

RF EXPOSURE REPORT

FOR

Applicant	:	Tonly Technology Co., Ltd.
Address	:	Section37, Zhongkai High-tech Development Zone, Huizhou City, Guangdong Province, P.R.China
Equipment under Test	:	2.1 Soundbar System
Model No.	:	SV210M-0808
Trade Mark	:	VIZIO
FCC ID	:	ZVASB000027
Manufacturer	:	Tonly Technology Co., Ltd.
Address	:	Section37, Zhongkai High-tech Development Zone, Huizhou City, Guangdong Province, P.R.China

Issued By: Guangdong Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park,
Dongguan City, Guangdong Province, China, 523808

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

REPORT

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Test Report Declare

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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-RE23070308-2E05		
Date of Receipt:	Aug. 29, 2023	Date of Test:	Aug. 29, 2023 ~ Oct. 11, 2023

Prepared By:

Johnny Wang

Johnny Wang/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	Oct. 11, 2023	

1. General Information

1.1. Description of equipment

EUT* Name	: 2.1 Soundbar System
Model Number	: SV210M-0808
EUT function description	: Please reference user manual of this device
Power supply	: Input: 100V-240V ~ 50Hz-60Hz
Radio Specification	: Bluetooth V5.3, SRD
Operation frequency	: Bluetooth: 2402MHz-2480MHz SRD: 2404 MHz - 2476MHz
Modulation	: Bluetooth: GFSK, $\pi/4$ -DQPSK, 8DPSK SRD: GFSK
Transmitter rate	: Bluetooth: 1Mbps, 2Mbps, 3Mbps SRD: 2Mbps
Antenna Gain	: Bluetooth Antenna: maximum PK gain: 1.87 dBi SRD Antenna: 3.73 dBi
Sample Type	: Series production
Sample Number	: S23070308-04 for conductive, S23070308-05 for radiation

1.2. Assess laboratory

Guangdong Dongdian Testing Service Co., Ltd.

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Guangdong Province, 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

2.1. Requirement

Systems operating under the provisions of FCC 47 CFR 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.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

2.2. Calculation method

$$E(\text{V/m}) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } S(\text{mW/cm}^2) = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (mW)

G = EUT Antenna numeric gain (numeric)=

d = Separation distance between radiator and human body (m)

The formula can be changed to

We can change the formula to:

$$S = \frac{30 \times P \times G}{377 \times d^2} \quad \text{or, } d = \sqrt{\frac{30 \times P \times G}{377 \times S}}$$

From the peak EUT RF output power, the minimum mobile separation distance, d= 0.2 m, as well as the gain of the used antenna, the RF power density can be obtained.

2.3. Estimation result

Mode	PK Output power (dBm)	Output power (mW)	tune up power (dBm)	Antenna Gain (dBi)	Antenna Gain (linear)	MPE Values (mW/cm ²)	MPE Limit (mW/cm ²)
BT	9.76	9.46	10	1.87	1.54	0.00306	1
BLE	8.39	6.90	9	1.87	1.54	0.00243	1
SRD	1.29	1.35	2	3.73	2.36	0.00074	1

Note: The estimation distance is 20 cm

For simultaneous emission: $0.00306/1+0.00074/1=0.0038<1$

Conclusion: The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

END OF REPORT