

FCC RF Exposure

Applicant : PEAG, LLC dba JLab Audio
Address : 5927 LANDAU CT, Carlsbad, CA 92008, United States
Product Name : Wireless Speaker
Brand Mark : 
Model : JLab Pop Party
Series model : N/A
FCC ID : 2AHYV-POPSP
Report Number : BLA-EMC-202501-A2903
Date of Receipt : Jan. 10, 2025
Date of Test : Jan. 10, 2025 to Jan. 20, 2025
47 CFR Part 15, Part1.1307
Test Standard : 47 CFR Part 15, Part2.1093
KDB447498D04 General RF Exposure Guidance v01
Test Result : Pass

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Review by: Sweels

Approved by: BlueAsia Zheng

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Revise Record

Version No.	Date	Description
01	Feb. 10, 2025	Original

1 General information

1.1 General information

Applicant	PEAG, LLC dba JLab Audio
Address	5927 LANDAU CT, Carlsbad, CA 92008, United States
Manufacturer	GuangDong Simpreal Intelligent Technology Co., Ltd
Address	Room 2408, JiaHong ZhenXing DaSha, DongGuan Avenue #13, DongCheng District, DongGuan City, GuangDong Province, P.R. China
Factory	GuangDong Simpreal Intelligent Technology Co., Ltd
Address	Room 2408, JiaHong ZhenXing DaSha, DongGuan Avenue #13, DongCheng District, DongGuan City, GuangDong Province, P.R. China

1.2 General description of EUT

Product name	Wireless Speaker
Model no.	JLab Pop Party
Operation Frequency:	BT/BLE:2402MHz-2480MHz
Modulation Type:	BLE:GFSK BT:GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channels:	BLE:40 BT:79
Antenna Type:	PCB Antenna
Antenna Gain:	-0.58dBi (Provided by customer)
Power supply:	Battery DC 3.7V
Test Voltage:	DC 3.7V
Hardware Version	N/A
Software Version	N/A

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 = 0.5cm

Ant gain = -0.58dBi

For BLE 2M(Worst):

Max Output power = -1.833dBm @ 2402MHz

EIRP = -1.833dBm - 0.58dBi = -2.413dBm,

ERP = -2.413 - 2.15 = -4.563dBm

because conducted Max Output power > ERP

So, conducted Max Output power = -1.833dBm = 0.656mW < 2.788 mW

For BT Classic(8DPSK):

Max Output power = -0.448dBm @ 2402MHz

EIRP = -0.448dBm - 0.58dBi = -1.028dBm,

ERP = -1.028dBm - 2.15 = -3.178dBm

because conducted Max Output power > ERP

So, conducted Max Output power = -0.448dBm = 0.902mW < 2.788 mW

Comply with RF exposure exemption limit.

----END OF REPORT----

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