

RF Exposure Evaluation Report

Product Name	Wireless Charger (WLC 5W)
Model No.	CONTINENTAL-WLC-CEM00
FCC ID.	KR5WLC-CEM00

Applicant	Continental Automotive GmbH
Address	Siemensstrasse 12, 93055 Regensburg, Germany

Date of Receipt	Mar. 17, 2020
Date of Declaration	May 05, 2020
Report No.	2030455R-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 of the equipment and evaluated measurement uncertainty herein.

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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 05, 2020

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Product Name	Wireless Charger (WLC 5W)
Applicant	Continental Automotive GmbH
Address	Siemensstrasse 12, 93055 Regensburg, Germany
Manufacturer	Continental Automotive GmbH
Model No.	CONTINENTAL-WLC-CEM00
FCC ID.	KR5WLC-CEM00
EUT Rated Voltage	DC 13.5V Supply
EUT Test Voltage	DC 13.5V Supply
Trade Name	Continental
Applicable Standard	FCC 47 CFR 1.1310 KDB 680106 D01
Test Result	Complied

Documented By : 
 (Senior Adm. Specialist / Rita Huang)

Tested By : 
 (Engineer / Trista Huang)

Approved By : 
 (Director / Vincent Lin)

1. RF Exposure Evaluation

1.1. Test Equipment

Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X EM Field Meter	ENAC	SMP2 / 18SN0747	Apr., 2020

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

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 v03)

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

1.4. Test Result of RF Exposure Evaluation for WPT

DC 13.5V	
<i>Items to be covered</i>	<i>Answer from applicant</i>
Power transfer frequency is less than 1 MHz.	Operation frequency range is 108.7±2kHz
Output power from each primary coil is less than or equal to 15 watts.	5W (Max)
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) @ 15cm = 7.37 V/m (< 307 V/m)</p> <p>Electric Field Strength (V/m) @20cm = 7.99 V/m (< 307 V/m)</p> <p>MPE Limit (614 V/m) *50% =307 V/m</p> <p>*Magnetic Field Strength (A/m) @ 15cm =0.43 A/m (< 0.815 A/m)</p> <p>*Magnetic Field Strength (A/m) @20cm =0.52 A/m (< 0.815 A/m)</p> <p>MPE Limit (1.63 A/m) *50%= 0.815 A/m</p>

Product : Wireless Charger (WLC 5W)
 Test Item : RF Exposure Evaluation
 Test Site : No.7 Chamber
 Test Date : 2020/04/30

E-Field Emissions

Test Position	Frequency (MHz)	Measurement Level @15cm (V/m)	Limit (V/m)	50% Limit (V/m)	Result
Side 1	0.10870	5.880	614.0	307.0	PASS
Side 2	0.10870	4.670	614.0	307.0	PASS
Side 3	0.10870	5.470	614.0	307.0	PASS
Side 4	0.10870	7.370	614.0	307.0	PASS

Test Position	Frequency (MHz)	Measurement Level @20cm (V/m)	Limit (V/m)	50% Limit (V/m)	Result
Top	0.10870	7.990	614.0	307.0	PASS
Bottom	0.10870	2.170	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	0.10870	0.430	1.63	0.815	PASS
Side 2	0.10870	0.350	1.63	0.815	PASS
Side 3	0.10870	0.410	1.63	0.815	PASS
Side 4	0.10870	0.350	1.63	0.815	PASS

Test Position	Frequency (MHz)	Measurement Level @20cm (A/m)	Limit (A/m)	50% Limit (A/m)	Result
Top	0.10870	0.520	1.63	0.815	PASS
Bottom	0.10870	0.250	1.63	0.815	PASS