

# Maximum Permissible Exposure Evaluation

**FCC ID: 2AF2R-HB30TX****IC ID: 20674-HB30TX**

## 1. Client Information

|                     |   |                                                                                                                                     |
|---------------------|---|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant</b>    | : | Shenzhen Videotimes Technology Co.,Ltd                                                                                              |
| <b>Address</b>      | : | Room 601, Building B, Union Financial Building, No 1 Shihua Road, Fubao Street, Futian Free Trade Zone, Shenzhen, Guangdong, China. |
| <b>Manufacturer</b> | : | Shenzhen Videotimes Technology Co.,Ltd                                                                                              |
| <b>Address</b>      | : | Room 601, Building B, Union Financial Building, No 1 Shihua Road, Fubao Street, Futian Free Trade Zone, Shenzhen, Guangdong, China. |

## 2. General Description of EUT

|                            |   |                                                                                                                                                                                  |                         |
|----------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <b>EUT Name</b>            | : | 2.4GHz Digital Wireless Video Baby Camera                                                                                                                                        |                         |
| <b>Models No.</b>          | : | HB31TX,HB30TX                                                                                                                                                                    |                         |
| <b>Model Different</b>     | : | All these models are identical in the same PCB layout and electrical circuit, Only the appearance design, color and model are different. Does not affect EMC and RF performance. |                         |
| <b>Product Description</b> | : | Operation Frequency:                                                                                                                                                             | GFSK: 2403.5MHz~2468MHz |
|                            |   | RF Output Power:                                                                                                                                                                 | GFSK: 17.338dBm         |
|                            |   | Antenna Gain:                                                                                                                                                                    | 2dBi FPC Antenna        |
|                            |   | Modulation Type:                                                                                                                                                                 | GFSK (1.5 Mbps)         |
| <b>Power Supply</b>        | : | DC Voltage Supply from AC/DC Adapter for TX (Camera)                                                                                                                             |                         |
| <b>Power Rating</b>        | : | Adapter Model:K05S050100U<br>Input: AC 100-240V~50/60Hz, 0.2A<br>Output: DC 5.0V@1.0A                                                                                            |                         |
| <b>Software Version</b>    | : | 1.0                                                                                                                                                                              |                         |

TB-RF-075-1.0

|                               |   |                                   |
|-------------------------------|---|-----------------------------------|
| <b>Hardware Version</b>       | : | 1.2                               |
| <b>Connecting I/O Port(S)</b> | : | Please refer to the User's Manual |

## MPE Calculations

### 1. Antenna Gain:

FPC Antenna: 2dBi.

### 2. EUT Operation Condition:

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

### 3. Exposure Evaluation:

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S=(PG)/4\pi R^2$$

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

### 4. Test Result:

| Mode   | Conducted Power(max)<br>(dBm) | Turn-up Power<br>(dB) | Max tune up power<br>(dBm)<br>[P] | ANT Gain<br>(dBi)<br>[G] | Distance<br>(cm)<br>[R] | Power Density<br>(mW/ cm <sup>2</sup> )<br>[S] |
|--------|-------------------------------|-----------------------|-----------------------------------|--------------------------|-------------------------|------------------------------------------------|
| 2403.5 | 17.338                        | 17±1                  | 18                                | 2                        | 20                      | 0.01989495                                     |
| 2439.5 | 17.307                        | 17±1                  | 18                                | 2                        | 20                      | 0.01989495                                     |
| 2468.0 | 17.239                        | 17±1                  | 18                                | 2                        | 20                      | 0.01989495                                     |

**5. Conclusion:**

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

**Limits for General Population/ Uncontrolled Exposure**

| Frequency Range (MHz) | Power density (mW/ cm <sup>2</sup> ) |
|-----------------------|--------------------------------------|
| 300-1,500             | F/1500                               |
| 1,500-100,000         | 1.0                                  |

For GFSK:2403.5~2468 MHz

MPE limit S: 1mW/ cm<sup>2</sup>

The MPE is calculated as **0.01989495mW / cm<sup>2</sup> < limit 1mW / cm<sup>2</sup>**. So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.

**Note**

For a more detailed features description, please refer to the RF Test Report.

-----END OF REPORT-----