

# RF EXPOSURE REPORT



Report No.: 17070791-FCC-H2

Supersede Report No.: N/A

Applicant	Bean Information Technology Co., Ltd.	
Product Name	Smartwatch	
Model No.	S2	
Serial No.	N/A	
Test Standard	FCC 2.1093:2016	
Test Date	August 25 to September 07, 2017	
Issue Date	September 08, 2017	
Test Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
Equipment complied with the specification		<input checked="" type="checkbox"/>
Equipment did not comply with the specification		<input type="checkbox"/>
Loren Luo	David Huang	
Loren Luo Test Engineer	David Huang Checked By	
This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only		

Issued by:

**SIEMIC (SHENZHEN-CHINA) LABORATORIES**

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## Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

### Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

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## 1. Report Revision History

Report No.	Report Version	Description	Issue Date
17070791-FCC-H2	NONE	Original	September 08, 2017

## 2. Customer information

Applicant Name	Bean Information Technology Co., Ltd.
Applicant Add	C203-204 Virtual University Park Industrial Building, Yuexing Three Road, South of Technology Park, Nanshan District, Shenzhen, China
Manufacturer	Bean Information Technology Co., Ltd.
Manufacturer Add	C203-204 Virtual University Park Industrial Building, Yuexing Three Road, South of Technology Park, Nanshan District, Shenzhen, China

## 3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES
Lab Address	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108
FCC Test Site No.	535293
IC Test Site No.	4842E-1
Test Software	Radiated Emission Program-To Shenzhen v2.0

#### **4. Equipment under Test (EUT) Information**

Description of EUT: Smartwatch

Main Model: S2

Serial Model: N/A

Date EUT received: August 24, 2017

Test Date(s): August 25 to September 07, 2017

Antenna Gain: Bluetooth/BLE: 1.2dBi

Antenna Type: Monopole antenna

Type of Modulation: Bluetooth: GFSK, π/4DQPSK, 8DPSK  
BLE: GFSK

RF Operating Frequency (ies): Bluetooth& BLE: 2402-2480 MHz

Number of Channels: Bluetooth: 79CH  
BLE: 40CH

Port: Charging Port and data Port

Input Power: Battery:  
Spec: 3.7V, 180mAh, 0.6Wh

Trade Name : Bit

FCC ID: 2AHWTS2

## 5. FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable devices.

### 5.1 RF Exposure

#### **Standard Requirement:**

According to §15.247 (i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

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:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{(\text{GHz})}}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR,}^{16}$  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.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

$$\text{result} = P \sqrt{F} / D$$

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm

## 5.2 Test Result

### Bluetooth Mode:

Modulation	CH	Frequency (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
GFSK	Low	2402	1.304	0.8±1	1.8	1.514	0.47	3
	Mid	2441	1.294	0.8±1	1.8	1.514	0.47	3
	High	2480	1.756	0.8±1	1.8	1.514	0.48	3
π/4 DQPSK	Low	2402	0.179	0±1	1	1.259	0.39	3
	Mid	2441	0.183	0±1	1	1.259	0.39	3
	High	2480	0.715	0±1	1	1.259	0.40	3
8-DPSK	Low	2402	0.443	0±1	1	1.259	0.39	3
	Mid	2441	0.515	0±1	1	1.259	0.39	3
	High	2480	0.982	0±1	1	1.259	0.40	3

### BLE Mode:

Modulation	CH	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
GFSK	Low	2402	1.012	0.6±1	1.6	1.445	0.45	3
	Mid	2440	1.053	0.6±1	1.6	1.445	0.45	3
	High	2480	1.549	0.6±1	1.6	1.445	0.46	3

**Result:** Compliance

No SAR measurement is required.