



# RF Exposure Evaluation Report

APPLICANT : HARDWARE & SOFTWARE TECHNOLOGY CO., LTD.  
EQUIPMENT : BLE module  
BRAND NAME : HST  
MODEL NUMBER : M52832QFAA  
FCC ID : LP4-M52832  
STANDARD : 47 CFR Part 2.1093  
FCC KDB 447498 D01 v06

We, SPORTON INTERNATIONAL INC., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1093 and pass the limit. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Eric Huang / Manager

Approved by: Jones Tsai / Manager



## SPORTON INTERNATIONAL INC.

No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.)





**1. Administration Data**

Testing Laboratory	
Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978

Applicant	
Company Name	HARDWARE & SOFTWARE TECHNOLOGY CO., LTD.
Address	No.5F-1, No.128, Jilin Rd., Luchu, Taoyuan, 33850, Taiwan

Manufacturer	
Company Name	Rayson Technology co., Ltd.
Address	No. 1, Tongfu 1st Road, The 2nd Industrial Zone, Loucun, Gongming, Guangming New District, Shenzhen, China.



2. General Information

2.1 Description of Device Under Test (DUT)

Product Feature & Specification	
DUT Type	BLE module
Brand Name	HST
Model Number	M52832QFAA
FCC ID	LP4-M52832
Wireless Technology and Frequency Range	Wireless 2.4GHz: 2403 MHz ~ 2480 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC : 13.56 MHz
Mode	Wireless 2.4GHz: GFSK Bluetooth : GFSK NFC:ASK
Antenna Type	Wireless 2.4GHz: PCB Antenna Bluetooth: PCB Antenna
Antenna Gain	Wireless 2.4GHz: -4dBi Bluetooth: -4dBi
HW Version	1
SW Version	80428
DUT Stage	Identical Prototype

**Remark:** The above DUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

3. Maximum RF output power among production units

Band	Average Power (dBm)
	GFSK
Bluetooth - LE	3.5

Band	Average Power (dBm)
	GFSK
Wireless 2.4GHz	3.5



### 4. RF Exposure Evaluation

<For Wireless 2.4GHz>

Wireless 2.4GHz Max Power (dBm)	mW	Separation Distance (mm)	Frequency (GHz)	Exclusion Thresholds
3.5	2.00	5	2.48	0.63

<For Bluetooth>

Bluetooth - LE Max Power (dBm)	mW	Separation Distance (mm)	Frequency (GHz)	Exclusion Thresholds
3.5	2.00	5	2.48	0.63

Note:

- Per KDB 447498 D01v06 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:

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

- f(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

### Conclusion:

1. For Wireless 2.4GHz:

Per KDB 447498 D01v06, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is 0.63 which is <= 3, SAR testing is not required.

2. For Bluetooth:

Per KDB 447498 D01v06, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is 0.63 which is <= 3, SAR testing is not required.