FCC 47 CFR MPE REPORT

Zylux Acoustic Corporation

MC100Blue

Model Number: MC100Blue

FCC ID: XN6-MC100BLUE

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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、Calculated Result and Limit

Model	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Antenna gain		Power Density (S) (mW/cm2)	Limited of Power Density (S) (mW/cm2)	Test Result
				(dBi)	(Linear)			
GFSK	2402	1.217	1.324	0	1	**0.00026**	1	Compiles
	2441	1.350	1.365	0	1	**0.00027**	1	Compiles
	2480	1.843	1.529	0	1	**0.00030**	1	Compiles
8-DPSK	2402	1.050	1.274	0	1	**0.00025**	1	Compiles
	2441	0.604	1.150	0	1	**0.00023**	1	Compiles
	2480	0.629	1.156	0	1	**0.00023**	1	Compiles

Note: dBm = 10log(mW)