



Maximum Permissible Exposure Evaluation

FCC ID:2AZFZ-DVR-FTD4-8

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
Model(s) No.	:	DVR-FTD4-8, DVR-FTD4-81, DVR-FTD4-82, DVR-FTD4-81-VT3, DVR-FTD4-82-VT3, DVR-FTD4-81-CN3, DVR-FTD4-82-CN3, FTD4-81-4L, FTD4-81-8L, FTD4-82-4L, FTD4-82-8L, WM-BTD281-4LSA, WM-FTD281-8L, CL-FT4D2-88L
Model Difference	:	All PCB boards and circuit diagrams are the same, the only difference is that model name.
Product Description	Operation Frequency:	Bluetooth 5.0(BLE): 2402MHz~2480MHz
	RF Output Power:	BLE: 2.919dBm (Max)
	Antenna Gain:	1dBi PCB Antenna
Power Supply	:	For Adapter (Model:CS-1202000) Input: 100-240V~ 50/60Hz 1.5A Max Output: 12V $\overline{=}$ 2A
Software Version	:	DVR-FTD4-8 V1.0.3
Hardware Version	:	AHB8008T-NB-T36-OWL V1.02
Remark: The antenna gain provided by the applicant, the adapter and verified for the RF conduction test and adapter provided by TOBY test lab.		

Note: More test information about the EUT please refer the RF Test Report.

MPE Calculations for WIFI

1. Antenna Gain:

PCB Antenna: 1dBi.

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								
BLE								
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]
1Mbps	1	2402	1.634	2±1	3	1	20	0.0005
		2440	2.19	2±1	3	1	20	0.0005
		2480	2.666	3±1	4	1	20	0.0006
2Mbps	1	2402	2.034	2±1	3	1	20	0.0005
		2440	2.379	2±1	3	1	20	0.0005
		2480	2.919	3±1	4	1	20	0.0006

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

MPE limit S: 1mW/ cm²

The MPE is calculated as $0.0006 \text{ mW} / \text{cm}^2 < \text{limit } 1 \text{ mW} / \text{cm}^2$. 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.

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

