

RF Exposure Evaluation Report

Product : Pulsewave Blood Pressure Monitor
Trade mark : Raycome
Model/Type reference : BP520DB, BP550DB, BP550DB-H
Serial Number : N/A
Report Number : EED32Q81392903
FCC ID : 2BLMA-BMP001
Date of Issue : Jan. 15, 2025
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
47 CFR Part 2.1091
47 CFR Part 2.1093
KDB 447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

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1 Version

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3 General Information

3.1 Client Information

Applicant:	Shenzhen Raycome Health Technology Co., Ltd
Address of Applicant:	No.501, Block B, Xinfeng Building, Yangguang Community, Xili Street, Nanshan District, Shenzhen, 518055 China
Manufacturer:	Shenzhen Raycome Health Technology Co., Ltd
Address of Manufacturer:	No.501, Block B, Xinfeng Building, Yangguang Community, Xili Street, Nanshan District, Shenzhen, 518055 China
Factory:	Shenzhen Raycome Health Technology Co., Ltd
Address of Factory:	Floor1, 2, 3, 6, Building A, No.2, Keji 3rd Road, Technology Innovation Coast, Tangjiawan Town, High-tech Zone, Zhuhai, 519085, China

3.2 General Description of EUT

Product Name:	Pulsewave Blood Pressure Monitor
Model No.:	BP520DB, BP550DB, BP550DB-H
Test Model No.:	BP520DB
Trade mark:	Raycome

3.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz	
Modulation Type:	BLE: GFSK BT: GFSK, $\pi/4$ DQPSK, 8DPSK	
Test Power Grade:	Default	
Test Software of EUT:	ISRT.exe	
Antenna Type:	PCB Antenna	
Antenna Gain:	2.84dBi	
Power Supply:	Adapter:	Manufacture: Shenzhen Longxc Power Supply Co LTD. Model No.: LXCP12X-0501008H Input: AC 100-240V 50/60Hz 0 5A Max Output: DC 5V 1A
	Battery:	DC 6V
Sample Received Date:	Sep. 12, 2024	
Sample tested Date:	Sep. 12, 2024 to Jan. 15, 2025	
Remark: Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified. Model No.: BP520DB, BP550DB, BP550DB-H Only the model BP520DB, was tested, their electrical circuit design, layout, components used and internal wiring are identical. only the outer decoration is different.		

3.4 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

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

4.1.3 EUT RF Exposure Evaluation

For Stand alone:

For BLE:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
2440	0.5	0.14	2.8400	0.83	1.21	2.753	0.4395	Pass

For BT:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
2480	0.5	2.11	2.8400	2.80	1.91	2.717	0.7030	Pass

Note:

- ① EIRP=conducted power+antenna gain;
- ② ERP=EIRP-2.15;
- ③ $EIRP(dBm) = \text{Field strength of the fundamental signal}(dBuV/m@3m) - 95.23$;
- ④ $ERP(mW) = 10^{(ERP(dBm)/10)}$;
- ⑤ The estimation distance is 0.5cm;
- ⑥ The test data please refer to the report of EED32Q81392901, EED32Q81392902 and only the worst case data was recorded in the report.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***