# RF Exposure Evaluation

## *FCC ID: 2AFFY-FT02*

## 1. Client Information

| | | |
|---|---|---|
| **Applicant** | : | Viatek Consumer Products Group, Inc. |
| **Address** | : | 6011 Century Oaks Drive Chattanooga, TN 37416 USA. |
| **Manufacturer** | : | *New Tech Development Co., Ltd.* |
| **Address** | : | *3 Flr. Bldg A, JinKe Industrial Park, No.310 Wuhe Road, ShangJing Community, GuanLan Street, LongHua District, Shenzhen, China.* |

## 2. General Description of EUT

| | | | |
|---|---|---|---|
| **EUT Name** | : | Bluetooth FM Transmitter | |
| **Models No.** | : | FT-02 | |
| **Model Difference** | : | N/A | |
| **Product Description** | : | Operation Frequency: | Bluetooth V3.0: 2402MHz~2480MHz |
| | | RF Output Power: | GFSK: -4.428dBm<br>π/4-DQPSK:-3.296dBm |
| | | Antenna Gain: | 0dBi PCB Antenna |
| **Power Rating** | : | Input: DC 12V-24V.<br>Output:5V/2.1A (Max) | |
| **Software Version** | : | N/A | |
| **Hardware Version** | : | N/A | |
| **Connecting I/O Port(S)** | : | Please refer to the User's Manual | |

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



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# MPE Calculations for BT

1. **Antenna Gain:**
   PCB Antenna: 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:**

| 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) |
|---|---|---|---|---|---|---|---|
| GFSK | -4.428 | -4±1 | -3 | 0 | 20 | 0.00010 | 1 |
| π/4-DQPSK | -3.296 | -3±1 | -2 | 0 | 20 | 0.00013 | 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 BT:2402~2480 MHz
MPE limit S: $1mW/cm^2$
The MPE is calculated as ***$0.00013mW/cm^2 < limit\ 1mW/cm^2$***. 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.

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