RF Exposure Report

FCC ID:	XN6-SB2021NJ6
Applicant:	Zylux Acoustic Corporation
Address:	7F, 70, Rui Guang Road, Neihu District, Taipei 114, Taiwan
Manufacturer	Zylux Acoustic Corporation
Address	7F, 70, Rui Guang Road, Neihu District, Taipei 114, Taiwan
Product:	20" Sound Bar 2.1 System
Brand:	VIZIO
Test Model(s):	SB2021n-J6
Series Model(s):	N/A
Test Date:	Dec.24, 2020 ~ Jan. 08, 2021
Issued By:	Hwa-Hsing (Dongguan) Testing Co., Ltd.
Address:	No.101, Bld N1, Yuyuan 2Rd, Yuyuan Industrial Park, HuangJiang Town, Dongguan, China
FCC Designation No.:	CN1255
Standards:	FCC Part 2 (Section 2.1091); KDB 447498 D01; IEEE C95.1

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

Prepared by : Scott He **Date:** Jan. 13, 2021

Scott He/Engineer

Approved by : Harry Li **Date:** Jan. 20, 2021

Harry Li/ Supervisor

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Release control record

Issue No.	Reason for change	Date issued
201029KH18-FE	Original release	Jan. 13, 2021

1 General Information of EUT

Product	20" Sound Bar 2.1 System
Brand	VIZIO
Test Model(s)	SB2021n-J6
Series Model(s)	N/A
FCC ID:	XN6-SB2021NJ6
Status of EUT	Engineering prototype
Power Supply Rating	AC100-240V~, 50/60Hz, 12W
Modulation Type	GFSK, π/4DQPSK,8DPSK
Modulation technology	FHSS
Transfer Rate	1/2/3 Mbps
Operating Frequency	2402 ~ 2480 MHz
Number of Channel	79
Maximum Output Power	4.80dBm
Antenna Type	PCB Antenna
Max. Peak ANT Gain	4.10dBi
Antenna Connector	N/A

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
3. Please refer to the EUT photo document for detailed product photo (Reference No.: 201029KH18).
4. For the test results, the EUT had been tested with all power board, the worst case was show in test report.

Power board difference:

Manufacturer	Model	Input	Output
DONGGUAN DONGSONG ELECTRONIC CO., LTD	DSP120-120100W	100-240Vac 50/60Hz; 0.5A max.	12Vdc, 1.0A
Chou Sen Electronics Co., LTD	CS12J120100FO	100-240Vac 50/60Hz; 0.5A max.	12Vdc, 1.0A

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				

MPE calculation formula:

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

Where:

Pd = power density in mW/cm

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

3 Classification

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

4 Calculation result of maximum conducted power

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

Frequency Band	Antenna Gain (dBi)	Antenna Type	Transmit and Receive Chain	Maximum Conducted Power(dBm)
2400~2483.5MHz	4.1	PCB	1	4.80

Calculation result of the MPE calculation formula:

Maximum Conducted Power		Antenna gain (dBi)	Distance (cm)	Power density (mW/cm^2)	Limit (mW/cm^2)
(dBm)	(mW)				
4.80	3.02	4.1	20	0.001544	1

Conclusion:

CPD/LPD< 1

CPD = Calculation power density

LPD = Limit of power density

The Calculation power density =0.0015544, which is less than the “1” limit.

Appendix – Information on the Testing Laboratories

We, Hwa-Hsing (Dongguan) 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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