

FCC RF Exposure

Applicant : Guangzhou Panyu Juda Car Audio Equipment Co., Ltd.
NO.5 Building ,No.139, ZhouxingStreet, Dongchong
Address : Town, Nansha District, Guangzhou City, Guangdong
Province, China
Product Name : 4.1 Soundbar System
Brand Mark : VIZO
Model : SV410XW-0905
FCC ID : ESX-SV410X
Report Number : BLA-EMC-202503-A9305
Date of Receipt : Mar.21, 2025
Date of Test : Mar.25, 2025 to Apr.02, 2025
47 CFR Part 15, Part1.1307
Test Standard : 47 CFR Part 15, Part2.1093
KDB447498D04 General RF Exposure Guidance v01
Test Result : Pass

Compiled by: Review by: Approved by: 

Issued Date: Apr.03, 2025

BlueAsia of Technical Services(Shenzhen) Co.,Ltd.Address: Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District,
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Revise Record

Version No.	Date	Description
01	Apr.03, 2025	Original

1 General information

1.1 General information

Applicant	Guangzhou Panyu Juda Car Audio Equipment Co., Ltd.
Address	NO.5 Building ,No.139, ZhouxingStreet, Dongchong Town, Nansha District, Guangzhou City, Guangdong Province, China
Manufacturer	Guangzhou Panyu Juda Car Audio Equipment Co., Ltd.
Address	NO.5 Building ,No.139, ZhouxingStreet, 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, ZhouxingStreet, Dongchong Town, Nansha District, Guangzhou City, Guangdong Province, China
Factory 2	EXZONE PREGSION ENGINEERING SDN.BHD
Address	Lot 50, Jalan 7, Kawasan Perindustrian Bakar Arang, 08000 Sungai Petani, Kedah, Malaysia

1.2 General description of EUT

Product name	4.1 Soundbar System
Model no.	SV410XW-0905
Operation Frequency	2402MHz-2480MHz
Modulation Type	BT: GFSK, π /4DQPSK, 8DPSK BLE: GFSK
Number of Channels	BT: 79 BLE: 40
Antenna Type	External antenna
Antenna Gain	3.70dBi (Provided by customer)
Power supply	Input: 100V-240V~ 50/60Hz,50W
Hardware Version	N/A
Software Version	N/A

2 Laboratory and accreditations

The test facility is recognized, certified, or accredited by the following organizations:

Company name:	BlueAsia of Technical Services(Shenzhen) Co., Ltd.
Address:	Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District, Shenzhen, Guangdong Province, China
CNAS accredited No.:	L9788
A2LA Cert. No.:	5071.01
FCC Designation No.:	CN1252
ISED CAB identifier No.:	CN0028
Telephone:	+86-755-28682673
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3 RF Exposure Compliance Requirement

3.1 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.

3.2 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

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

3.3 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

Chip for ATS2835P

Ant gain = 3.70 dBi

For BT Classic(8DPSK)

Max Output power = 3.78dBm @ 2480MHz

$$\text{EIRP} = 3.78\text{dBm} + 3.70\text{dBi} = 7.48\text{dBm}$$

$$\text{So, ERP} = 7.48\text{dBi} - 2.15 = 4.33\text{dBm} = 2.71\text{mW} < 3060\text{mW}$$

For BLE

Max Output power = 3.68dBm @ 2480MHz

$$\text{EIRP} = 3.68\text{dBm} + 3.70\text{dBi} = 7.38\text{dBm}$$

$$\text{So, ERP} = 7.38\text{dBm} - 2.15 = 5.23\text{dBm} = 3.33\text{mW} < 3060\text{mW}$$

Comply with RF exposure exemption limit.

Chip for ATS2833PL

Ant gain = 3.70 dBi

For BT Classic($\pi/4$ DQPSK)

Max Output power = 2.48dBm @ 2480MHz

$$\text{EIRP} = 2.48\text{dBm} + 3.70\text{dBi} = 6.18\text{dBm}$$

$$\text{So, ERP} = 6.18\text{dBm} - 2.15 = 4.03\text{dBm} = 2.53\text{mW} < 3060\text{mW}$$

For BLE

Max Output power = 2.47dBm @ 2480MHz

$$\text{EIRP} = 2.47\text{dBm} + 3.70\text{dBi} = 6.17\text{dBm}$$

$$\text{So, ERP} = 6.17\text{dBm} - 2.15 = 4.02\text{dBm} = 2.52\text{mW} < 3060\text{mW}$$

Comply with RF exposure exemption limit.

----END OF REPORT----

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