

## RF Exposure Report

FCC ID: 2BH6K-A95XF9

The EUT is a Router TV Box in the 2412 ~ 2462MHz and 5180-5240 MHz 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

## 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> ) |
|-------------------------|------------------------------|-----------------------------|------------------------|------------------------------------------|---------------------------------------------------|
| 802.11b                 | 10.453                       | 11.099                      | 2.559                  | 0.005654                                 | 1                                                 |
| 802.11g                 | 10.405                       | 10.977                      | 2.559                  | 0.005591                                 | 1                                                 |
| 802.11n20               | 13.602                       | 22.919                      | 5.117                  | 0.023343                                 | 1                                                 |
| 802.11n40               | 12.776                       | 18.950                      | 5.117                  | 0.019300                                 | 1                                                 |
| 802.11a                 | 10.319                       | 10.762                      | 3.524                  | 0.007549                                 | 1                                                 |
| 5G Wi-Fi<br>802.11 n20  | 13.055                       | 20.207                      | 7.047                  | 0.028344                                 | 1                                                 |
| 5G Wi-Fi<br>802.11 n40  | 12.414                       | 17.434                      | 7.047                  | 0.024454                                 | 1                                                 |
| 5G Wi-Fi<br>802.11 ac20 | 12.977                       | 19.847                      | 7.047                  | 0.027839                                 | 1                                                 |
| 5G Wi-Fi<br>802.11 ac40 | 12.315                       | 17.041                      | 7.047                  | 0.023903                                 | 1                                                 |
| 5G Wi-Fi<br>802.11 ac80 | 12.252                       | 16.796                      | 1.26                   | 0.004212                                 | 1                                                 |

Note1: the antenna gain is 4.08dBi for 2.4GWIFI; Directional Gain=4.08dBi+10log(2)=7.09dBi

The EUT 802.11n (20) and 802.11n(40) is support MIMO mode.

the antenna gain is 5.47dBi for 5GWIFI; Directional Gain=5.47dBi+10log(2)=8.48dBi

The EUT 802.11n20, 802.11n40 802.11ac20 802.11ac40 802.11ac80 is support MIMO mode.

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