

Maximum Permissible Exposure Evaluation

FCC ID: 2AZFZ-DVR-BTD2-16

1. Client Information

| | | |
|---------------------|---|---|
| Applicant | : | BLUE VIDEO TECHNOLOGY COMPANY LIMITED |
| Address | : | FLAT/RM B, 13/F, GOLD SHINE TOWER, NO.346-348 QUEEN'S RD CENTRAL, SHEUNG WAN, HONG KONG |
| Manufacturer | : | JUFENG TECH COMPANY LIMITED |
| Address | : | Lot S9, Street No. 11, Hai Son Industrial Park (Stage 3 + 4), Duc Hoa Ha Commune, Duc Hoa District, Long An Province, Viet Nam. |

2. General Description of EUT

| | | |
|-------------------------------|---|--|
| EUT Name | : | DVR |
| Models No. | : | DVR-BTD2-16, DVR-BTD2-161, BTD2-161-10LSA, BTD21LSA-1612-B, BTD21LSA-1614-B |
| Model Different | : | All these models are identical in the same PCB, layout and electrical circuit, the only difference is Appearance and Model name. |
| Brand Name | : | Nightowl |
| Product Description | : | Operation Frequency: Bluetooth 4.2(BLE): 2402MHz~2480MHz |
| | : | Number of Channel: Bluetooth 4.2(BLE): 40 channels <i>see note(3)</i> |
| | : | RF Output Power: 5.621 dBm (Max) |
| | : | Antenna Gain: 1.0 dBi PCB Antenna |
| Power Rating | : | Adapter (CS-1202000) Input: 100-240V~, 50/60Hz, 1.5A MAX Output: DC 12V2A |
| Software Version | : | ---- |
| Hardware Version | : | ---- |
| Connecting I/O Port(S) | : | Please refer to the User's Manual |
| Remark | : | the MPE report used the EUT-2(20210708-11-02). |

MPE Calculations for Bluetooth

1. Antenna Gain:

PCB Antenna: 1.0dBi.

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:

Bluetooth 4.2(BLE)

| Mode | Conducted Power(max) (dBm) | Turn-up Power (dB) | Max tune up power (dBm) [P] | ANT Gain (dBi) [G] | Distance (cm) [R] | Power Density (mW/ cm ²) [S] | Limit of Power Density (mW/ cm ²) (S) |
|------|----------------------------|--------------------|-----------------------------|--------------------|-------------------|--|---|
| 2402 | 5.621 | 5±1 | 6 | 1 | 20 | 0.001 | 1 |
| 2442 | 4.472 | 4±1 | 5 | 1 | 20 | 0.0008 | 1 |
| 2480 | 4.062 | 4±1 | 5 | 1 | 20 | 0.0008 | 1 |

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 ²) |
|-----------------------|--------------------------------------|
| 300-1,500 | F/1500 |
| 1,500-100,000 | 1.0 |

For Bluetooth 4.2(BLE):2402~2480 MHz

MPE limit S: 1mW/ cm²

The MPE is calculated as **0.001mW / cm² < limit 1mW / cm²**. 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.

6. Conclusion:

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

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