

# RF EXPOSURE REPORT

Applicant	SHANTOU ZHUOYI TOYS CO.LTD
Address	North Longnan, Guangyi street, Chenghai District, Shantou City



Product	REMOTE CONTROL TOY SERIES
Brand Name	N/A
Model	YD898-MT1876
Additional Models & Model Difference	ZY021-812, ZY021-813, ZY021-814, etc; see item 1
Date of tests	Apr. 18, 2023 ~ May 09, 2023

☒ FCC Part 2 (Section 2.1093)

☒ KDB 447498 D01

☒ 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: Jun. 14, 2023

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Test Report No.: FM2304WDG0091

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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM2304WDG0091	Original release	Jun. 14, 2023

## 1. CERTIFICATION

<b>FCC ID:</b>	2BBF9ZY613791061-1
<b>PRODUCT:</b>	REMOTE CONTROL TOY SERIES
<b>BRAND NAME:</b>	N/A
<b>MODEL NO.:</b>	YD898-MT1876
<b>ADDITIONAL NO.:</b>	ZY021-812, ZY021-813, ZY021-814, ZY021-815, ZY021-816, ZY021-817, ZY021-818, ZY021-819, ZY021-820, ZY021-821, ZY021-822, ZY021-823, ZY021-824, ZY021-825, ZY021-826, ZY021-827, ZY021-828, ZY021-829, ZY021-830, ZY021-831, ZY021-832, ZY021-833, ZY021-834, ZY021-835, ZY021-836, ZY021-837, ZY021-838, ZY021-839, ZY021-840, ZY021-841, ZY021-842, ZY021-843, ZY021-844, ZY021-845, ZY021-846, ZY021-847, ZY021-848, ZY021-849, ZY021-850, ZY021-851, ZY022-812, ZY022-813, ZY022-814, ZY022-815, ZY022-816, ZY022-817, ZY022-818, ZY022-819, ZY022-820, ZY022-821, ZY022-822, ZY022-823, ZY022-824, ZY022-825, ZY022-826, ZY022-827, ZY022-828, ZY022-829, ZY022-830, ZY022-831, ZY022-832, ZY022-833, ZY022-834, ZY022-835, ZY022-836, ZY022-837, ZY022-838, ZY022-839, ZY022-840, ZY022-841, ZY022-842, ZY022-843, ZY022-844, ZY022-845, ZY022-846, ZY022-847, ZY022-848, ZY022-849, ZY022-850, ZY022-851
<b>APPLICANT:</b>	SHANTOU ZHUOYI TOYS CO.LTD
<b>STANDARDS:</b>	FCC Part 2 (Section 2.1093)
	KDB 447498 D01
	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  $\leq 50$  mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, 16 where}$$

- $f(\text{GHz})$  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  $\leq 50$  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)  $\cdot$  (f(MHz)/150)] mW, at 100MHz to 1500 MHz
  - b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)  $\cdot$  10] mW at  $> 1500$  MHz and  $\leq 6$  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  $[1 + \log(100/f(\text{MHz}))]$  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  $\frac{1}{2}$  for test separation distances  $\leq 50$  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	2410-2473	-5	+2	-7	-3

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBuV/m)	Averaged Power (dBm)
TX	2442	90.81	-4.42

Note:

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

E = Electric field strength 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  $\approx$  0.36151 (mW)

$$dBm = 10 \cdot \log_{10}(0.36151) \approx -4.42 \text{ (dBm)}$$

### 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
2410-2473	-3	5	0.15664	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.