RF EXPOSURE REPORT

Applicant	Dongguan Tianyu electronic technology Co., LTD
Address	Room 102, Building 1, No. 2, Dali Lushu Street, Qingxi Town, Dongguan City, Guangdong

Manufacturer or Supplier	Dongguan Tianyu electronic technology Co., LTD
Address	Room 102, Building 1, No. 2, Dali Lushu Street, Qingxi Town, Dongguan City, Guangdong
Product	3C Battery BOX
Brand Name	N/A
Model	RM-TY433-18K
Additional Model & Model Difference	N/A
Date of tests	Aug. 15, 2024 ~ Sep. 10, 2024

☒ **FCC Part 2 (Section 2.1093)**
☒ **KDB 447498 D01 V06**
☒ **IEEE C95.1**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Tested by Loren Luo Project Engineer / EMC Department	Approved by Glyn He Assistant Manager / EMC Department
	 Date: Sep. 14, 2024

Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM2408WDG0147	Original release	Sep. 14, 2024

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1. CERTIFICATION

FCC ID:	2BKEH-DGTYC
PRODUCT:	3C Battery BOX
BRAND NAME:	N/A
MODEL NO.:	RM-TY433-18K
ADDITIONAL MODELS	N/A
APPLICANT:	Dongguan Tianyu electronic technology Co., LTD
STANDARDS:	FCC Part 2 (Section 2.1093)
	KDB 447498 D01 V06
	IEEE C95.1

2. RF EXPOSURE DEFINE

The corresponding SAR Exclusion Threshold condition, listed below:

1) 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,16 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

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. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

2) At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following:
   a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·(f(MHz)/150)] mW, at 100MHz to 1500 MHz
   b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz
3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.
   a) The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by [1 + log(100/f(MHz))] for test separation distances > 50 mm and < 200 mm.
   b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by ½ for test separation distances ≤ 50 mm.
   c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

3. CLASSIFICATION

The antenna of this product, under normal use condition, is at less than 20cm away from the body of the user. So, this device is classified as **Portable Device.**

4. SAR TEST EXCLUSION THRESHOLDS

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
TX	433.92	-50	+-2	-52	-48

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBuV/m)	Averaged Power (dBm)
TX	433.92	44.84	-50.46

Note:

$$E = \frac{\sqrt{30\ PG}}{d}$$

E =Electric field streng in v/m

V/m=$10^{(dBuv/m\ -120)/20}$

P =Power in Watts

G =Antenna gain in dBi

d =Measurement distance in metres

Power ≈ 0.000009 (mW)

dBm=$10*\log_{10}{}^{(0.000009)}$ ≈ -50.46 (dBm)

SAR Test Exclusion Thresholds

Frequency (MHz)	Maximum source-based time averaged conducted output power (dBm)	Minimum separation distance (mm)	Result of Eq. 1	Limit for 1-g SAR	Limit for 10-g extremity SAR	Verdict
TX（433.92MHz）	-48	5	0.000002	3.0	7.5	Exempt from SAR

Conclusion

Therefore this device complies with FCC's RF radiation exposure limits for general population without SAR evaluation.