



中国认可  
国际互认  
检测  
TESTING  
CNAS L5313



# SAR Exemption Evaluation Report

Product Name : InBodyWATCH  
Model No. : InBodyWATCH  
FCC ID : F6OINBODYWATCH

Applicant : InBody Co., Ltd.  
Address : InBody Bldg., 54, Nonhyeon-ro 2-gil, Gangnam-gu, Seoul  
KOREA

Date of Receipt : Aug. 24th, 2017  
Test Date : Aug. 24th, 2017~ Sep. 13th, 2017  
Issued Date : Sep. 14th, 2017  
Report No. : 1782119R-RF-US- P20V02  
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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The test report shall not be reproduced without the written approval of DEKRA Testing & Certification (Suzhou) Co., Ltd.

# Test Report Certification

Issued Date : Sep. 14th, 2017

Report No. : 1782119R-RF-US-P20V02



Product Name : InBodyWATCH  
Applicant : InBody Co., Ltd.  
Address : InBody Bldg., 54, Nonhyeon-ro 2-gil, Gangnam-gu, Seoul  
KOREA  
Manufacturer : InBody Co., Ltd.  
Address : InBody Bldg., 54, Nonhyeon-ro 2-gil, Gangnam-gu, Seoul  
KOREA  
Model No. : InBodyWATCH  
FCC ID : F60INBODYWATCH  
EUT Voltage : DC 3.7V  
Test Voltage : AC 120V/60Hz  
Applicable Standard : KDB 447498D01V06  
FCC Part1.1310  
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 Registration Number: CN1199

Documented By :



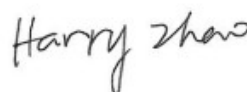
(Adm. Specialist: Kathy Feng)

Reviewed By :



(Senior Engineer: Jack Zhang )

Approved By :



(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:

$$\left[ \frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] \cdot [\sqrt{f(\text{GHz})}]$$

$\leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where

- $f(\text{GHz})$  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)  $[\text{Power allowed at numeric threshold for 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)]$  mW, at 100 MHz to 1500 MHz
- b)  $[\text{Power allowed at numeric threshold for 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10]$  mW at  $> 1500$  MHz and  $\leq 6$  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  $[1 + \log(100/f(\text{MHz}))]$  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% RH.

## 1.3. Test Result of RF Exposure Evaluation

Product Name	:	InBodyWATCH
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

### ● Antenna Gain:

Model No.		N/A								
Antenna manufacturer		N/A								
Antenna Delivery		<input checked="" type="checkbox"/>	1*TX+1*RX		<input type="checkbox"/>	2*TX+2*RX		<input type="checkbox"/>	3*TX+3*RX	
Antenna technology		<input checked="" type="checkbox"/>	SISO							
		<input type="checkbox"/>	MIMO	<input type="checkbox"/>	Basic					
				<input type="checkbox"/>	CDD					
				<input type="checkbox"/>	Sectorized					
				<input type="checkbox"/>	Beam-forming					
Antenna Type		<input type="checkbox"/>	External	<input type="checkbox"/>	Dipole					
				<input type="checkbox"/>	Sectorized					
		<input checked="" type="checkbox"/>	Internal	<input type="checkbox"/>	PIFA					
				<input type="checkbox"/>	PCB					
				<input type="checkbox"/>	Ceramic Chip Antenna					
				<input checked="" type="checkbox"/>	Stamping Antenna					
				<input type="checkbox"/>	Metal housing Antenna					
Antenna Technology		Ant Gain (dBi)								
<input checked="" type="checkbox"/>	SISO	0.64								

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

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

Band	Exposure Condition	Pmax	Pmax	Distance	f(GHz)	calculation result	Stand-alone Test exclusion threshold	SAR Test
		(dBm)	(mw)	(mm)				
BT	limb	0.041	1.009	5	2.440	0.315	7.50	No

Conclusion: 2402MHz-2480MHz SAR was not required.

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