

# FCC RF EXPOSURE REPORT

Jin Hao Electronic Science & Tech Co. Ltd

Bleetooth CD Boombox

Model Number: BT-9237MUC

Additional Model: BT-9237M、CD-9237MUC、BT-9237、CD-9237、MP3862

FCC ID: 2AE7AMP3862

Prepared for : Goldyip Science And Technology Park,Goldyip Road Xiabian  
Village,Liaobu,Dongguan City, China

Prepared By : EST Technology Co., Ltd.  
Santun(guantai Road), Houjie Town, DongGuan City,  
GuangDong, China.

Tel: 86-769-83081888-808

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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 <sup>2</sup> )	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 <sup>2</sup> )	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

Model	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Antenna gain		Target power (dBm)	Power Density (S) (mW/cm <sup>2</sup> )	Limited of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
				(dBi)	(Linear )				
GFSK	2402	-7.150	0.193	-0.68	0.86	-8±1	<b>3.39414E-05</b>	1	Compiles
	2441	-5.067	0.311	-0.68	0.86	-6±1	<b>5.37934E-05</b>	1	Compiles
	2480	-3.402	0.457	-0.68	0.86	-4±1	<b>8.52568E-05</b>	1	Compiles
$\pi/4$ -DQ PSK	2402	-6.398	0.229	-0.68	0.86	-7±1	<b>4.27296E-05</b>	1	Compiles
	2441	-4.334	0.369	-0.68	0.86	-5±1	<b>6.77219E-05</b>	1	Compiles
	2480	-2.718	0.535	-0.68	0.86	-3±1	<b>0.000107332</b>	1	Compiles