



## FCC 47 CFR MPE REPORT

Klipsch Group, Inc.

Portable Bluetooth Party Speaker

Model Number: New York

FCC ID: STI-NEWYORK

|                          |                                                                     |
|--------------------------|---------------------------------------------------------------------|
| Applicant:               | Klipsch Group, Inc.                                                 |
| Address:                 | 3502 Woodview Trace, Indianapolis, IN 46268, USA                    |
|                          |                                                                     |
| Prepared By:             | EST Technology Co., Ltd.                                            |
|                          | Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China |
| Tel: 86-769-83081888-808 |                                                                     |

|                 |                              |
|-----------------|------------------------------|
| Report Number:  | ESTE-R2501100                |
| Date of Test:   | Oct. 29, 2024~ Jan. 08, 2025 |
| Date of Report: | Jan. 13, 2025                |

## Maximum Permissible Exposure

### 1. Applicable Standards

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

#### 1.1. Limits for Maximum Permissible Exposure (MPE)

##### (a) Limits for Occupational/Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Times   E   <sup>2</sup> ,   H   <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|-----------------------------------------|------------------------------------------------------------------------|
| 0.3-3.0               | 614                               | 1.63                              | (100)*                                  | 6                                                                      |
| 3.0-30                | 1842/f                            | 4.89/f                            | (900/f)*                                | 6                                                                      |
| 30-300                | 61.4                              | 0.163                             | 1.0                                     | 6                                                                      |
| 300-1500              |                                   |                                   | F/300                                   | 6                                                                      |
| 1500-10000            |                                   |                                   | 5                                       | 6                                                                      |

##### (b) Limits for General Population / Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Times   E   <sup>2</sup> ,   H   <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|-----------------------------------------|------------------------------------------------------------------------|
| 0.3-1.34              | 614                               | 1.63                              | (100)*                                  | 30                                                                     |
| 1.34-30               | 824/f                             | 2.19/f                            | (180/f)*                                | 30                                                                     |
| 30-300                | 27.5                              | 0.073                             | 0.2                                     | 30                                                                     |
| 300-1500              |                                   |                                   | F/1500                                  | 30                                                                     |
| 1500-10000            |                                   |                                   | 1.0                                     | 30                                                                     |

Note: f=frequency in MHz; \*Plane-wave equivalent power density

## 1.2. MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric Field (V/m)

P = Peak RF output Power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance,  $d=0.2\text{m}$ , as well as the gain of the used antenna, the RF power density can be obtained

## 2. Conducted Power Result

Module No.: 32883

| Mode           | Frequency (MHz) | Peak output power (dBm) | Peak output power (mW) |
|----------------|-----------------|-------------------------|------------------------|
| GFSK           | 2402            | 5.02                    | 3.177                  |
|                | 2441            | 4.82                    | 3.034                  |
|                | 2480            | 3.87                    | 2.438                  |
| $\pi/4$ -DQPSK | 2402            | 5.2                     | 3.311                  |
|                | 2441            | 4.88                    | 3.076                  |
|                | 2480            | 3.97                    | 2.495                  |
| 8-DPSK         | 2402            | 5.18                    | 3.296                  |
|                | 2441            | 4.87                    | 3.069                  |
|                | 2480            | 3.93                    | 2.472                  |
| BLE 1M         | 2402            | 5.17                    | 3.289                  |
|                | 2440            | 5                       | 3.162                  |
|                | 2480            | 4.04                    | 2.535                  |

Module No.: 32889

| Mode           | Frequency (MHz) | Peak output power (dBm) | Peak output power (mW) |
|----------------|-----------------|-------------------------|------------------------|
| GFSK           | 2402            | 8.1                     | 6.457                  |
|                | 2441            | 7.86                    | 6.109                  |
|                | 2480            | 7.54                    | 5.675                  |
| $\pi/4$ -DQPSK | 2402            | 8.12                    | 6.486                  |
|                | 2441            | 7.84                    | 6.081                  |
|                | 2480            | 7.54                    | 5.675                  |
| 8-DPSK         | 2402            | 8.09                    | 6.442                  |
|                | 2441            | 7.83                    | 6.067                  |
|                | 2480            | 7.53                    | 5.662                  |
| BLE 1M         | 2402            | 8.02                    | 6.339                  |
|                | 2440            | 7.82                    | 6.053                  |
|                | 2480            | 7.49                    | 5.610                  |

### 3. Calculated Result and Limit

Module No.: 32883

| Mode      | Peak<br>output<br>power<br>(dBm) | Target<br>power<br>(dBm) | MAX<br>Target<br>power<br>(dBm) | Antenna gain |          | Power<br>Density<br>(S)<br>(mW<br>/cm <sup>2</sup> ) | Limited<br>of<br>Power<br>Density<br>(S)<br>(mW<br>/cm <sup>2</sup> ) | Test<br>Result |
|-----------|----------------------------------|--------------------------|---------------------------------|--------------|----------|------------------------------------------------------|-----------------------------------------------------------------------|----------------|
|           |                                  |                          |                                 | (dBi)        | (Linear) |                                                      |                                                                       |                |
| 2.4G Band |                                  |                          |                                 |              |          |                                                      |                                                                       |                |
| GFSK      | 5.02                             | 5±1                      | 6                               | 2.12         | 1.629    | 0.00129                                              | 1                                                                     | Complies       |
| π/4-DQPSK | 5.20                             | 5±1                      | 6                               | 2.12         | 1.629    | 0.00129                                              | 1                                                                     | Complies       |
| 8-DPSK    | 5.18                             | 5±1                      | 6                               | 2.12         | 1.629    | 0.00129                                              | 1                                                                     | Complies       |
| BLE 1M    | 5.17                             | 5±1                      | 6                               | 2.12         | 1.629    | 0.00129                                              | 1                                                                     | Complies       |

Module No.: 32883

| Mode      | Peak<br>output<br>power<br>(dBm) | Target<br>power<br>(dBm) | MAX<br>Target<br>power<br>(dBm) | Antenna gain |          | Power<br>Density<br>(S)<br>(mW<br>/cm <sup>2</sup> ) | Limited<br>of<br>Power<br>Density<br>(S)<br>(mW<br>/cm <sup>2</sup> ) | Test<br>Result |
|-----------|----------------------------------|--------------------------|---------------------------------|--------------|----------|------------------------------------------------------|-----------------------------------------------------------------------|----------------|
|           |                                  |                          |                                 | (dBi)        | (Linear) |                                                      |                                                                       |                |
| 2.4G Band |                                  |                          |                                 |              |          |                                                      |                                                                       |                |
| GFSK      | 8.1                              | 8±1                      | 9                               | 2.12         | 1.629    | 0.00257                                              | 1                                                                     | Complies       |
| π/4-DQPSK | 8.12                             | 8±1                      | 9                               | 2.12         | 1.629    | 0.00257                                              | 1                                                                     | Complies       |
| 8-DPSK    | 8.09                             | 8±1                      | 9                               | 2.12         | 1.629    | 0.00257                                              | 1                                                                     | Complies       |
| BLE 1M    | 8.02                             | 8±1                      | 9                               | 2.12         | 1.629    | 0.00257                                              | 1                                                                     | Complies       |



| MAX<br>Power Density(S)<br>(mW/cm <sup>2</sup> )<br>32883 Bluetooth | MAX<br>Power Density(S)<br>(mW/cm <sup>2</sup> )<br>32889 Bluetooth | Total Ratio | Limit Ratio | Test Result |
|---------------------------------------------------------------------|---------------------------------------------------------------------|-------------|-------------|-------------|
| 0.00129                                                             | 0.00257                                                             | 0.00386     | 1           | Complies    |

**End of Test Report**