Maximum Permissible Exposure Evaluation

FCC ID: 2AZFZ-DVR-BTD8-16

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-BTD8-16, DVR-BTD8-162, BTD82LSA-169-B, BTD82LSA-1610-B	
Model Different	:	All these models are identical in the same PCB, layout and electrical circuit, Differences in the number and resolution of cameras that can be accessed.	
Product Description	:	Operation Frequency:	Bluetooth 4.2 (BLE): 2402MHz~2480MHz
		Number of Channel:	Bluetooth 4.2 (BLE): 40 channels
		RF Output Power:	GFSK（BLE）: 8.554 dBm
		Antenna Gain:	1dBi PCB Antenna
Power Rating	:	For Adapter (Model:CS-1202000) Input: 100-240V~, 50/60Hz 1.5A Output: DC12V⎓, 2.0A	
Software Version	:	N/A	
Hardware Version	:	AHB80N16R-LME AHB8016RA-NA-N68C-OWL V1.01	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

MPE Calculations for WIFI

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:**

Worst Maximum MPE Result								
Mode	N_{TX}	Freq. (MHz)	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]
BLE（1 Mbps）	1	2402	8.554	8±1	9	1.0	20	0.0020
		2442	8.063	8±1	9	1.0	20	0.0020
		2480	7.64	7±1	8	1.0	20	0.0016
BLE（2 Mbps）	1	2402	8.223	8±1	9	1.0	20	0.0020
		2442	7.993	7±1	8	1.0	20	0.0016
		2480	7.551	7±1	8	1.0	20	0.0016

Note:
(1) N_{TX}= Number of Transmit Antennas
(2) RF Output power specifies that Maximum Conducted Peak Output Power.

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 BLE:2402~2480 MHz

MPE limit S: 1mW/ cm^2

The MPE is calculated as **0.0020 *mW / 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.

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