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

Issued Date: May 10, 2021
Report No.: 2130835R-E3082100015

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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	☒ For Field Strength Test
Test Result	Complied	

Documented By : Jinn Chen

(Senior Adm. Specialist / Jinn Chen)

Tested By : Bill Lin

(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^2)	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	*($900/F^{2)}$	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	*($180/F^2$)	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℃and 62％ RH.

1.4. Test Result of RF Exposure Evaluation for WPT

Items to be covered	*Answer from applicant*
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.	*Electric Field Strength (V/m) @20cm = 1.12 V/m (< 307 V/m) MPE Limit (614 V/m) *50% =307 V/m *Magnetic Field Strength (A/m) @20cm =0.003 A/m (< 0.815 A/m) MPE Limit (1.63 A/m) *50%= 0.815 A/m

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

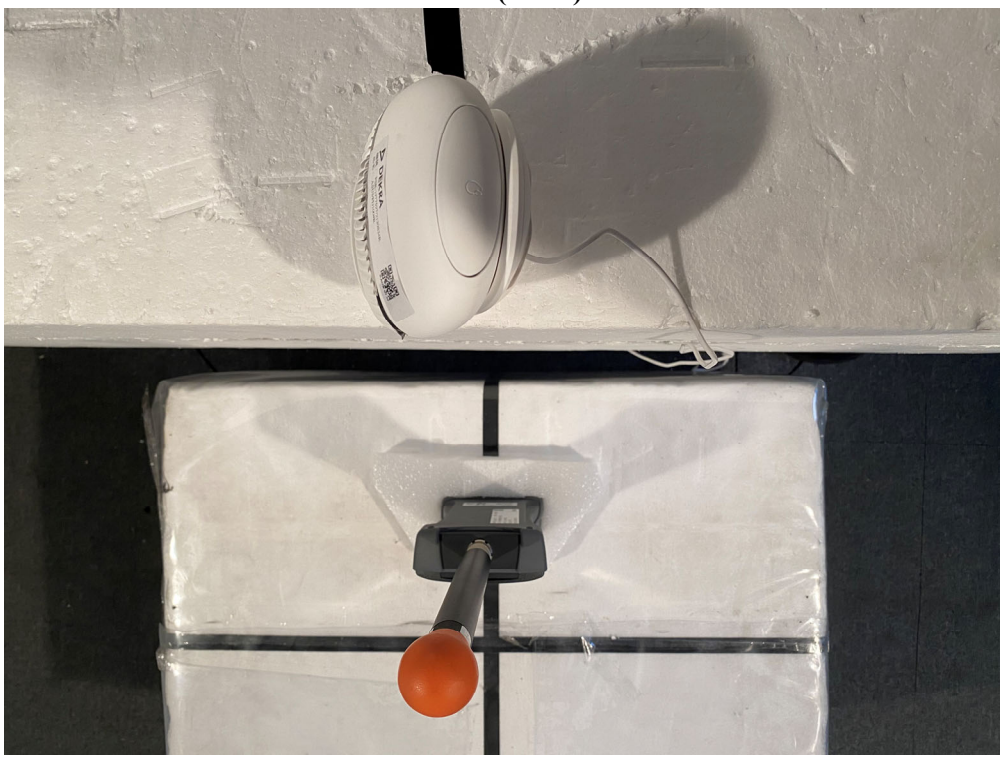
Test Position	Frequency (MHz)	Measurement Level @15cm (A/m)	Limit (A/m)	50% Limit (A/m)	Result
Side 1	0.14730	0.080	1.63	0.815	PASS
Side 2	0.14730	0.090	1.63	0.815	PASS
Side 3	0.14730	0.230	1.63	0.815	PASS
Side 4	0.14730	0.060	1.63	0.815	PASS

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

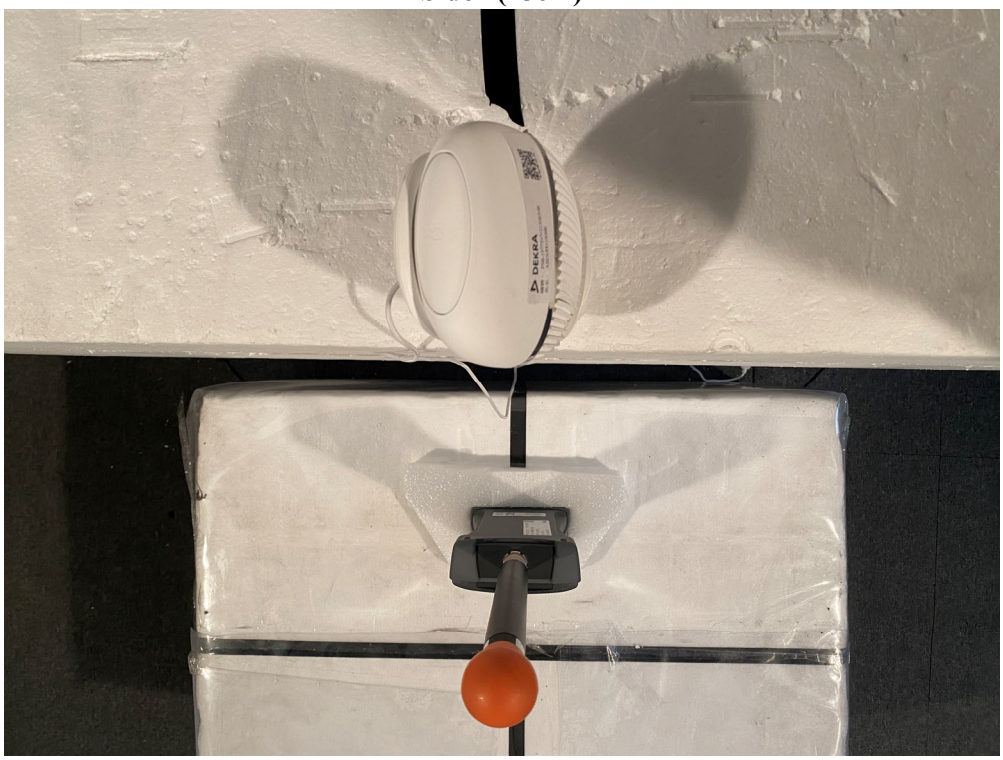
Side 1(15cm)

Side 2(15cm)



Side 3(15cm)

Side 4(15cm)



Top(20cm)

Bottom(20cm)