RF Exposure Report

INMUSIC BRANDS INC

CD player

Model Number: DN-700CB

Additional Model: DP30

FCC ID:Y4O-DP30

IC: 11215A-DP30

Prepared for:	INMUSIC BRANDS INC
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FCC Part

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			1.0	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、Calculated Result and Limit

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Target power（dBm）	Antenna gain		Power Density (S) (mW /cm2)	Limited of Power Density (S) (mW /cm2)	Test Result
					(dBi)	(Linear)			
GFSK	2402	2.593	1.817	2±2	2.50	1.778	**0.00089**	1	Compiles
	2441	4.001	2.512	4±2	2.50	1.778	**0.00141**	1	Compiles
	2480	6.277	4.243	6±2	2.50	1.778	**0.00223**	1	Compiles
8-DPSK	2402	2.277	1.689	2±2	2.50	1.778	**0.00089**	1	Compiles
	2441	3.457	2.217	3±2	2.50	1.778	**0.00112**	1	Compiles
	2480	4.943	3.121	4±2	2.50	1.778	**0.00141**	1	Compiles
BLE	2402	0.740	1.186	0±2	2.50	1.778	**0.00056**	1	Compiles
	2440	2.310	1.702	2±2	2.50	1.778	**0.00089**	1	Compiles
	2480	3.950	2.483	3±2	2.50	1.778	**0.00112**	1	Compiles

ISED Part

Maximum Permissible Exposure

1、 Applicable Standard

Radiocommunication apparatus meets the exemption from the routine evaluation limits in Section 2.5 of this standard; that the Technical Brief was prepared and the information contained therein is correct; that the device evaluation was performed or supervised by me; that applicable measurement methods and evaluation methodologies have been followed; and that the device meets the SAR and/or RF field strength limits of RSS-102.

2、 Limit

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- below 20 MHz[6] and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $22.48/f^{0.5}$ W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

Quick Fact

MHz	EIRP (W)	EIRP (dBm)
920	1.39	31.43
850	1.32	31.19
2450	2.71	34.33
1900	2.28	33.58
5200	4.54	36.57

3、Calculated Result and Limit

Mode	Freq. (MHz)	Peak output power (dBm)	Ant. gain (dBi)	E.I.R.P (dBm)	Ture-up power (dBm)	Max Ture-up power		Limited (W)	Test Result
						(dBm)	(W)		
GFSK	2402	2.593	2.50	5.093	5±2	7	**0.0050**	2.676	Compiles
	2441	4.001	2.50	6.251	6±2	8	**0.0063**	2.706	Compiles
	2480	6.277	2.50	8.777	8±2	10	**0.0100**	2.736	Compiles
8-DPSK	2402	2.277	2.50	4.777	4±2	6	**0.0040**	2.676	Compiles
	2441	3.457	2.50	5.957	5±2	7	**0.0050**	2.706	Compiles
	2480	4.943	2.50	7.443	7±2	9	**0.0079**	2.736	Compiles
BLE-GFSK	2402	0.740	2.50	3.240	3±2	5	**0.0032**	2.676	Compiles
	2440	2.310	2.50	4.810	4±2	6	**0.0040**	2.705	Compiles
	2480	3.950	2.50	6.450	6±2	8	**0.0063**	2.736	Compiles
Limited= $1.31 \times 10^{-2} f^{0.6834}$ W (where f is in MHz)									