

FCC RF Exposure

Applicant : Guangzhou Panyu Juda Car Audio Equipment Co., Ltd.
NO.5 Building, No.139, Zhouxing Street, Dongchong
Address : Town, Nansha District, Guangzhou City, Guangdong
Province, China
Product Name : 2.1 Soundbar System/Subwoofer
Brand Mark : VIZIO
Model : SV210X-0805
Series model : N/A
FCC ID : ESX-SV210XW
Report Number : BLA-EMC-202501-A7102
Date of Receipt : Jan. 15, 2025
Date of Test : Jan. 15, 2025 to Apr. 24, 2025
47 CFR Part 15, Part 1.1307
Test Standard : 47 CFR Part 15, Part 2.1093
KDB447498D04 General RF Exposure Guidance v01
Test Result : Pass

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Review by: Xavier

Approved by: Blue Zheng

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Revise Record

Version No.	Date	Description
01	May 12, 2025	Original

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1 General information

1.1 General information

Applicant	Guangzhou Panyu Juda Car Audio Equipment Co., Ltd.
Address	NO.5 Building, No.139, Zhouxing Street,Dongchong Town, Nansha District, Guangzhou City, Guangdong Province, China
Manufacturer	Guangzhou Panyu Juda Car Audio Equipment Co., Ltd.
Address	NO.5 Building, No.139, Zhouxing Street,Dongchong Town, Nansha District, Guangzhou City, Guangdong Province, China
Factory 1	Guangzhou Panyu Juda Car Audio Equipment Co., Ltd.
Address	NO.5 Building, No.139, Zhouxing Street,Dongchong Town, Nansha District, Guangzhou City, Guangdong Province, China
Factory 2	Exzone Precision Engineering Sdn. Bhd.
Address	Lot 50, Jalan 7, Kawasan Perindustrian Bakar Arang, 08000 Sungai Petani, Kedah, Malaysia
Factory 3	VTREK VIETNAM COMPANY LIMITED
Address	Factory No. NX2 (B7), Nam Tai Thai Binh International Company Limited, Lot B2, Lien Ha Thai Industrial Park (Green iP-I),Diem Dien Town, Thai Thuy district, Thai Binh province, Vietnam

1.2 General description of EUT

Product name	2.1 Soundbar System
Model no.	SV210X-0805
Operation Frequency:	2402MHz-2480MHz
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channels:	79
Antenna Type:	PCB Antenna
Antenna Gain:	3.47dBi (Provided by customer)
Power supply:	Input:100-240V, 50/60Hz, 60W
Test Voltage:	AC 120V
Hardware Version	N/A

Software Version	N/A
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2 RF Exposure Compliance Requirement

2.1 Standard Requirement

According to 447498 D04 Interim General RF Exposure Guidance v01

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.

2.2 Limits

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B. 2})$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

Example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
		5	10	15	20	25	30	35	40	45	50
	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B. 1})$$

2.3 Result

$$\text{EIRP} = \text{pt} \times \text{gt} = (\text{E} \times \text{d})^{2/30}$$

Where:

pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m,

d = measurement distance in meters (m)

$$\text{Spot} = (\text{E} \times \text{d})^{2/30} \times \text{gt}$$

Separation distance = 20cm

Ant gain = 3.47dBi

For BT Classic(8DPSK):

Max Output power = 4.898dBm @ 2480MHz

$$\text{EIRP} = 4.898\text{dBm} + 3.47\text{dBi} = 8.368\text{dBm},$$

$$\text{So, ERP} = 8.368\text{dBm} - 2.15 = 6.218\text{dBm} = 4.186\text{mW} < 3060 \text{ mW}$$

Comply with RF exposure exemption limit.

----END OF REPORT----

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