

FCC 47 CFR MPE REPORT

Klipsch L.L.C.

2.0 SOUND BAR WITH INTEGRATED SUBWOOFER

Model Number: RSB-3

Additional Model: STUDIO SB 36

FCC ID: STI-RSB36J

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Maximum Permissible Exposure

1、Applicable Standard

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.

(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 ²)	Averaging Times E 2 , H 2 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 ²)	Averaging Times E 2 , H 2 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

2、MPE Calculation Method

$$E \text{ (V/m)} = (30 \cdot P \cdot G)^{0.5} / d \quad \text{Power Density: } P_d \text{ (W/m}^2\text{)} = E^2 / 377$$

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

$$P_d = (30 \cdot P \cdot G) / (377 \cdot d^2)$$

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

3、Calculated Result and Limit

Ant 1

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Target power (dBm)	Antenna gain		Power Density (S) (mW /cm ²)	Limited of Power Density (S) (mW /cm ²)	Test Result
					(dBi)	(Linear)			
GFSK	2402	2.929	1.963	2±1	4.93	3.112	0.00124	1	Compiles
	2441	4.733	2.974	4±1	4.93	3.112	0.00196	1	Compiles
	2480	3.244	2.111	3±1	4.93	3.112	0.00155	1	Compiles
8-DPSK	2402	1.594	1.443	1±1	4.93	3.112	0.00098	1	Compiles
	2441	3.514	2.246	3±1	4.93	3.112	0.00155	1	Compiles
	2480	1.740	1.493	1±1	4.93	3.112	0.00098	1	Compiles
BLE	2402	4.360	2.729	4±1	4.93	3.112	0.00196	1	Compiles
	2440	5.680	3.698	5±1	4.93	3.112	0.00246	1	Compiles
	2480	3.890	2.449	3±1	4.93	3.112	0.00155	1	Compiles

Ant 2

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Target power (dBm)	Antenna gain		Power Density (S) (mW /cm ²)	Limited of Power Density (S) (mW /cm ²)	Test Result
					(dBi)	(Linear)			
GFSK	2402	0.897	1.229	0±1	0	1.000	0.00025	1	Compiles
	2441	2.971	1.982	2±1	0	1.000	0.00040	1	Compiles
	2480	2.091	1.618	2±1	0	1.000	0.00040	1	Compiles
8-DPSK	2402	-0.525	0.886	-1±1	0	1.000	0.00020	1	Compiles
	2441	1.605	1.447	1±1	0	1.000	0.00032	1	Compiles
	2480	0.498	1.122	0±1	0	1.000	0.00025	1	Compiles
BLE	2402	2.260	1.683	2±1	0	1.000	0.00040	1	Compiles
	2440	4.480	2.805	4±1	0	1.000	0.00063	1	Compiles
	2480	2.610	1.824	2±1	0	1.000	0.00040	1	Compiles