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FCC RF Exposure

Applicant	:	Klipsch Group, Inc.
Address	:	3502 Woodview Trace, Suite 200, Indianapolis, IN 46268,USA
Product Name	:	2.1 Gaming Speaker System
Brand Mark	:	Klipsch
Model	:	ProMedia Lumina
FCC ID	:	STI-PM21PRO
Report Number	:	BLA-EMC-202504-A7704
Date of Receipt	:	Apr. 23, 2025
Date of Test	:	Apr. 23, 2025 to May. 8, 2025
Test Standard	:	KDB447498D04 General RF Exposure Guidance v01
Test Result	:	Pass

Compiled by: Hugh **Review by:** Xavier **Approved by:** Blue Zheng

Issued Date: May. 8, 2025

BlueAsia of Technical Services(Shenzhen) Co.,Ltd.
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Revise Record

Version No.	Date	Description
01	May. 8, 2025	Original

1 General information

1.1 General information

Applicant	Klipsch Group, Inc.
Address	3502 Woodview Trace, Suite 200, Indianapolis, IN 46268,USA
Manufacturer	Klipsch Group,Inc.
Address	3502 Woodview Trace, Suite 200, Indianapolis, IN 46268,USA
Factory	Suga Electronics(Dongguan) Company Limited
Address	No 8, Fulong Road, Qingxi Town, Dongguan, Guangdong
Factory	SUGA INTERNATIONAL (VIETNAM) COMPANY LIMITED
Address	Lot CN11-3, Que Vo 3 Industrial Park, Que Tan ward, Que Vo town. Bac Ninh Province. Viet Nam

1.2 General description of EUT

Product name	2.1 Gaming Speaker System
Model no.	ProMedia Lumina
Series model	N/A
Power supply or adapter information	DC3.3V
Hardware Version	N/A
Software Version	V1.0
Note: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.	

BLE:

Operation Frequency:	2402MHz-2480MHz
Modulation Type:	GFSK
Rate data:	1Mbps
Channel Spacing:	2MHz
Number of Channels:	40
Antenna Type:	PCB antenna
Antenna Gain:	1.78 dBi(Provided by customer)

BT:

Operation Frequency:	2402MHz-2480MHz
Modulation Type:	GFSK, π/4DQPSK, 8DPSK
Channel Spacing:	1MHz
Number of Channels:	79
Antenna Type:	PCB antenna
Antenna Gain:	1.78dBi(Provided by customer)

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

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

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

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

2.3 Result

EIRP = pt x gt = (E X 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, --- 10((dBuV/m)/20)/106
d = measurement distance in meters (m) ---3m
Spot = (EXd)^2/30 x gt

Ant gain = 1.78 dBi

BLE
Max Output power =-4.533dBm @ 2402MHz
ERP =-4.533+1.78-2.15=-4.903dBm

So
ERP is worse case
10^-0.4533=0.352 mW < 3060 mW

BT
Max Output power =-3.248dBm @ 2402MHz
ERP =-3.248+1.78-2.15=-3.618dBm

So
ERP is worse case
10^-0.3248=0.473 mW < 3060 mW
Comply with RF exposure exemption limit.

----END OF REPORT----