FCC – Radio Frequency Exposure Report

Report Number	:	**60.790.25.006.01S02**	Date of Issue:	**April 1, 2025**
Model/HVIN	:	**FM II POWER FLEX**		
Product Type	:	**Merchandise Theft Deterrent System**		
Applicant	:	Mobile Technologies Inc.		
Address	:	2345 NE Overlook Drive, Hillsboro OR 97006 United States of America.		
Production Facility (1)	:	Shenzhen Xia Zi Tang Electronic Manufacturing Co Ltd.		
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Production Facility (2)	:	Dinh Sang Technology Company Limited		
Address	:	No 9 Street, Tam Phuoc Industrial Park, BienHoa City, DongNai Province, Vietnam.		
Test Result	:	**n Positive** o Negative		
Total pages including Appendices	:	**3**		

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RF Exposure Estimation – SAR Exempt Evaluation

This exposure evaluation is intended for **FCC ID: 2AA2X-15000362**

Limit and Guidelines on Exposure to Electromagnetic Fields

According to§15.247(e)(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to 447498 D01 General RF Exposure Guidance v06, no SAR required if power is lower than the flowing threshold:
The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] * [√f(GHz)]
≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz.

Calculation method

[(max. power of` channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] *·[√f(GHz)] ≤ 3.0

The Max Power according to the RF Report No.: 60.790.25.006.01R01.
Conducted Power + tune up tolerance
= -3.34 dBm + 0 dB
= -3.34 dBm
= 0.46 mW

Distance = 5 mm
f (GHz) = 2.480 GHz

[0.46 / 5] * SQRT (2.480) = 0.145
As 0.145 ≤ 3.0

Therefore, this device is exempt from stand-alone SAR test requirements.

Calculation of Simultaneous Transmission

For the multiple transmitter product:

In order to ensure compliance with the EMF for a controlled environment, the sum of the ratios of the power density to the corresponding EMF should not exceed unity. That is

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

The simultaneous transmission possibilities are as below:

Mode	Si	SLimit	Ratio
Zigbee	0.145	3	0.05
RFID	0.0163	163	0.01

- The Max Power of RFID is according to the RF Exposure Report (Report No.: 60.790.25.006.01S01

No.	Simultaneous Tx Combination	Ssum	Limit
1	Zigbee + RFID	0.06	≤ 1

Conclusion

According to the table above, we can conclude that the product meets the requirements.

- TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch -

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