



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

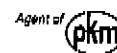
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F C C - TEST REPORT

REPORT NO.: 23099/0/400F



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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	Carbot -- 27 MHz Transmitter
Model	91200T(27MHZ)
Applicant	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: 2000-03-10
DATE OF TESTING: 2000-07-03

DESCRIPTION OF SAMPLE:

Product: Carbot -- 27 MHz Transmitter
Manufacturer: ECHO TOYS LTD
Model number: 91200T(27MHZ)
Rating: DC 9V (6F22' Size Battery x 1)
Country of Origin: P.R. CHINA

INVESTIGATIONS REQUESTED:

Measurements to the relevant clauses of F.C.C. Rules and Regulations
 Part 15 Subpart C - Intentional Radiators

RESULTS:

See the attached test sheets

CONCLUSIONS

From 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.



Stephen Wang

Authorized Signature

Remark: Purpose of those tests in this report is to provide the applicant with the necessary test data of their device for the submission to FCC with application for Equipment Authorization under the FCC Equipment Authorization Program. The tests themselves are not for approval.
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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.

Measurement of Emissions within Band Edges

Test result: O.K.
Test data: See attached data sheet



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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	BBA 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	--	
Loop Antenna	Rohde & Schwarz	HFH2-Z2	871336/48	9KHz – 30MHz
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	--	
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- 2510GTW10555	10KHz – 30MHz
Turntable with Controller	Drehtisch	DT312	--	φ120 cm

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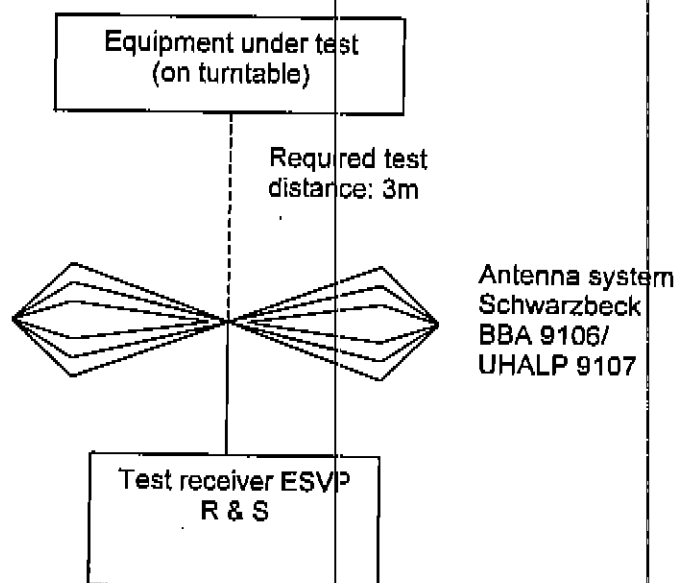
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Radiated Emission Test Procedure (Measurement at/ over 30 MHz)



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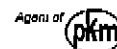
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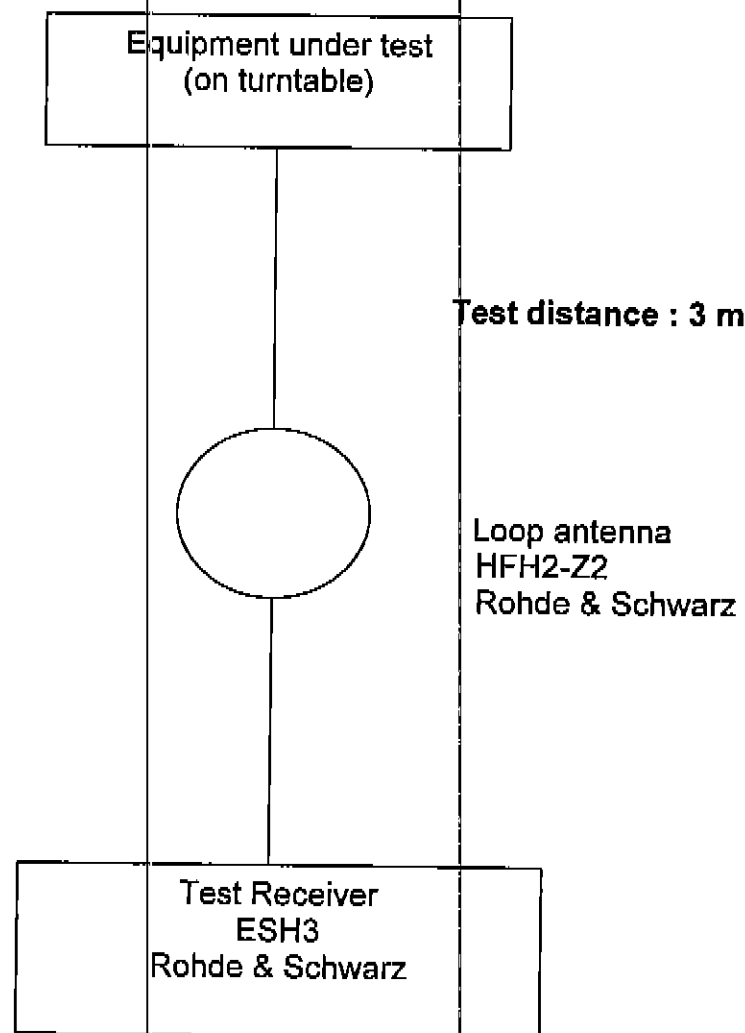
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Radiated Emission Test Procedure (Measurement below 30 MHz)





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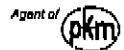


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Interference Radiation

Measurement of Radiated Emissions (27MHz-1000MHz)

App: FCC Part 15 Subpart C



Accredited Laboratory

IECC Ref: 23099/0/400F
Model: 91200T(27MHZ)
Applicant: ECHO TOYS LTD
Ser.Nr.: 1
Set under test: Carbot
Connected sets: -
Operating mode: Power "On"

Test Equipment
Receiver: ESVP Rohde & Schwarz
Antenna: Schwarzbeck BBA 9106
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)
Harm. 2	54.29	< 16	18	10.2	< 20	26	100
Harm. 3	81.435	< 16	< 16	7.1	< 14	14	100
Harm. 4	108.58	< 16	< 16	11.6	< 24	24	150
Harm. 5	135.725	< 16	< 16	14.3	< 33	33	150
Harm. 6	162.87	< 16	< 16	15.6	< 38	38	150
Harm. 7	190.015	< 16	< 16	16.3	< 41	41	150
Harm. 8	217.16	< 16	< 16	16.9	< 44	44	200
Harm. 9	244.305	< 16	< 16	17.6	< 48	48	200
Harm. 10	271.45	< 16	< 16	18.5	< 53	53	200
Harm. 11	298.595	< 16	< 16	19.9	< 62	62	200
Harm. 12	325.74	< 16	< 16	16.8	< 44	44	200
Harm. 13	352.885	< 16	< 16	17.4	< 47	47	200
Harm. 14	380.03	< 16	< 16	17.9	< 50	50	200
Harm. 15	407.175	< 16	< 16	18.4	< 52	52	200
Harm. 16	434.32	< 16	< 16	18.8	< 55	55	200
Harm. 17	461.465	< 16	< 16	19.2	< 57	57	200
Harm. 18	488.61	< 16	< 16	19.5	< 60	60	200
Harm. 19	515.755	< 16	< 16	19.9	< 62	62	200
Harm. 20	542.9	< 16	< 16	20.1	< 64	64	200
Harm. 21	570.045	< 16	< 16	20.5	< 67	67	200
Harm. 22	597.19	< 16	< 16	20.9	< 70	70	200
Harm. 23	624.335	< 16	< 16	21.2	< 73	73	200
Harm. 24	651.48	< 16	< 16	21.6	< 76	76	200
Harm. 25	678.625	< 16	< 16	22.1	< 80	80	200
Harm. 26	705.77	< 16	< 16	22.5	< 84	84	200
Harm. 27	732.915	< 16	< 16	22.8	< 87	87	200
Harm. 28	760.06	< 16	< 16	23.2	< 91	91	200
Harm. 29	787.205	< 16	< 16	23.5	< 95	95	200
Harm. 30	814.35	< 16	< 16	23.9	< 99	99	200
Harm. 31	841.495	< 16	< 16	24.2	< 103	103	200
Harm. 32	868.64	< 16	< 16	24.6	< 107	107	200
Harm. 33	895.785	< 16	< 16	24.9	< 111	111	200
Harm. 34	922.93	< 16	< 16	25.3	< 117	117	200
Harm. 35	950.075	< 16	< 16	25.8	< 122	122	200
Harm. 36	977.22	< 16	< 16	26.2	< 128	128	500

Radiation Measurement below 30 MHz (Using Loop Antenna)

Frequency	Maximum Test Result (dBμV/m)	Limit (dBμV/m)
	Peak Average	Peak Average
27.145	58 53	100 80

Note : The measured radiation outside the operation band and below 30 MHz were negligible

Test result:

☒ O.K.
☐ Not O.K.

Date:

03 JUL 2000

Operator:



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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 2.948 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.

In the frequency range above 1000 MHz Spectrum Analyzer FMSM26 and Analyzer Display Unit FSA-D are used, bandwidth set at 100 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.

Loop antenna for the frequency range 9KHz – 30MHz, connected with 10meters coaxial cable. Cable loss of the coaxial cable included in the measurement data. The center of the loop 1 m above the ground plane, positioned with its plane vertical at the specified distance and rotated about its vertical axis and placed horizontal for maximum response at each azimuth about the EUT.

In the frequency range above 1 GHz horn-antenna RGA 50/60 is used.

5. Frequency range scanned:

The frequency range 30 - 5000 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'.



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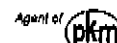


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Interference Radiation

Measurement of Emissions within Band Edges

Acc: FCC Part 15 Subpart C



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IECC Ref: 23099/0/400F
Model: 91200T(27MHZ)
Applicant: ECHO TOYS LTD

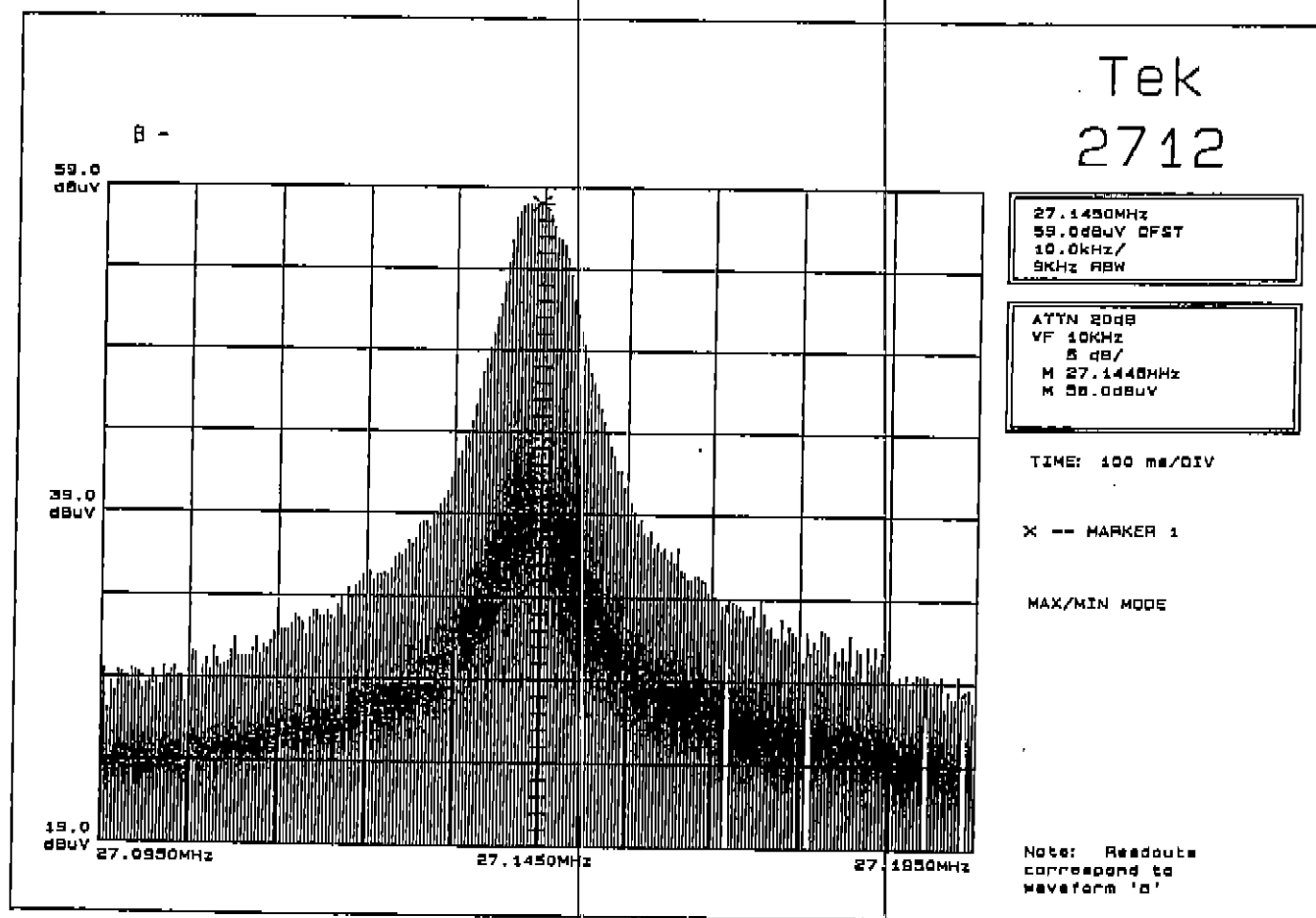
Test Equipment
Spectrum Analyzer : Tektronix 2712

Ser.Nr.:

Set under test: Carbot

Connected sets:

Operating mode: Power "On"



Test result:

☒ O.K.
☐ Not O.K.

Date: 03 JUL 2000

Operator:



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Notes for Measurement of Emissions within Band Edges

1. **Measurement facility:**
Measurement facility located at Fanling (Hong Kong) placed on file with the FCC Pursuant to Section 2.948 of the FCC Rules.
2. **Measuring Instrumentations:**
Spectrum Analyzer: Tektronix 2712
3. **Frequency range scanned:**
The frequency range acc. to FCC rules and regulations part 15 subpart C - Intentional Radiators.
4. **Arrangement of EUT:**
During the test, the sample was operated.
5. **Measuring Procedure:**
In accordance with the relevant sections of 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 9 kHz to 40 GHz'.