



FCC RF EXPOSURE REPORT

Applicant	:	ION Audio LLC
Address of Applicant	:	200 Scenic View Drive, Suite 201 Cumberland, RI 02864, U.S.A
Manufacturer	:	ION Audio LLC
Address of Manufacturer	:	200 Scenic View Drive, Suite 201 Cumberland, RI 02864, U.S.A
Equipment under Test	:	Powered by Solar or Rechargeable Battery Bluetooth Weatherproof Speaker Delivering Powerful ION Sound
Model No.	:	SOL STONE™ LINK, iSP176, SOL STONE*****, iSP176***** (“*” can be “0-9”, “a-z”, “A-Z”, “blank”, “-”, “+” or any character, symbol, alphanumeric for marketing purpose)
FCC ID	:	2AB3E-ISP176
Test Standard(s)	:	KDB447498 D01 General RF Exposure Guidance v06
Report No.	:	DDT-RE23092805-2E03
Issue Date	:	2023/11/25
Issue By	:	Guangdong Dongdian Testing Service Co., Ltd.
Address of Laboratory	:	Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

REPORT

Table of Contents

	Test report declares.....	3
1.	General Information	5
1.1.	Description of equipment	5
1.2.	Assess laboratory.....	5
2.	RF Exposure evaluation for FCC	6

Test Report Declare

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Manufacturer	:	ION Audio LLC
Address of Manufacturer	:	200 Scenic View Drive, Suite 201 Cumberland, RI 02864, U.S.A

Standard Used: KDB447498 D01 General RF Exposure Guidance v06

We Declare:

The equipment described above is assessed by Guangdong Dongdian Testing Service Co., Ltd and in the configuration assessed the equipment complied with the standards specified above. The assessed results are contained in this report and Guangdong Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these assess.

After evaluation, our opinion is that the equipment In Accordance with above standard.

Report No.:	DDT-RE23092805-2E03		
Date of Receipt:	2023/11/01	Date of Test:	2023/11/01-2023/11/09

Prepared By:

Jacky Huang

Jacky Huang/Engineer

Approved By:

Damon Hu

Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	2023/11/25	

1. General Information

1.1. Description of equipment

EUT Name	: Powered by Solar or Rechargeable Battery Bluetooth Weatherproof Speaker Delivering Powerful ION Sound
Model Number	: SOL STONE™ LINK, iSP176, SOL STONE*****, iSP176***** : (“*” can be “0-9”, “a-z”, “A-Z”, “blank”, “-”, “+” or any character, symbol, alphanumeric for marketing purpose)
Model Difference	: All models are identical except the appearance and model number, therefore the test performed on the model iSP176.
EUT Function Description	: Please reference user manual of this device
Power Supply	: DC 5V by Type-C port : DC 3.7V Polymer Li-ion built-in battery
Radio Specification	: Bluetooth V5.3 (BR/EDR/LE)
Operation Frequency	: Bluetooth (BR/EDR/LE): 2402 MHz-2480 MHz
Modulation	: Bluetooth BR/EDR: GFSK, $\pi/4$ -DQPSK, 8DPSK : Bluetooth LE: GFSK
Sample Number	: S23092805-04 for conductive, S23092805-01 and S23092805-03 for radiation and Power Line Conducted Emissions

Note 1: EUT is the abbreviation of equipment under test.

Note 2: Simultaneously transmission condition: N/A

Note 3: Antenna information:

Antenna information	
Antenna Type	: FPC
Antenna Gain (dBi)	: 1.73

1.2. Assess laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Unit 2, Building 1, No.17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

2. RF Exposure evaluation for FCC

According to 447498 D01 General RF Exposure Guidance v06

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:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ 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 calculation

The result is rounded to one decimal place for comparison

Manufacturing Tolerance

BT

GFSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	4.68	4.37	4.21
Tolerance \pm (dB)	1.50	1.50	1.50
$\pi/4$ DQPSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	4.63	4.28	4.15
Tolerance \pm (dB)	1.50	1.50	1.50
8DPSK (Peak)			
Channel	Channel	Channel	Channel
Target (dBm)	4.63	4.30	4.18
Tolerance \pm (dB)	1.50	1.50	1.50

BLE

GFSK_1M (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	4.60	4.38	4.15
Tolerance \pm (dB)	1.50	1.50	1.50
GFSK_2M (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	4.52	4.31	4.10
Tolerance \pm (dB)	1.50	1.50	1.50

Estimation Result

Worse case is as below: [2402 MHz, 6.18 dBm, (4.15 mW) output power]

$(4.15/5) \cdot [\sqrt{2.402(\text{GHz})}] = 1.29 < 3.0$ for 1-g SAR

Then SAR evaluation is not required.

END OF REPORT