

# RF Exposure Evaluation Report

**Product** : Digital Blood Pressure Monitor  
**Trade mark** : *microlife*  
**Model/Type reference** : BP3NQ1-4B, BP3NQ1-4BHEB  
**Serial Number** : N/A  
**Report Number** : EED32M00009002  
**FCC ID** : U7I-BP3NQ1-4B  
**Date of Issue** : Mar. 12, 2020  
**Test Standards** : 47 CFR Part 1.1307  
47 CFR Part 2.1093  
KDB447498D01 General RF Exposure Guidance v06  
**Test result** : PASS

Prepared for:

**Microlife Corporation**  
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Prepared by:

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Date:

Mar. 12, 2020

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## 2 Version

Version No.	Date	Description
00	Mar. 12, 2020	Original

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## 4 General Information

### 4.1 Client Information

Applicant:	Microlife Corporation
Address of Applicant:	9F, 431, RuiGuang Road, NeiHu, Taipei 11492, Taiwan
Manufacturer:	ONBO Electronic (Shenzhen) Co., Ltd.
Address of Manufacturer:	No. 138, Huasheng Road, Langkou Community, Dalang Street, Longhua District, Shenzhen, China
Factory:	ONBO Electronic (Shenzhen) Co., Ltd.
Address of Factory:	No. 138, Huasheng Road, Langkou Community, Dalang Street, Longhua District, Shenzhen, China

### 4.2 General Description of EUT

Product Name:	Digital Blood Pressure Monitor
Model No.(EUT):	BP3NQ1-4B, BP3NQ1-4BHEB
Model Test:	BP3NQ1-4B
Trade Mark:	<i>microlife</i>
EUT Supports Radios application:	BT 4.0 Single mode, 2402MHz to 2480MHz

### 4.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz	
Modulation Type:	GFSK	
Test Power Grade:	Default	
Test Software of EUT:	Default	
Antenna Type:	Integral Antenna	
Antenna Gain:	-2.39dBi	
Power Supply:	Battery	DC 6V
	Adapter	Model: DSA-6E-05 US 060060 Input: 100-240V~50/60Hz 0.3A Output: +6V 0.6A
Max Conducted Peak Output Power:	-3.717dBm	
	The Max Conducted Peak Output Power data refer to the report EED32M00009001	
Sample Received Date:	Jan. 13, 2020	
Sample tested Date:	Jan. 13, 2020 to Mar. 09, 2020	
<p>The tested sample(s) and the sample information are provided by the client.</p> <p>Model No.: BP3NQ1-4B, BP3NQ1-4BHEB</p> <p>Only the model BP3NQ1-4B was tested, their electrical circuit design, layout, components used, internal wiring, software and outer decoration are identical. Only the model numbers are different. The tested product has two model numbers, BPNQ1-4BHEB is the market model number, BP3NQ1-4B is the factory internal model number.</p>		

#### **4.4 Test Location**

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

#### **4.5 Deviation from Standards**

None.

#### **4.6 Abnormalities from Standard Conditions**

None.

#### **4.7 Other Information Requested by the Customer**

None.

## 5 SAR Evaluation

### 5.1 RF Exposure Compliance Requirement

#### 5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06  
Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### 5.1.2 Limits

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:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f(\text{GHz})}] \leq 3.0$  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<sup>17</sup>

The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion

### 5.1.3 EUT RF Exposure

The tune-up power is -4.5 dBm +/- 1dB, therefore the highest tune-up power is  
-3.5 dBm (0.45 mW) @ 2402 MHz

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.

So,

$$\left( \frac{0.45\text{mW}}{5\text{mm}} \right) * \left( 2.402\text{GHz} \right)^{0.5} = 0.1$$

$$\left[ \frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \right] * \sqrt{f(\text{GHz})} = 0.1 < 3.0$$

Therefore, standalone SAR measurements are not required for both head and body

## PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32M00009001 for EUT external and internal photos.

\*\*\* End of Report \*\*\*

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