RF Exposure Evaluation Declaration

Product Name	:	Vehicle Dock
Model No.	:	CX80-VD-WL
FCC ID	:	HD5-CX80VDWL

Applicant	:	HONEYWELL INTERNATIONAL INC Honeywell Safety and Productivity Solutions
Address	:	9680 OLD BAILES RD FORT MILL SC 29707-7539

Date of Receipt	:	May. 14, 2018
Test Date		May. 14, 2018~ May. 30, 2018
Issued Date	:	May. 30, 2018
Report No.	:	1852085R-RF-US-P20V01
Report Version	:	V1.0

Test Report Certification

Issued Date : May. 30, 2018
Report No. : 1852085R-RF-US-P20V01

Product Name	:	Vehicle Dock
Applicant	:	HONEYWELL INTERNATIONAL INC Honeywell Safety and Productivity Solutions
Address	:	9680 OLD BAILES RD FORT MILL SC 29707-7539
Manufacturer	:	HONEYWELL INTERNATIONAL INC Honeywell Safety and Productivity Solutions 2、Metro(Suzhou)Technologies Co.,Ltd
Address	:	1、9680 OLD BAILES RD FORT MILL SC 29707-7539 2、No.221 Xinghai street China-Singapore Suzhou Industrial Park
Model No.	:	CX80-VD-WL
FCC ID	:	HD5-CX80VDWL
Brand Name	:	Honeywell
EUT Voltage	:	DC 12V
Applicable Standard	:	KDB 680106 D01 RF Exposure Wireless Charging Apps v03
Test Result	:	Complied
Performed Location	:	DEKRA Testing and Certification (Suzhou) Co., Ltd. No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098 FCC Registration Number: 800392

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Approved By : Harry Zhao

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1. RF Exposure Evaluation

1.1. 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/cm2)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: Pd = (Pout*G)/(4*pi*r2)

Where

Pd = power density in mW/cm2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd is the limit of MPE, 1 mW/cm2. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.
The temperature and related humidity: 18℃and 78％ RH.

1.3. Test Result of RF Exposure Evaluation

WPT Device requirement	
☒	Wireless power transfer frequency is below 1 MHz;
☒	Output power from each primary coil is less than or equal to 15 watts;
☒	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.
☒	Client device is placed directly in contact with the transmitter;
☒	Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
☒	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.

Note: The WPT device can maintain all the six conditions above, so the RF exposure can be exempted.

The End