



RF Exposure Evaluation Report

Application No.: GZCR2108020914ME
Applicant: Shenzhen Yolanda Technology Co., Ltd.
Address of Applicant: Room 201, Jinfulai Building, No.49-1, Dabao Road, Dalang Area, Xinan Street, Baoan, Shenzhen, China
Manufacturer: Shenzhen Yolanda Technology Co., Ltd.
Address of Manufacturer: Room 201, Jinfulai Building, No.49-1, Dabao Road, Dalang Area, Xinan Street, Baoan, Shenzhen, China
Factory: Shenzhen Yolanda Technology Co., Ltd.
Address of Factory: Building A3, Abao Guangyao International Industrial Park, ShuiTian Fourth Industrial Zone, ShuiTian Community, ShiYan Street, BaoAn District, ShenZhen, China

Equipment Under Test (EUT):

EUT Name: Upper Arm Blood Pressure Monitor

Model No.: SP10A, SP10B, SP10C ♣

♣

Please refer to section 3 of this report which indicates which model was actually tested and which were electrically identical.

Trade Mark:

Yolanda

Standards:

47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF Exposure Guidance v06

Date of Receipt: 2021-08-15

Date of Test: 2021-08-16 to 2021-08-31

Date of Issue: 2021-09-01

Test Result :	PASS*
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* In the configuration tested, the EUT complied with the standards specified above.

Kobe Jian

Kobe Jian
EMC Laboratory Manager





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Guangzhou Branch

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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2021-09-01		Original

Authorized for issue by				
				
		Curry Wu/Project Engineer		
				
		Ricky Liu/Reviewer		



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3 General Information

3.1 General Description of EUT

Power supply:	DC 3.7V by rechargeable Li-ion battery and charged by DC 5V/1A
For 2.4G Wifi:	
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz; 802.11b/g/n(HT40): 2422MHz to 2452MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK);802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Number of Channels:	802.11b/g/n(HT20):11; 802.11n(HT40):7
Channel Spacing:	5MHz
Antenna Type:	PCB Antenna
Antenna Gain:	1.0dBi
For BLE:	
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V5.0 LE
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Date Rate:	1Mbps, 2Mbps
Antenna Type:	PCB Antenna
Antenna Gain:	1.0dBi

Declaration of EUT Family Grouping:

Model No.: SP10A, SP10B, SP10C

Only the model SP10A was tested, since according to the declaration from the applicant, the electrical circuit design, PCB layout, components used and internal wiring and functions were identical for the above models, with only difference on LCD display.

3.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District,
Guangzhou, China 510663

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No tests were sub-contracted.



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3.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

3.4 Deviation from Standards

None.

3.5 Abnormalities from Standard Conditions

None.





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3.6 Other Information Requested by the Customer

None.



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4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. 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.

4.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 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 ≤ 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 calculation¹⁷

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 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

4.1.3 EUT RF Exposure

For BLE

The Max. power (including tune-up tolerance) is -0.67 dBm on the middle channel 2.44 GHz (*)
-0.67 dBm logarithmic terms convert to numeric result is nearly 0.86 mW

According to the formula. calculate the test exclusion thresholds:

$$\text{General RF Exposure} = \frac{(\text{Max. Power of channel, including tune-up tolerance, mW}) * \sqrt{f(\text{GHz})}}{(\text{min. test separation distance, mm})}$$

$$\text{General RF Exposure} = (0.86 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.44 \text{ GHz}} = 0.27 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

$$(1) < (2)$$

So the SAR report is not required.

(*) Max. power refer to Report No.:GZCR210802091401



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The Max. power (including tune-up tolerance) 8.52 dBm on the lowest channel 2.422 GHz (*)
8.52 dBm logarithmic terms convert to numeric result is nearly 7.11 mW
According to the formula, calculate the test exclusion thresholds:

$$\text{General RF Exposure} = \frac{(\text{Max. Power of channel, including tune-up tolerance, mW}) * \sqrt{f \text{ (GHz)}}}{(\text{min. test separation distance, mm})}$$

$$\text{General RF Exposure} = (7.11 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.422 \text{ GHz}} = 2.21 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

$$(1) < (2)$$

So the SAR report is not required.

(*) Max. power refer to Report No.:GZCR210802091402

- End of the Report -



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