CMA Testing and Certification Laboratories
廠商會檢定中心

TEST REPORT

Report No.	:	AF028659-001	Date :	2005 December 20
Application No.	:	LF224027(6)		
Client	:	Mattel Asia Pacific Sourcing Limited 13/F., South Tower, World Finance Centre, Harbour City, Tsim Sha Tsui, Kowloon, Hong Kong.		
Sample Description	:	One(1) submitted sample(s) stated to be Tyco RC 06 Drop Stars SLR of Model No. J6835 Rating : 4 x 1.5V AA size batteries No. of submitted sample : Three (3) piece(s)		
Date Received	:	2005 December 06		
Test Period	:	2005 December 06 – 2005 December 19		
Test Requested	:	FCC Part 15 Certification.		
Test Method	:	FCC Rules and Regulations Part 15 – July 2004 ANSI C63.4 – 2003		
Test Result	:	See attached sheet(s) from page 2 to 11.		
Conclusion	:	The submitted sample was found to comply with requirement of FCC Part 15 Subpart B.		

For and on behalf of
CMA Industrial Development Foundation Limited

Authorized Signature : _____

Danny Chui
EMC Engineer - EL. Division

FCC ID: PIYJ6835-05A4R

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Test Result :

1 General Information

1.1 General Description

The equipment under test (EUT) is a superregenerative receiver for Tyco RC 06 Drop Stars SLR. Operating at 49.860MHz which is controlled by a LRC circuit. The EUT is powered by 4 x 1.5V AA size battery. When it switches on, it can receive radio frequency and running to forward, backward left and right.

The brief circuit description is listed as follows:

- Q1 and associated circuit act as super regenerative.
- SPRL206 and associated circuit act as decoder.
- Q3 ~ Q8 and associated circuit act as motor control for M1.
- Q9 ~ Q14 and associated circuit act as motor control for M2.
- AM4EC005D, Q15, Q16 and associated circuit act as LED control.
- Q2 and associated circuit act as voltage control.

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1.2 Location of the test site

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003. A Semi-Anechoic Chamber Testing Site is set up for investigation and located at :

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2003. A shielded room is located at :

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9 – 13 Wong Chuk Yeung Street,
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1.3 List of measuring equipment

Equipment	Manufacturer	Model No.	Serial No.	Calibration Certification No.
EMI Test Receiver	R&S	ESCS30	100001	S43284
Broadband Antenna	Schaffner	CBL6112B	2692	CA3025
Signal Generator	IFR	2023B	202302/938	S43098
LISN	R&S	ESH3-Z5	100038	S43377
LISN	R&S	ESH3-Z5	100010	S43101
Pulse Limiter	R&S	ESH3-Z2	100001	S43325
Biconical Antenna	R&S	HK116	837414/004	2GB05000535-0001
Loop Antenna	EMCO	6502	00056620	49906

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Test Result :

2 Description of the radiated emission test

2.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

A signal generator was used to radiate an unmodulated continuous wave (CW) signal to the EUT (superregenerative receiver) at its operating frequency in order to "cohere" the characteristic broadband emissions from the receiver.

2.2 Test Result

All other measurements are well below the limit. Thus, those highest emissions were presented in next page.

The emissions meeting the requirement of section 15.109 are based on measurements employing the CISPR quasi-peak detector below 1000MHz and average detector for frequencies above 1000MHz.

It was found that the EUT meet the FCC requirement.

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Test Result :

2.3 Radiated Emission Measurement Data

Radiated emission

pursuant to

the requirement of FCC Part 15 subpart B

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dBμV/m)	Antenna and Cable factor (dB)	Field Strength (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
49.664	V	16.2	10.3	26.5	40.0	-13.5
50.216	V	22.7	8.1	30.8	40.0	-9.2
50.388	V	23.5	8.1	31.6	40.0	-8.4
50.658	V	23.4	8.1	31.5	40.0	-8.5
50.732	V	22.8	8.1	30.9	40.0	-9.1
99.532	V	14.9	9.2	24.1	43.5	-19.4
99.898	V	14.8	9.2	24.0	43.5	-19.5
100.056	V	12.7	11.0	23.7	43.5	-19.8
144.690	V	11.8	11.9	23.7	43.5	-19.8
149.736	V	11.7	11.9	23.6	43.5	-19.9

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Test Result :

3 Description of the Line-conducted Test

3.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2003. The EUT was setup as described in the procedures, and both lines were measured.

3.2 Test Result

No measurement is required as the EUT is a battery-operated product.

3.3 Graph and Table of Conducted Emission Measurement Data

Not Applicable

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Test Result :

4 Photograph

4.1 Photographs of the Test Setup for Radiated Emission and Conduction Emission

For electronic filing, the photos are saved with filename TSup1.jpg to TSup2.jpg

4.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename ExPho1.jpg to ExPho2.jpg and InPho1.jpg to InPho2.jpg.

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5 Supplementary document

The following document were submitted by applicant, and for electronic filing, the document are saved with the following filenames:

Document	Filename
ID Label/Location	LabelSmp.jpg
Block Diagram	BlkDia.pdf
Schematic Diagram	Schem.pdf
Users Manual	UserMan.pdf
Operational Description	OpDes.pdf

5.1 Bandwidth

N/A

5.2 Duty cycle

N/A

5.3 Transmission time

N/A

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A2.	Photos of External Configurations	2	pages
A3.	Photos of Internal Configurations	2	pages
A4.	ID Label/Location	1	page
A5.	Block Diagram	1	pages
A6.	Schematics Diagram	1	pages
A7.	User Manual	4	pages
A8.	Operation Description	1	page

***** End of Report *****

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