

# **FCC RF EXPOSURE REPORT**

**FCC ID: 2AN93BIKI-V1**

**Project No. : 1710C318**  
**Equipment : Bionic Robo Fish**  
**Model : BIKI V1.0**  
**Applicant : Boya Gongdao (Beijing) Robot Technology Co.,Ltd.**  
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**According: : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091**

**B T L I N C .**

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## MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi r^2} = \frac{EIRP}{4\pi r^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Table for Filled Antenna

For His:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Internal	N/A	1.6

For Repeater:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Internal	N/A	2.5

## TEST RESULTS

EUT :	Bionic Robo Fish	Model Name :	BIKI V1.0
Temperature :	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		

For His:

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
1.6	1.4454	16.18	41.4954	0.01193852	1	Complies

For Repeater:

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
2.5	1.7783	18.44	69.8232	0.02471442	1	Complies

Because the His & Repeater is transmitting simultaneously:

So the Power Density=0.01193852+0.02471442=0.03665294

Note: the calculated distance is 20 cm.