

Maximum Permissible Exposure Evaluation

FCC ID: 2AZFZ-DVR-BTD8-8

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-BTD8-8, DVR-BTD8-81, CL-BT8D-4-14LSA, WM-BTD881-4LSA, CL-BT8D-8-26LSA	
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 see note(3)	
	RF Output Power:	5.156 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	5.156	5±1	6	1	20	0.001	1
2442	4.016	4±1	5	1	20	0.0008	1
2480	4.092	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 $0.001\text{mW/cm}^2 < \text{limit } 1\text{mW/cm}^2$. 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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