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RF Exposure Evaluation Report

Report No. : CQASZ20191100061EX-02
Applicant: SMP Labs, Inc
Address of Applicant: 868 Southamptn Dr Palo Alto, CA 94303 USA
Equipment Under Test (EUT):
Product: SMP Labs BT1
Model No.: SMP Labs BT1
Brand Name: N/A
FCC ID: 2AUYZ-SMPLABSBT1
Standards: 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF Exposure Guidance v06
Date of Receipt: 2019-10-17
Date of Test: 2019-10-17 to 2019-10-29
Date of Issue: 2019-11-04
Test Result : PASS*

Tested By:

Tom Chen.

(Tom chen)

Reviewed By:

Sheek, Luo

(Sheek Luo)

Approved By:

Jack Ai

(Jack Ai)



* In the configuration tested, the EUT complied with the standards specified above.

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 CQA, this report can't be reproduced except in full.

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20191100061EX-02	Rev.01	Initial report	2019-11-04

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3 General Information

3.1 Client Information

Applicant:	SMP Labs, Inc
Address of Applicant:	868 Southamptn Dr Palo Alto,CA 94303 USA
Manufacturer:	Shenzhen Huachuang Hengda Technology Co., Ltd
Address of Manufacturer:	Room 401, Unit 2, Building 2, Guanghui Technology Park, Minqin Road, Longhua, Shenzhen, China
Factory:	Shenzhen Huachuang Hengda Technology Co., Ltd
Address of Factory:	2F, Building 1, No. 37 Xia Xin Tang, Xin Tang Village, Fu Cheng street, Longhua District, Shenzhen, China

3.2 General Description of EUT

Product Name:	SMP Labs BT1
Model No.:	SMP Labs BT1
Trade Mark:	N/A
Type of Modulation:	BLE(GFSK)
Channel Spacing:	2MHz
Operation Frequency:	2402-2480MHz
Antenna Type:	Ceramic Antenna
Antenna:	0.5 dBi gain
Power Supply:	DC 3V

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:

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

$f(\text{GHz})$ 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

1) For BLE

Worst case: GFSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	1.11	1.0±0.5	1.5	1.413	0.438	3.0
Middle (2440MHz)	2.85	3.0±0.5	3.5	2.239	0.699	
Highest (2480MHz)	3.67	4.0±0.5	4.5	2.818	0.888	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20191100061EX-01