

# RF Exposure Evaluation Report

|              |                  |
|--------------|------------------|
| Product Name | Wireless Charger |
| Model No.    | PD100CS          |
| FCC ID.      | MSQ-PD100CS      |

|           |                                                              |
|-----------|--------------------------------------------------------------|
| Applicant | ASUSTeK COMPUTER INC.                                        |
| Address   | 1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan |

|                     |                      |
|---------------------|----------------------|
| Date of Receipt     | Mar. 21, 2021        |
| Date of Declaration | May 10, 2021         |
| Report No.          | 2130835R-E3082100015 |
| Report Version      | V1.0                 |

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

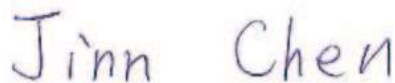
Issued Date: May 10, 2021

Report No.: 2130835R-E3082100015



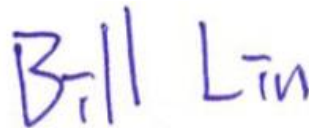
|                     |                                                              |                                                             |
|---------------------|--------------------------------------------------------------|-------------------------------------------------------------|
| Product Name        | Wireless Charger                                             |                                                             |
| Applicant           | ASUSTeK COMPUTER INC.                                        |                                                             |
| Address             | 1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan |                                                             |
| Manufacturer        | ASUSTeK COMPUTER INC.                                        |                                                             |
| Model No.           | PD100CS                                                      |                                                             |
| FCC ID.             | MSQ-PD100CS                                                  |                                                             |
| EUT Rated Voltage   | AC 100-240~50/60Hz                                           |                                                             |
| EUT Test Voltage    | AC 120V/60Hz                                                 |                                                             |
| Trade Name          | ASUS                                                         |                                                             |
| Applicable Standard | KDB 447498 D01 v06                                           | <input checked="" type="checkbox"/> For Field Strength Test |
| Test Result         | Complied                                                     |                                                             |

Documented By :



( Senior Adm. Specialist / Jinn Chen )

Tested By :



( Senior Engineer / Bill Lin )

Approved By :



( Director / Vincent Lin )

## Revision History

| Report No.           | Version | Description              | Issued Date  |
|----------------------|---------|--------------------------|--------------|
| 2130835R-E3082100015 | V1.0    | Initial issue of report. | May 10, 2021 |

## 1. RF Exposure Evaluation

### 1.1. Test Equipment

|   | Equipment                | Manufacturer | Model No./Serial No. | Specification   | Last Cal.  |
|---|--------------------------|--------------|----------------------|-----------------|------------|
| X | EM Field Meter           | Wavecontrol  | SMP2 / 18SN0746      | 1 Hz - 60 GHz   | Apr., 2021 |
| X | Isotropic EM Field Probe | Wavecontrol  | WP400-3 / 18WP120014 | 1 Hz - 400 KHz  | Apr., 2021 |
| X | Isotropic EM Field Probe | Wavecontrol  | WP400 / 18WP100392   | 1 Hz - 400 KHz  | Apr., 2021 |
| X | Isotropic EM Field Probe | Wavecontrol  | WPF8 / 18WP040835    | 100 KHz - 8 GHz | Apr., 2021 |

### 1.2. Limits

According to FCC 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)

#### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency Range (MHz)                                     | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm <sup>2</sup> ) | Average Time (Minutes) |
|-----------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| (A) Limits for Occupational/ Control Exposures            |                               |                               |                                     |                        |
| 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                                   | 6                      |
| 300-1500                                                  | --                            | --                            | F/300                               | 6                      |
| 1500-100,000                                              | --                            | --                            | 5                                   | 6                      |
| (B) Limits for General Population/ Uncontrolled Exposures |                               |                               |                                     |                        |
| 0.3-1.34                                                  | 614                           | 1.63                          | *(100)                              | 30                     |
| 1.34-30                                                   | 824/F                         | 2.19/F                        | *(180/F <sup>2</sup> )              | 30                     |
| 300-1500                                                  | 27.5                          | 0.073                         | 0.2                                 | 30                     |
| 300-1500                                                  | --                            | --                            | F/1500                              | 30                     |
| 1500-100,000                                              | --                            | --                            | 1                                   | 30                     |

Note:

1. RF Exposure evaluation should be conducted assuming a separation distance of 10 cm
2. The EUT is including four models for different marketing requirement.

### 1.3. Test Procedure

The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils per the FCC 's request. (reference KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01)

The temperature and related humidity: 18°C and 62% RH.

#### 1.4. Test Result of RF Exposure Evaluation for WPT

| <i>Items to be covered</i>                                                                                                                                                                                                               | <i>Answer from applicant</i>                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power transfer frequency is less than 1 MHz.                                                                                                                                                                                             | Operation frequency range is 111~205kHz.                                                                                                                                                                                              |
| Output power from each primary coil is less than or equal to 15 watts.                                                                                                                                                                   | Output Power equal to 0.09mW.                                                                                                                                                                                                         |
| The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils. | Yes, allow coupling only between individual pairs of coils.                                                                                                                                                                           |
| Client device is placed directly in contact with the transmitter.                                                                                                                                                                        | Yes, meet the requirements.                                                                                                                                                                                                           |
| Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).                                                                                                                                        | Yes, meet the requirements.                                                                                                                                                                                                           |
| The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.                                          | <p>*Electric Field Strength (V/m) @20cm<br/>= 1.12 V/m (&lt; 307 V/m)<br/>MPE Limit (614 V/m) *50% =307 V/m</p> <p>*Magnetic Field Strength (A/m) @20cm<br/>=0.003 A/m (&lt; 0.815 A/m )<br/>MPE Limit (1.63 A/m) *50%= 0.815 A/m</p> |

Product : Wireless Charger  
 Test Item : RF Exposure Evaluation  
 Test Site : ACB1 Chamber  
 Test Date : 2021/04/27

**E-Field Emissions**

| Test Position | Frequency (MHz) | Measurement Level @15cm (V/m) | Limit (V/m) | 50% Limit (V/m) | Result |
|---------------|-----------------|-------------------------------|-------------|-----------------|--------|
| Side 1        | 0.14730         | 0.600                         | 614.0       | 307.0           | PASS   |
| Side 2        | 0.14730         | 0.710                         | 614.0       | 307.0           | PASS   |
| Side 3        | 0.14730         | 0.710                         | 614.0       | 307.0           | PASS   |
| Side 4        | 0.14730         | 0.680                         | 614.0       | 307.0           | PASS   |

| Test Position | Frequency (MHz) | Measurement Level @20cm (V/m) | Limit (V/m) | 50% Limit (V/m) | Result |
|---------------|-----------------|-------------------------------|-------------|-----------------|--------|
| Top           | 0.14730         | 0.550                         | 614.0       | 307.0           | PASS   |
| Bottom        | 0.14730         | 0.490                         | 614.0       | 307.0           | PASS   |

**H-Field Emissions**

| Test Position | Frequency (MHz) | Measurement Level @15cm (A/m) | Limit (A/m) | 50% Limit (A/m) | Result |
|---------------|-----------------|-------------------------------|-------------|-----------------|--------|
| Side 1        | 0.14730         | 0.080                         | 1.63        | 0.815           | PASS   |
| Side 2        | 0.14730         | 0.090                         | 1.63        | 0.815           | PASS   |
| Side 3        | 0.14730         | 0.230                         | 1.63        | 0.815           | PASS   |
| Side 4        | 0.14730         | 0.060                         | 1.63        | 0.815           | PASS   |

| Test Position | Frequency (MHz) | Measurement Level @20cm (V/m) | Limit (V/m) | 50% Limit (V/m) | Result |
|---------------|-----------------|-------------------------------|-------------|-----------------|--------|
| Top           | 0.14730         | 0.070                         | 1.63        | 0.815           | PASS   |
| Bottom        | 0.14730         | 0.010                         | 1.63        | 0.815           | PASS   |

## 1.5. EUT Test Setup Photographs

Side 1(15cm)



Side 2(15cm)



**Side 3(15cm)**



**Side 4(15cm)**



**Top(20cm)**



**Bottom(20cm)**

