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FEDERAL COMMUNICATIONS COMMISSION
Registration number: 282399

Report No.: GLEMO060401034RFI
Page: 1 of 12
FCC ID: T9DTY06051627M

TEST REPORT

Application No. : GLEMO060401034RF
Applicant: NEW SUNNY PLASTIC TOYS FACTORY
FCC ID: T9DTY06051627M
Fundamental Frequency : 27.145MHz
Equipment Under Test (EUT):
EUT Name: R/C CAR SERIES
Model No.: TY-8023, TY-9001, TY-9002, TY-9003, TY-9004, TY-9005, TY-9006,
TY-9007, TY-9008, TY-8022♣
♣ Please refer to section 2 of this report which indicates which item was
actually tested and which were electrically identical.
Standards: FCC PART 15, SUBPART C : 2006
Section 15.227
Date of Receipt: 30 April 2006
Date of Test: 15 to 16 May 2006
Date of Issue: 16 May 2006

Test Result :	PASS *
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* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Jerry Chen
Technical Manager

This report refers to the General Conditions for Inspection and Testing Services, printed overleaf
This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other
samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product
sample detailed in this report.
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detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS
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product described in this report must be approved by SGS International Electrical Approvals in writing.
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of
the federal government.
All test results in this report can be traceable to National or International Standards.

2 Test Summary

Test	Test Requirement	Standard Paragraph	Result
Radiated Emission (30MHz to 1000MHz)	FCC PART 15 :2006	Section 15.227	PASS①
Occupied Bandwidth	FCC PART 15 :2006	Section 15.215	PASS

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radiated Frequency.

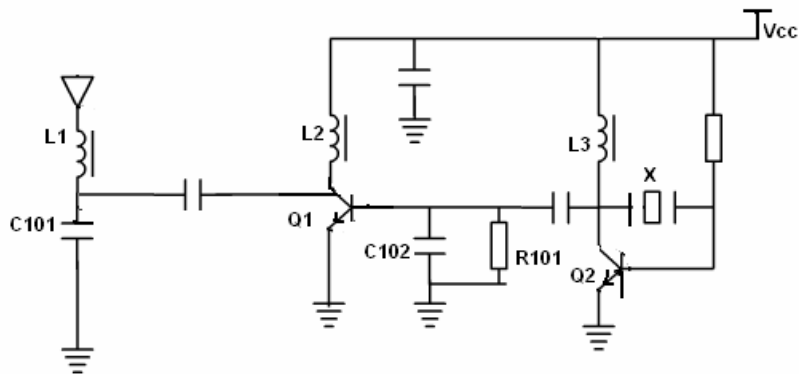
Remark:

Item No.: TY-8023, TY-9001, TY-9002, TY-9003, TY-9004, TY-9005, TY-9006, TY-9007, TY-9008, TY-8022

Only the Item TY-8023 was tested, since the electrical circuit design, PCB layout, components used and internal wiring were identical for the above items, only the outer decoration was difference.

- ① The EUT passed the Carrier Radiation test after modification. Please refer to the following information for further details.

Added one capacitor and one resistor as the following figure shown. Replaced the capacitor C with a new one.



C101: 5PF;

C102: 200PF;

R101: 5.1kΩ.



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4 General Information

4.1 Client Information

Applicant Name: NEW SUNNY PLASTIC TOYS FACTORY

Applicant Address: Fengxin 2 Rd., Chenghai, Shantou City, Guangdong Province China

4.2 Details of E.U.T.

EUT Name: R/C Car Series

Item No.: TY-8023, TY-9001, TY-9002, TY-9003, TY-9004, TY-9005, TY-9006, TY-9007, TY-9008, TY-8022

Power Supply: 9.0V DC (1*9.0V '6F22' Size Battery) for Tx.

Power Cord: N/A

4.3 Description of Support Units

The EUT was tested as an independent unit: 27MHz radio transmitter.

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory, No.198 Kezhu Road, Science Town Economic & Technology Development District Guangzhou, China 510663

Tel: +86 20 8215 5555 Fax: +86 20 8207 5059

4.5 Other Information Requested by the Customer

None.



4.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **NVLAP – Lab Code: 200611-0**
SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0. Effective through December 31, 2006.
- **ACA**
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.
- **VCCI**
The 3m Semi-anechoic chamber and Shielded Room (11.5m x 4m x 4m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-1599 and C-1706 respectively.
Date of Registration: June 01, 2005. Valid until February 22, 2008.
- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**
Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.
- **CNAL – LAB Code: L0141**
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of Testing Laboratories.
- **FCC – Registration No.: 282399**
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 282399, May 31, 2002. With the above and NVLAP's accreditation, SGS-CSTC is an authorised test laboratory for the DoC process.
- **Industry Canada (IC)**
The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5169.



5 Test Results

5.1 Test Instruments

RE in Chamber/OATS						
No:	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
EMC0525	Impact Semi-Anechoic Chamber	ChangZhou ZhongYu	N/A	N/A	06-03-2006	06-03-2007
EMC0525	Compact chamber	ZhongYu	N/A	N/A	20-12-2005	20-12-2006
EMC0522	EMI Test Receiver	Rohde & Schwarz	ESIB26	100249	05-12-2005	05-12-2006
N/A	EMI Test Software	Audix	E3	N/A	N/A	N/A
EMC0514	Coaxial cable	SGS	N/A	N/A	04-12-2005	04-12-2006
EMC0519	Bilog Type Antenna	Schaffner -Chase	CBL6143	5070	16-01-2006	16-01-2007
EMC0518	Horn Antenna	Rohde & Schwarz	HF906	100096	10-05-2005	09-05-2006
EMC0040	Spectrum Analyzer	Rohde & Schwarz	FSP30	100324	05-12-2005	05-12-2006
EMC0520	0.1-1300 MHz Pre-Amplifier	HP	8447D OPT 010	2944A0625 2	06-03-2006	06-03-2007
EMC0521	1-26.5 GHz Pre-Amplifier	Agilent	8449B	3008A0164 9	06-03-2006	06-03-2007
EMC0523	Active Loop Antenna	EMCO	6502	00042963	14-01-2006	14-01-2007
EMC0529	10m Open Site	ZhongYu	N/A	N/A	26-12-2005	26-12-2006



5.2 E.U.T. Operation

Input voltage:	9.0V DC (1* 9.0V '6F22' Size Battery)
Operating Environment:	
Temperature:	25.0 °C
Humidity:	51% RH
Atmospheric Pressure:	1013mbar
EUT Operation:	Test the EUT in transmitting mode.

5.3 Test Procedure & Measurement Data

5.3.1 Radiated Emissions

Test Requirement:	FCC Part15 C Section 15.227
Test Method:	ANSI C63.4 section 8 & 13
Test Date:	15 May 2006 (Initial test) 16 May 2006 (Test after modification)
Measurement Distance:	3m (Semi-Anechoic Chamber and OATS)
Requirements:	Carrier frequency will not exceed 80dBuV/m AT 3m. Out of band emissions shall not exceed: 40.0 dB μ V/m between 30MHz & 88MHz 43.5 dB μ V/m between 88MHz & 216MHz 46.0 dB μ V/m between 216MHz & 960MHz 54.0 dB μ V/m above 960MHz
Detector:	Peak Scan (9kHz resolution bandwidth for 9kHz to 30MHz; 120kHz resolution bandwidth for 30MHz to 1000MHz)

**27.145MHz Mode.**

Test Procedure: For testing performed with the loop antenna, testing was performed in accordance to ANSI C63.4 section 8.2.1. The center of the loop was positioned 1 m above the ground and positioned with its plane vertical at the specified distance from the EUT. During testing the loop was rotated about its vertical axis for maximum response at each azimuth and also investigated with the loop positioned in the horizontal plane.

Horizontal.

Test Frequency (MHz)	Peak (dB μ V/m)			Limits (dB μ V/m)	Margin (dB)		
	X	Y	Z		X	Y	Z
27.145	71.2	69.8	72.1	100.0	28.8	30.2	27.9

Test Frequency (MHz)	Average (dB μ V/m)			Limits (dB μ V/m)	Margin (dB)		
	X	Y	Z		X	Y	Z
27.145	66.8	65.2	67.2	80.0	13.2	14.8	12.8

Vertical.

Test Frequency (MHz)	Peak (dB μ V/m)			Limits (dB μ V/m)	Margin (dB)		
	X	Y	Z		X	Y	Z
27.145	54.2	55.8	56.5	100.0	45.8	44.2	43.5

Test Frequency (MHz)	Average (dB μ V/m)			Limits (dB μ V/m)	Margin (dB)		
	X	Y	Z		X	Y	Z
27.145	50.3	50.7	51.6	80.0	29.7	29.3	28.4

Y: EUT as per photograph in section 5.3.3 of this report.

X: As Y, but rotate EUT by 90° clockwise.

Z: As X, but rotate EUT by 90° vertically.

Note: (Factual) level = read level + cable loss + antenna factor – preamp factor

At the 27.145MHz,

the cable loss = 0.1dB,

the Electric antenna factor of loop antenna = 8.7,

preamp factor = 25.2 .

**Other emissions**

Test Procedure: The procedure used was ANSI Standard C63.4-2003. The receive was scanned from 30MHz to 1000MHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the Horizontal and Vertical polarities and performed a pre-test three orthogonal planes. The worst case emissions were reported.

An initial pre-scan was performed in the 3m chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by Bilog antenna with 2 orthogonal polarities

Test the EUT in transmitting mode.

Horizontal.

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
54.290	31.7	9.9	0.7	25.2	17.1	40.0	-22.9
81.435	30.3	9.5	0.8	25.1	15.5	40.0	-24.5
108.580	29.2	12.5	0.9	25.1	17.5	43.5	-26.0
135.725	28.8	11.9	1.1	25.1	16.7	43.5	-26.8
162.870	29.4	9.8	1.2	24.9	15.5	43.5	-28.0
190.015	29.1	8.9	1.3	24.7	14.6	43.5	-28.9
217.160	29.7	10.6	1.4	24.5	17.1	46.0	-28.9
244.305	29.4	12.4	1.5	24.4	18.8	46.0	-27.2
271.450	29.7	12.7	1.5	24.4	19.5	46.0	-26.5

Vertical.

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
54.290	46.0	6.7	0.7	25.2	28.2	40.0	-11.8
81.435	46.3	6.9	0.8	25.1	29.0	40.0	-11.1
108.580	38.9	10.6	0.9	25.1	25.3	43.5	-18.2
135.725	49.7	11.0	1.1	25.1	36.6	43.5	-6.9
162.870	40.9	9.3	1.2	24.9	26.5	43.5	-17.1
190.015	48.4	11.0	1.3	24.7	36.0	43.5	-7.5
217.160	40.1	11.0	1.4	24.5	27.9	46.0	-18.1
244.305	43.2	11.0	1.5	24.4	31.2	46.0	-14.8
271.450	38.1	12.6	1.5	24.4	27.9	46.0	-18.2

Remark:

(Factual) level = read level + cable loss + antenna factor – preamp factor.

According to 15.35 (b) When average radiated emission measurements are specified in the regulations, including emission measurements below 1000 MHz, there is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules, e.g., see Section 15.255.

Test Results: The unit does meet the FCC Part 15 C Section 15.227 requirements.



5.3.2 Occupied Bandwidth

Test Requirement: FCC Part 15 C Section 15.215 (C) and Section 15.227.

Test Method: ANSI C63.4 section 13 & Part 2.1049

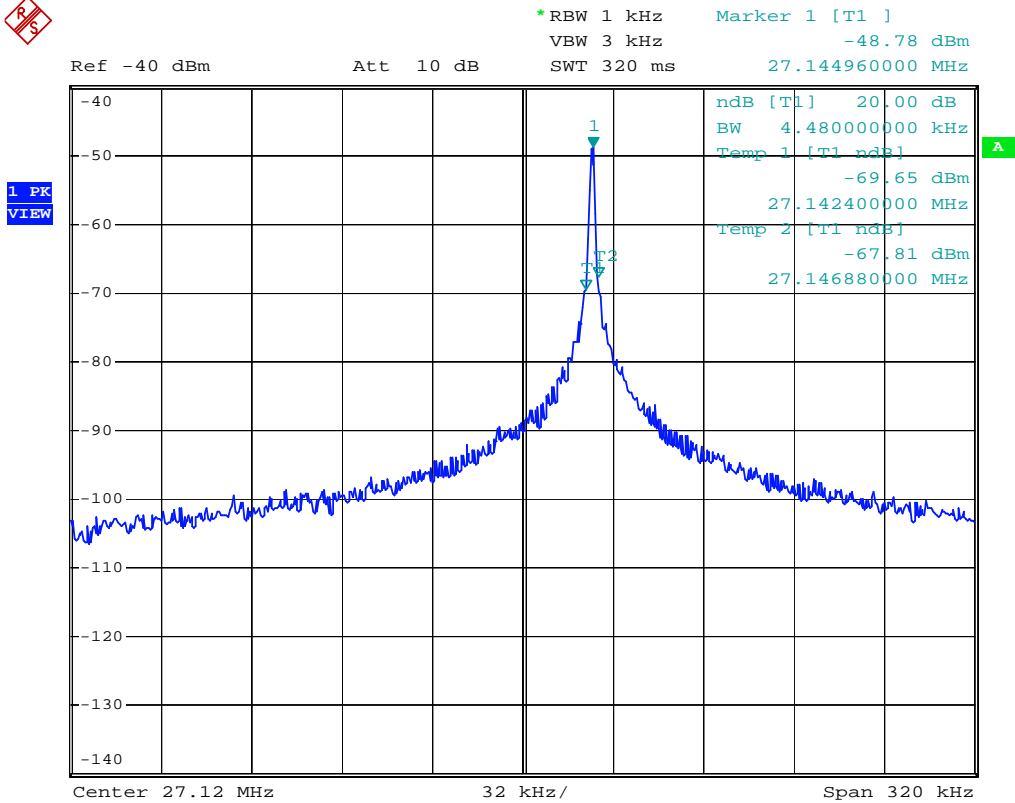
Operation within the band 26.960 – 27.280 MHz .

Test Date: 16 May 2006

26.960–27.280MHz Mode.

Requirements: Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the 20 dB bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

Method of measurement: The useful radiated emission from the EUT was detected by the spectrum analyser with peak detector. The vertical Scale is set to 10dB per division. The horizontal scale is set to 32KHz per division.



Date: 16.MAY.2006 17:50:42

The results: The unit does meet the FCC Part 15 C Section 15.215 requirements