



RF Exposure Report

FCC ID: XN6-SV510M86

Applicant: Zylux Acoustic Corporation

Address: 7F, 70, Rui Guang Road, Neihu District, Taipei 114, Taiwan, Chinese Taipei

Manufacturer: VIZIO INC.

Address: 39 Tesla, Irvine, CA 92618, USA

Product: VIZIO 5.1 Soundbar

Brand: **VIZIO**

Test Model(s): SV510M-0806

Series Model(s): SV510X-0806

Test Date: Aug. 12, 2023 ~ Aug. 29, 2023

Issued Date: Nov. 01, 2023

Issued By: Hwa-Hsing (Dongguan) Testing Co., Ltd.

Address: No.101, Building N1, Yuyuan 2 Road, Yuyuan Industrial Park, HuangJiang Town, Dongguan City, People's Republic of China

Test Firm Registration No.: 915896

Standards: FCC Part 2 (Section 2.1091); IEEE C95.1
KDB 447498 D01 General RF Exposure Guidance v06

The above equipment has been tested by **Hwa-Hsing (Dongguan) Testing Co., Ltd.**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

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HWA-HSING Test Report No.: 230505KH05-SE-US-01

Release control record

Issue No.	Reason for change	Date issued
230505KH05-SE-US-01	Original Release	Nov. 01, 2023

Lab: [Hwa-Hsing \(Dongguan\) Testing Co., Ltd.](#)
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Release
[Ver. 1.5](#)



1 General Information

1.1 General Description of EUT

Product	VIZIO 5.1 Soundbar
Test Model(s)	SV510M-0806
Sample No.	N/A
Series Model(s)	SV510X-0806
Status of EUT	Engineering Prototype
Power Supply Rating	100-240 V~ 50/60 Hz 75 W
Modulation Type	EDR: GFSK, $\pi/4$ DQPSK, 8DPSK for FHSS BLE: GFSK for DTS Other 5G: GFSK
Transfer Rate	EDR: 1/2/3Mbps BLE: 1 Mbps, 2Mbps Other 5G: 2Mbps
Operating Frequency	2402 ~ 2480MHz, 5160~5245MHz and 5735~5840MHz
Number of Channel	EDR: 79 BLE: 40 Other 5G: 5160~5245MHz:18; 5735~5840MHz:22
Maximum Output Power	EDR: 8.20dBm(Peak) BLE: 7.75dBm (Peak) Other 5G: 9.95dBm (Peak)
Antenna Type	Dipole Antenna PCB Printed Antenna
Antenna Gain	Bluetooth: 2.75dBi Other 5G: Ant 1:4.35dBi & Ant 2:5.38dBi
Antenna Connector	N/A
Accessory Device	N/A
Data Cable Supplied	N/A

Note:

1. Please refer to the EUT photo document (Reference No.: 230505KH05-01&02) for detailed product photo.
2. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.
3. Model difference: These models are the same except model name.



2 RF exposure limit

Limits for maximum permissible exposure (MPE)

Limits for general population / uncontrolled exposure				
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Average time (minutes)
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

Note: F = Frequency in MHz

2.1 MPE calculation formula

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

Where:

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Classification:

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user.



3 Calculation result of maximum conducted power

The antennas provided to the EUT, please refer to the following table:

Function	Frequency Band	Antenna Gain (dBi)	Antenna Type	Transmit and Receive Chain	Maximum Power
Bluetooth	2400~2483.5MHz	2.75	Dipole	1TX,1RX	8.20 dBm
Other 5G	5735~5840MHz	4.35	PCB	2TX,2RX	14.30 dbm

Frequency band (MHz)	Max power (mW)	Antenna gain (dBi)	Distance (cm)	Power density (mW/cm ²)	Limit (mW/cm ²)
2400~2483.5MHz	6.61	2.75	20	0.00248	1.0
5735~5840MHz	26.92	4.35	20	0.00535	1.0

Note:

1. Other 5G: Antenna 1 and Antenna 2 do not transmit at the same time and the EIRP of Antenna 1 is greater than that of Antenna 2. Here is the EIRP value of Antenna.
2. Bluetooth and Other 5G can be operated simultaneously.

Conclusion:

Therefore, the worst-case situation is 0.00783 mW/cm², which is less than "1". This confirmed that the device compliance with FCC 1.1310 MPE limit.



Appendix – Information on the Testing Laboratories

We, [Hwa-Hsing \(Dongguan\) Testing Co., Ltd.](#), A global provider of TESTING and CERTIFICATION services for consumer products, electronic products and wireless information technology products. Adhering to the core values “HONEST and TRUSTWORTHY, OBJECTIVE and IMPARTIALITY, RIGOROUS and AFFICIENT”, commitment to provide professional, perfect and efficient comprehensive ONE-STOP solution of TESTING and CERTIFICATION services for Manufacturers, Buyers, Traders, Brands, Retailers. Assist client to better manage risk, protect their brands, reduce costs and cut time to over 150 markets in global. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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