

# RF Exposure Report

FCC ID: 2BDK9-BS002

The EUT is a Dangles in the 2402 ~ 2480MHz frequency band.

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

## (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 Time  E  <sup>2</sup> , H  <sup>2</sup> 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
1500-100,000			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 Time  E  <sup>2</sup> , H  <sup>2</sup> 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
1500-100,000			1.0	30

Note: f = frequency in MHz

## MPE calculation method

Calculation Method of RF Safety Distance:

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

S: power density mW/ cm<sup>2</sup>;

P: power input to the antenna in mW;

g: numeric gain of antenna;

r: distance to centre of radiation in cm

## Unit dbuv/m@3m to mW calculation method

$$E = EIRP - 20\log(d) + 104.8$$

E: is the electric field strength in dBuv/m;

EIRP: is the equivalent isotropically radiated power in dBm;

d: is the specified measurement distance in m

## Calculated result

Mode	Max. Peak output power (dBm)	Max. Peak output power (mW)	Antenna Gain (numeric)	Power Density (S) (mW/ cm <sup>2</sup> )	Limit of Power Density (S) (mW/ cm <sup>2</sup> )
BT	-0.127	0.971	1.0	0.000193	1
BLE	-0.827	0.827	1.0	0.000165	1

### For BT mode

Field strength = 95.13dBuV/m @3m

$$\text{EIRP} = E + 20\log(d) - 104.8 = 95.13 + 20\log 3 - 104.8 = -0.127 \text{ dbm} = 0.971 \text{ mW}$$

### For BLE mode

Field strength = 94.43dBuV/m @3m

$$\text{EIRP} = E + 20\log(d) - 104.8 = 94.43 + 20\log 3 - 104.8 = -0.827 \text{ dbm} = 0.827 \text{ mW}$$

Note1: the antenna gain is 0dBi;

Note2: Calculated distance is 20cm, which is declared by the manufacturer.