG is required.

The MAGPy can be used is ostensibly two ways:

- 1. Take a direct measurement of the E- and H-fields; as well as extrapolate the results when it is not possible to take a direct measurement due to the physical limitations of the probe tip.
- 2. Estimate the SAR based on the measured electric fields for when traditional SAR measurements are not possible (i.e., SAR below 4 $\,$ MHz).

Option 1 does not require a PAG while option 2 does require the NUMSIM PAG.

---Reply from Customer on 01/10/2024---

Hello, the external photo of the accessory product is the product I last consulted about Portable wireless charging equipment MAGPy test RF Exposure. I would like to ask if I encounter similar portable wireless charging products in the future, I need to initiate an FCC Inquiry like this product?

FCC Response on 01/10/2024:

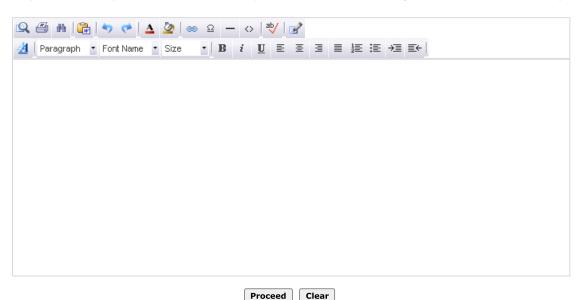
Since this is a new topic it is highly encouraged to start a new KDB inquiry; however, it is noted that portable WPT devices are now required to utilize the ECR (Equipment Compliance Review) category with WPT second category according to the recent changes to KDB publication 680106 D01 v04.

Attachment List:

MAGPy Manual MAGPy photo Product photo

Enter any additional comments below:

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



Please use the Submit Inquiry link at $\underline{www.fcc.gov/labhelp}$ to send any comments or suggestions for this site

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