



國際電器認證中心有限公司 International Electrical Certification Centre Ltd.

提供電器產品測試國際認證及諮詢服務 Technical Service in Electrical Product Testing, International Certification & Information



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INTERNATIONAL ELECTRICAL CERTIFICATION CENTRE LTD.

F C C - TEST REPORT

REPORT NO.: 22048B/0/400F

Units 602-605, 6/F., 31 Lok Yip Road, On Lok Tsuen, Fanling, N.T., Hong Kong
Tel: [852] 2305-2570 Fax: [852] 2756-4480

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No. 22048B/0/400F

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FCC listed testlab
acc. to Section 2.948 of the FCC - Rules

in compliance with the requirements of
ANSI C63.4 - 1992

Product : Flasher -- 49 MHz Receiver**Model** : 60-4250 (49MHz)**Importer** : ECHO TOYS LTD**Manufacturer** : ECHO TOYS LTD

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LABORATORY - REPORT**APPLICANT:**

ECHO TOYS LTD

ADDRESS:8 A&B, Block 1, Tai Ping Industrial Centre
57 Ting Kok Road
Taipo, NT
HONG KONG**DATE OF SAMPLE RECEIVED:** 2000-03-11**DATE OF TESTING:** 2000-03-15**DESCRIPTION OF SAMPLE:**

Product: Flasher -- 49 MHz Receiver
Manufacturer: ECHO TOYS LTD
Model number: 60-4250 (49MHz)
Additional model number: --
Rating: DC 9V ('AA' Size Battery x 6)
Country of Origin: P R CHINA

**INVESTIGATIONS
REQUESTED:**Measurements to the relevant clauses of F.C.C. Rules and Regulations
Part 15 Subpart B – 'Unintentional Radiators'**RESULTS:**

See the attached test sheets

CONCLUSIONSFrom the measurement data obtained, the tested sample was considered
to have COMPLIED with the requirements for the relevant clauses of
Federal Communications Commission Rules as specified above.

Authorized Signature

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Summary of Test Results**Interference Radiation:****Test result:**

O.K.

Test data:

See attached data sheet

Interference Voltage:**Test result:**

N.A.

Test data:

N.A.



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TEST EQUIPMENT LIST

Equipment	Manufacturer	Model	Serial No.	Remark
Test Receiver	Rohde & Schwarz	ESH 3	863497/015	10KHz – 30MHz
Test Receiver	Rohde & Schwarz	ESVP	860688/022	25MHz – 1,300 MHz
Artificial Mains Network (LISN)	Schwarzbeck	NSLK 8127	—	2 x 10A, 50Ω, 50μH 10KHz-30MHz
Antenna System	Schwarzbeck	BDA 9106 / UHALP 9107	—	30MHz – 1000MHz
Antenna Mast System	Schwarzbeck	AM9104	—	Max. 4 meters height
Spectrum Analyzer with Q. Peak	Tektronix	2712	B023006	9KHz – 1.8GHz
Interface for Spectrum 2712	Tektronix	TD3F14A	—	
Test Receiver	Rohde & Schwarz	ESH 3	892580/006	10KHz – 30MHz
Test Receiver	Rohde & Schwarz	ESVP	863512/012	25MHz – 1,300 MHz
Impulse Limiter	Rohde & Schwarz	ESH-3-Z2	—	
Artificial Mains Network (LISN)	Schwarzbeck	NSLK 8127	—	2 x 10A, 50Ω, 50μH 10KHz-30MHz
Antenna System	Schwarzbeck	BBA 9106 / UHALP 9107	—	30MHz – 1000MHz
Signal Generator	Rohde & Schwarz	SWS 2	879113/42	100KHz – 1040 MHz
Digital Multimeter	Tektronix	DM2510G	DM- 2510GTW105 55	10KHz – 30MHz
Turntable with Controller	Drehtisch	DT312	—	φ120 cm

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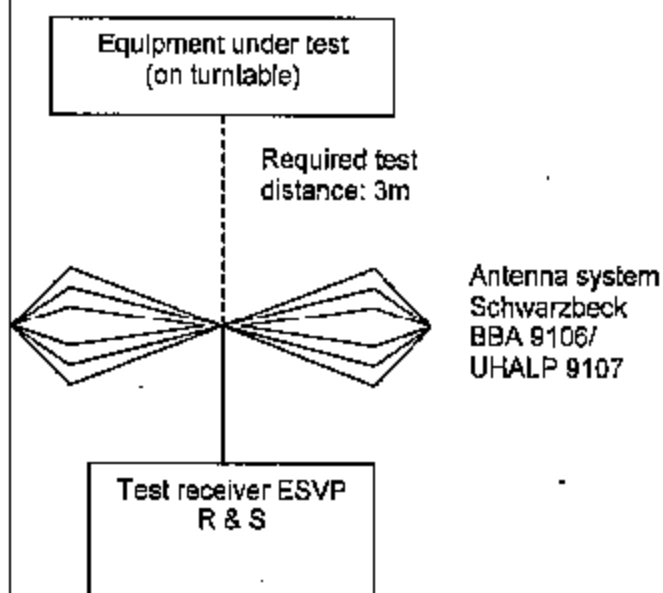
Authorized Laboratory

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Radiated Emission Test procedure



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Unintentional Radiators



Associated Laboratory

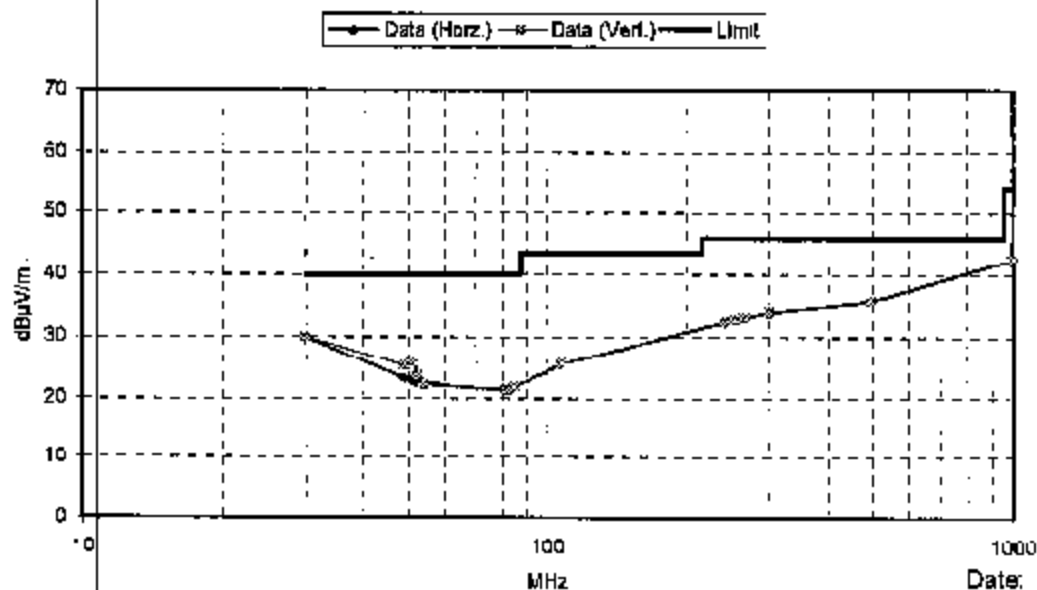
Measurement of Radiated Emissions (30MHz-1000MHz)

Acc: FCC Part 15 Subpart B

IECC Ref: 22048B/04400F
 Model: 60-4250 (49MHz)
 Applicant: ECHO TOYS LTD
 Ser.Nr.: 1
 Set under test: Flasher
 Connected sets: -
 Operating mode: Standby Mode

Test Equipment
 Receiver: ESVP Rohde & Schwarz
 Antenne: Schwarzbeck BBA 9108
 and UHALP 9107

Frequency (MHz)	Horz. Reading dB(μV)	Vert. Reading dB(μV)	Antenna Factor (dB)	Horiz. Test Result (μV/m)	Vert. Test Result (μV/m)	Limit (μV/m)
30	< 16	< 16	14.0	< 31.6	< 31.6	100.0
49	< 16	< 16	7.3	< 14.7	< 14.7	100.0
51	< 16	< 16	6.6	< 13.9	< 13.9	100.0
52.4	< 16	< 16	6.6	< 13.5	< 13.5	100.0
53.8	< 16	< 16	6.4	< 13.2	< 13.2	100.0
61.08	< 16	< 16	5.3	< 11.6	< 11.6	100.0
63.5	< 16	< 16	5.0	< 11.9	< 11.9	100.0
65.3	< 16	< 16	5.8	< 12.3	< 12.3	100.0
107.72	< 16	< 16	9.5	< 18.7	< 18.7	150.0
242.12	< 16	< 16	16.5	< 42.0	< 42.0	200.0
254.84	< 16	< 16	16.9	< 43.9	< 43.9	200.0
254.76	< 16	< 16	17.1	< 45.4	< 45.4	200.0
300	< 16	< 16	18.0	< 50.1	< 50.1	200.0
500	< 16	< 16	19.7	< 61.0	< 61.0	200.0
1000	< 16	< 16	26.5	< 133.4	< 133.4	500.0



Date: 15 MAR 2001



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Unintentional Radiators



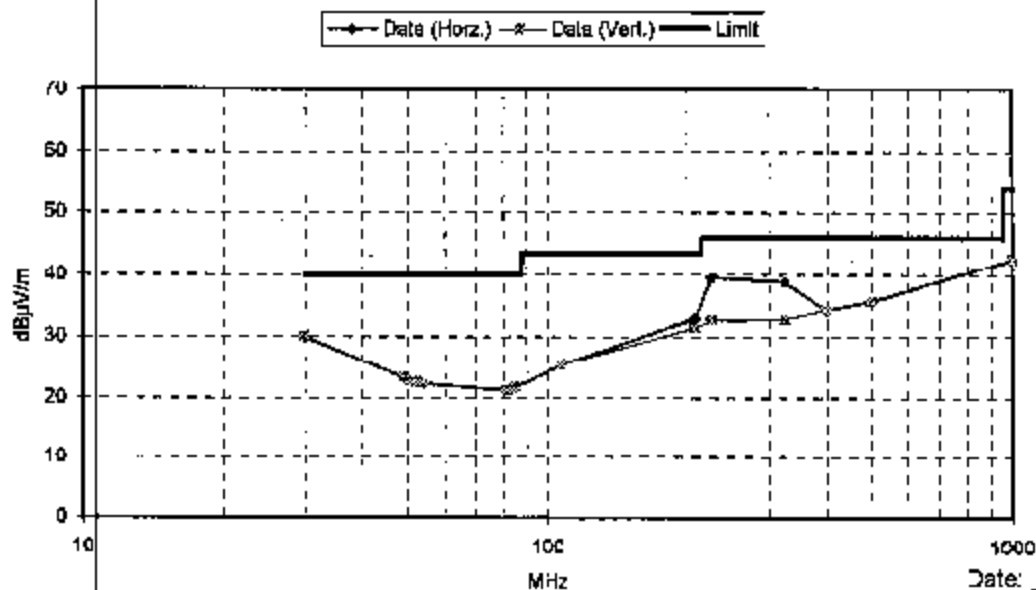
Measurement of Radiated Emissions (30MHz-1000MHz)

Acc: FCC Part 15 Subpart B

IECC Ref: 22048B/0/400F
 Model: 60-4250 (49MHz)
 Applicant: ECHO TOYS LTD
 Ser.Nr.: 1
 Set under test: Flasher
 Connected sets: -
 Operating mode: Motor test backward mode
 Remark: Measurement for motor noise only

Test Equipment
 Receiver: ESVP Rohde & Schwarz
 Antenna: Schwarzbeck BBA 9106
 and UH4LP 9107

Frequency (MHz)	Horz. Reading dB(μV)	Vert. Reading dB(μV)	Antenna Factor (dB)	Horiz. Test Result (μV/m)	Vert. Test Result (μV/m)	Limit (μV/m)
30	< 16	< 16	14.0	< 31.6	< 31.6	100.0
49	< 16	< 16	7.3	< 14.7	< 14.7	100.0
51	< 16	< 16	6.8	< 13.9	< 13.9	100.0
52.4	< 16	< 16	6.6	< 13.5	< 13.5	100.0
53.8	< 16	< 16	6.4	< 13.2	< 13.2	100.0
61.98	< 16	< 16	5.3	< 11.6	< 11.6	100.0
83.5	< 16	< 16	5.5	< 11.9	< 11.9	100.0
85.3	< 16	< 16	5.8	< 12.3	< 12.3	100.0
107.72	< 16	< 16	9.5	< 18.7	< 18.7	150.0
208.8	17.5	< 16	15.4	44.2	< 37.2	150.0
226.9	23.5	16.5	16.0	94.5	42.2	200.0
325	22	< 16	18.8	87.1	< 43.7	200.0
400	< 16	< 16	18.3	< 51.9	< 51.9	200.0
500	< 16	< 16	16.7	< 61.0	< 61.0	200.0
1000	< 16	< 16	26.5	< 133.4	< 133.4	500.0



Date: 15 MAR 2000

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Notes for Radiation Measurement**1. Measurement facility:**

Measurement facility located at Fanling (Hong Kong), placed on file with the FCC Pursuant to Section 2.946 of the FCC Rules.

2. Distance between the EUT and measuring antenna:

3 meters.

3. Measuring instrumentations:

Rohde & Schwarz ESVP Test Receiver (20 - 1300 MHz) with a CISPR weighting QP detector, 6 dB bandwidth set at 120 KHz.

4. Measuring antenna:

Broad-band antenna for the frequency range 30 - 300 MHz and frequency range 300 - 1000 MHz, connected with 10 meters coaxial cable. Cable loss of the coaxial cable included in the Antenna Factor for measurement data. The antennas are capable of measuring both horizontal and vertical polarizations.

5. Frequency range scanned:

The frequency range 30 - 1000 MHz has been scanned. Readings of the highest emissions relating to the limit were reported as above.

6. Arrangement of EUT:

During the test, the sample was operated at rated supply voltage and arranged for maximum emissions.

7. Measuring Procedure:

In accordance with the relevant sections of the American National Standards Institute (ANSI) C63.4-1992 'Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9KHz to 40GHz'.