



# Shenzhen Huaxin Information Technology Service Co., Ltd

101, R & D Building, No.3 guansheng 4th Road, Luhua Community, Guanhu Street, Longhua District, Shenzhen, Guangdong, China

Tel: +86-755-21018313 Http: //www.tecovo.net

## Maximum Permissible Exposure Evaluation

FCC ID: 2A4AS-2605B

IC: 28290-2605B

### EUT Specification

|                           |                                                                                                                                                                                                                                |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:             | Video Doorbell                                                                                                                                                                                                                 |
| Trade Mark:               | <b>Reolink</b>                                                                                                                                                                                                                 |
| Model/Type reference:     | Reolink Doorbell Wired                                                                                                                                                                                                         |
| Listed Model(s):          | D330PW                                                                                                                                                                                                                         |
| Model Different:          | It's just that the model names and sales channels are different.                                                                                                                                                               |
| Operating Frequency band: | 915MHz                                                                                                                                                                                                                         |
| Device category:          | <input type="checkbox"/> Portable (<5mm separation)<br><input type="checkbox"/> Mobile (>20cm separation)<br><input checked="" type="checkbox"/> Fixed (>20cm separation)<br><input type="checkbox"/> Others ____              |
| Exposure classification:  | <input type="checkbox"/> Occupational/Controlled exposure (S=5mW/cm <sup>2</sup> )<br><input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm <sup>2</sup> )                                    |
| Antenna diversity:        | <input checked="" type="checkbox"/> Single antenna<br><input type="checkbox"/> Multiple antennas<br><input type="checkbox"/> Tx diversity<br><input type="checkbox"/> Rx diversity<br><input type="checkbox"/> Tx/Rx diversity |
| Antenna gain:             | 0.91dBi                                                                                                                                                                                                                        |
| Evaluation applied:       | <input checked="" type="checkbox"/> MPE Evaluation<br><input type="checkbox"/> SAR Evaluation                                                                                                                                  |

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)

Limits for Maximum Permissible Exposure (MPE)

| Frequency Range (MHz)                                 | Electric Field Strength(V/m) | Magnetic Field Strength(A/m) | Power Density(mW/cm <sup>2</sup> ) | Average Time |
|-------------------------------------------------------|------------------------------|------------------------------|------------------------------------|--------------|
| (A) Limits for Occupational/Control Exposures         |                              |                              |                                    |              |
| 300-1500                                              | --                           | --                           | F/300                              | 6            |
| 1500-100000                                           | --                           | --                           | 5                                  | 6            |
| (B) Limits for General Population/Uncontrol Exposures |                              |                              |                                    |              |
| 300-1500                                              | --                           | --                           | F/1500                             | 30           |
| 1500-100000                                           | --                           | --                           | 1                                  | 30           |

F = frequency in MHz

Friis transmission formula:  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

$P_d$  = Power density in mW/cm<sup>2</sup>



Pout= output power to antenna in mW

G= gain of antenna in linear scale

Pi= 3.1416

R= distance between observation point and center of the radiator in cm

Pd the limit of MPE 1mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, We will know the distance where the MPE limit is reached.

RF exposure evaluation Limits for IC

RSS-102 Issue 6 Section 6.6

Field reference level (FRL) exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm (i.e. mobile devices), except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 1 W (adjusted for tune-up tolerance)
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than  $4.49/f^{0.5}$  W (adjusted for tune-up tolerance), where  $f$  is in MHz
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance)
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than  $1.31 \times 10^{-2} f^{0.6834}$  W (adjusted for tune-up tolerance), where  $f$  is in MHz
- at or above 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 5 W (adjusted for tune-up tolerance)

915MHz the highest test data with is: 90.4dBuV/m @3m

EIRP = 90.4-95.2 = -4.8dBm

FCC Measurement Result

| Frequency (MHz) | Antenna Gain (dBi) | Maximum Power (dBm) | Tune up tolerance (dBm) | Max. Tune up Power (dBm) | Power Density at 20cm (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) | Verdict |
|-----------------|--------------------|---------------------|-------------------------|--------------------------|---------------------------------------------|-----------------------------|---------|
| 915             | 0.91               | -4.8                | -5±1                    | -4                       | 0.0001                                      | 0.61                        | PASS    |

IC Measurement Result

| Frequency (MHz) | Antenna Gain (dBi) | EIRP (dBm) | Tune up tolerance (dBm) | Max. Tune up Power (dBm) | Field reference level (W) | Limit (W) | Verdict |
|-----------------|--------------------|------------|-------------------------|--------------------------|---------------------------|-----------|---------|
| 915             | 0.91               | -4.8       | -5±1                    | -4                       | 0.0004                    | 1.38      | PASS    |

Note:

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

This product does not support simultaneous transmission.

\*\*\*\*\*THE END\*\*\*\*\*