FCC 47 CFR MPE REPORT

Dongguan City MeiZhiZun Electronics Technology Co., Ltd

Trolley BT Speaker

Model Number: IQ-7210DJBT

Additional Model: CM-09, DM61, M61, DDM61, DM60

FCC ID: 2ALS7IQ7210DJ

Prepared for:	Dongguan City MeiZhiZun Electronics Technology Co., Ltd
	No. 33, Hehe Road, Xiangxi Village, Liaobu Town, Dongguan,
	Guangdong. China
Prepared By:	EST Technology Co., Ltd.
	San Tun Management Zone, Houjie District, Dongguan, 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/cm2)	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/cm2)	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.o	30

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

2、MPE Calculation Method

E (V/m) = (30*P*G) 0.5/d Power Density: Pd (W/m2) = E2/377

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 = (30*P*G) / (377*d2)

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、Conducted Power Result

3.1 Module 1

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Target power（dBm）	Antenna gain	
					(dBi)	(Linear)
GFSK	2402	-5.432	0.286	-6±1	0	1
	2441	-5.242	0.299	-6±1	0	1
	2480	-5.439	0.286	-6±1	0	1
π/4-DQPSK	2402	-4.439	0.360	-5±1	0	1
	2441	-4.445	0.359	-5±1	0	1
	2480	-4.870	0.326	-5±1	0	1

3.1 Module 2

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Target power（dBm）	Antenna gain	
					(dBi)	(Linear)
GFSK	2402	-6.142	0.243	-7±1	0	1
	2441	-6.106	0.245	-7±1	0	1
	2480	-5.739	0.267	-6±1	0	1
π/4-DQPSK	2402	-5.181	0.303	-6±1	0	1
	2441	-5.123	0.307	-6±1	0	1
	2480	-4.746	0.335	-5±1	0	1

4、Calculated Result and Limit

4.1 Module 1

Mode	Target power（dBm）	Antenna gain		Power Density (S) (mW /cm2)	Limited of Power Density (S) (mW /cm2)	Test Result
		(dBi)	(Linear)			
GFSK	-5	0	1	**0.00006**	1	Compiles
π/4-DQPSK	-4	0	1	**0.00008**	1	Compiles

4.1 Module 2

Mode	Target power（dBm）	Antenna gain		Power Density (S) (mW /cm2)	Limited of Power Density (S) (mW /cm2)	Test Result
		(dBi)	(Linear)			
GFSK	-5	0	1	**0.00006**	1	Compiles
π/4-DQPSK	-4	0	1	**0.00008**	1	Compiles