

TEST REPORT

Product Name : Infrared remote control toy car
Model Number : 20-13DA, 20-11DB, 20-13DB, 23-3CA, 23-3CB,
23-3CP, 23-5GA, 23-6GA, 23-5GB, 23-6GB,
23-5GY, 23-6GY, 27-11DA, 27-12DA, 27-13DA,
27-15G, 27-16G, 27-18G, 27-19G, 27-20G
FCC ID : 2BL47-27-20G

Prepared for : Shantou Meijiu Toys Co. , Ltd.
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Table of Contents

1. TEST RESULT CERTIFICATION	3
2. EUT SPECIFICATION	5
3. TEST REQUIREMENT	6
4. MEASUREMENT RESULT	7



1. TEST RESULT CERTIFICATION

Applicant : Shantou Meijiu Toys Co. , Ltd.
Address : 6F, 9 Wah Tai Road, West Gate, Chenghua Street, Chenghai District, Shantou, China
Manufacturer : XING FENG TOYS FACTORY
Address : CHENGHAI DISTRICT, SHANTOU CITY, GUANGDONG PROVINCE, CHINA
EUT : Infrared remote control toy car
Model Name : 20-13DA, 20-11DB, 20-13DB, 23-3CA, 23-3CB, 23-3CP, 23-5GA, 23-6GA, 23-5GB, 23-6GB, 23-5GY, 23-6GY, 27-11DA, 27-12DA, 27-13DA, 27-15G, 27-16G, 27-18G, 27-19G, 27-20G
Trademark : N/A

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
§ 1.1307(b), § 2.1093	PASS

The above equipment was tested by EMTEK(DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules FCC § 1.1307(b), § 2.1093.

The test results of this report relate only to the tested sample identified in this report

Date of Test : October 28, 2024 to November 08, 2024

Prepared by : Warren Deng
Warren Deng /Editor

Reviewer : Galen Xiao
Galen Xiao /Supervisor

Approve & Authorized Signer :  EMTEK (DONGGUAN) CO., LTD. TESTING
Sam Lv /Manager

Modified History

Version	Report No.	Revision Date	Summary
	EDG2410280113E00102R	/	Original Report



2. EUT Specification

Characteristics	Description
Product:	Infrared remote control toy car
Model Number:	20-13DA, 20-11DB, 20-13DB, 23-3CA, 23-3CB, 23-3CP, 23-5GA, 23-6GA, 23-5GB, 23-6GB, 23-5GY, 23-6GY, 27-11DA, 27-12DA, 27-13DA, 27-15G, 27-16G, 27-18G, 27-19G, 27-20G Note: The models are all the same remote control, and the only difference is that the remote control cars sold with them are different.
Sample:	1#
Operating Frequency Range(s) :	27.145MHz
Number of Channels:	1 Channel
Max Field Strength	55.67 dBuV@3m
Antenna Type:	Hose antenna
Power Supply	DC 3V from Battery
Evaluation applied:	<input type="checkbox"/> MPE Evaluation <input checked="" type="checkbox"/> SAR Evaluation

3. Test Requirement

RF EXPOSURE EVALUATION

According to KDB 447498 and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

- a) For 100 MHz to 6 GHz and *test separation distances* ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{(GHz)}}}] \leq 3.0 \text{ for 1-g SAR, and } \leq 7.5 \text{ for 10-g extremity SAR,}^{30} \text{ where}$$

- $f_{\text{(GHz)}}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation³¹
- The result is rounded to one decimal place for comparison
- The values 3.0 and 7.5 are referred to as *numeric thresholds* in step b) 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. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

- b) For 100 MHz to 6 GHz and *test separation distances* > 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following (also illustrated in Appendix B):³²

- 1) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f_{\text{(MHz)}}/150)]\}$ mW, for 100 MHz to 1500 MHz
- 2) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$ mW, for > 1500 MHz and ≤ 6 GHz

- c) For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):³³

- 1) For *test separation distances* > 50 mm and < 200 mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by $[1 + \log(100/f_{\text{(MHz)}})]$
- 2) For *test separation distances* ≤ 50 mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by $1/2$
- 3) SAR measurement procedures are not established below 100 MHz.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval. One antenna is available for the EUT. The minimum separation distance is 5mm.

According to ANSI C63.10-2013

9.5 Equations to calculate EIRP

Calculate the EIRP from the radiated field strength in the far field using Equation (22):

$$\text{EIRP} = E + 20 \log(d) - 104.7 \quad (22)$$

where

EIRP is the equivalent isotropically radiated power, in dBm

E is the field strength of the emission at the measurement distance, in dBμV/m

d is the measurement distance, in m

4. Measurement Result

Antenna gain: 0 dBi

When a single module works, the measurement results are as follows:

27.145MHz

Channel Freq. (MHz)	Max Field Strength (dBuV/m)	peak output power (dBm)	Tune upPower (dBm)	Max tune up power (dBm)	Calculation Result	1-g SAR
27.145	55.67	-39.4876	-40±1	-39	0.0000012995	3

According to KDB 447498, no stand-alone required for BT antenna, and no simultaneous SAR measurement is required.

*** End of Report ***