

SAR Exemption Evaluation Report

Product Name	:	Charger Cradle
Model No.	:	CCB05-010BT
FCC ID	:	HD5-CCB05A

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

Date of Receipt	:	Feb. 22, 2018
Test Date		Feb. 23, 2018~ Mar. 26, 2018
Issued Date	:	May. 14, 2018
Report No.	:	1822059R-RF-US-P20V02
Report Version	:	V1.1

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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Test Report Certification Issued Date : May. 14, 2018

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		DEKRA
Product Name	:	Charger Cradle
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.	:	CCB05-010BT
FCC ID	:	HD5-CCB05A
EUT Voltage	:	DC 4.0-5.5V
Applicable Standard	:	KDB 447498 D01v06
Test Result	:	Complied
Performed Location	:	DEKRA Testing & 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 Designation Number: CN1199;
Documented By	:	Kitty Li
		(Adm. Specialist: Kitty Li)
Reviewed By	:	Frankhe
		(Senior Engineer: Frank He)
Approved By	:	Harry zhan
		(Engineering Manager : Harry Zhao)



1. RF Exposure Evaluation

1.1. Limits

According to KDB 447498 D01 General RF Exposure Guidance v06

4.3.1 Standalone SAR test exclusion considerations

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances \leq 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] $\cdot [\sqrt{f(GHz)}] \le 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is \leq 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

2) At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following, and as illustrated in Appendix B:

a) [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm) \cdot (f(MHz)/150)] mW, at 100 MHz to 1500 MHz

b) [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm) \cdot 10] mW at > 1500 MHz and ≤ 6 GHz

3) The 1-g and 10-g SAR test exclusion thresholds for below 100 MHz at test separation distances \leq 50 mm are determined by:

a) The power threshold at the corresponding test separation distance at 100 MHz in step 2) is

multiplied by [1 + log(100/f(MHz))] for test separation distances > 50 mm and < 200 mm

b) The power threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$ for test separation distances \leq 50 mm

c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable. Note: when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

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° C and 78°_{0} RH.

1.3. Test Result of RF Exposure Evaluation

Product	:	Charger Cradle
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

• Antenna Gain:

Model No.	N/A							
Antenna manufacturer	N/A							
Antenna Delivery	\boxtimes	1*TX+1*RX						
Antenna technology	\square	SISO						
		MIMO		Basic				
				CDD				
				Sectorized				
				Beam-forming				
Antenna Type		External		Dipole				
				Sectorized				
				PIFA				
		Internal		РСВ				
			\boxtimes	Ceramic Chip Antenna				
				Mono	pole Antenna			
Antonno Tochnology	Ant Gain							
Antenna rechnology	(dBi)							
SISO	Ant1:2.9							

Based on The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances \leq 50 mm and the formula below:

Estimated SAR=
$$\sqrt{f(GHz)} * \frac{(Max Power of channel, mW)}{Min. Separation Distance, mm}$$



		Dmox	Dmox	Distanco			Stand-alone	
Dand	Exposure	гпах	гшах	Distance	4(CU-)	calculation	Test	
Condition			(2011)	(2022)	I(GHZ)	result	exclusion	SAR Test
		(ubiii)	(111W)	(mm)			threshold	
BT								
V2.1&4	Body	-2.25	1.68	5	2.48	0.53	3.0	No
.2								

Conclusion: 2.4GHz SAR was not required.

— The End