

F C C - TEST REPORT

REPORT NO.: 47279

FCC – Test Report

No. 47279

Date: 2007-03-24
Page 2 of 20

**FCC listed testlab
acc. to Section 2.948 of the FCC - Rules
in compliance with the requirements of
ANSI C63.4 - 2003**

Product : AM/FM Weather Alarm Clock Radio
with SAME

Product Class : Communication Receiver (Super
Hetrodyne)

Brand Name : Emerson Research

Model : CKW2000, CKW2500

**Importer /
Manufacturer** : LASCO INDUSTRIES LIMITED

FCC – Test Report

No. 47279

Date: 2007-03-24
Page 3 of 20

TABLE OF CONTENTS

1. Cover sheet
2. Introduction
3. Table of Contents
4. Laboratory Report
5. Test Location and Summary of Test Results
6. Test Equipment List
7. Radiated Emission Test Setup
8. Conducted Emission Test Setup
9. Test Procedure
10. Test Results
- 11-19. Measurement Data
20. Photo of sample

FCC – Test Report

No. 47279

Date: 2007-03-24

Page 4 of 20

LABORATORY - REPORT

APPLICANT: LASCO INDUSTRIES LIMITED

ADDRESS: Unit 2 & 4, 9/F., Century Centre
44-46 Hung To Road
Kwun Tong, Kowloon
Hong Kong

DATE OF SAMPLE RECEIVED: 2007-01-22

DATE OF TESTING: 2007-03-02 to 2007-03-20

DESCRIPTION OF SAMPLE:

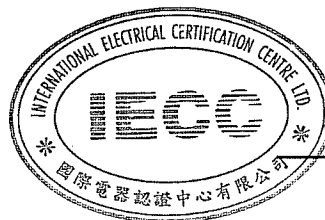
Product: AM/FM Weather Alarm Clock Radio with SAME
Product class: Communication Receiver (Super Hetrodyne)
Brand name: Emerson Research
Model no.: CKW2000, CKW2500
(The above two models are stated to be different in colour)
Band combination: AM/FM/WX
Rating: AC/DC adaptor : UD3514060030G, Input : AC 120V, 60Hz; Output : DC 6V, or DC 6V (AA size battery x 4)

CONDITION OF TEST SAMPLE: The received sample was under good condition.

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

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.



Authorized Signature

FCC – Test Report

No. 47279

Date: 2007-03-24

Page 5 of 20

Test Location

International Electrical Certification Centre Ltd.
Unit 602-605, 31 Lok Yip Road, On Lok Tsuen, Fanling, N.T., Hong Kong
Tel : +852 23052570
Fax : +852 27564480
Email : info@iecc.com.hk

Summary of Test Results

Radiated Emission:

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

Conducted Emission:

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

FCC – Test Report

No. 47279

Date: 2007-03-24

Page 6 of 20

TEST EQUIPMENT LIST

Equipment	Manufacturer	Model	Serial No.	Last Calibration Date	Next Calibration Date
Test Receiver	Rohde & Schwarz	ESVP	860688/022	14/11/2006	13/11/2007
Test Receiver	Rohde & Schwarz	ESHS 30	839667/002	14/11/2006	13/11/2007
Artificial Mains Network (LISN)	Schwarzbeck	NSLK 8127	8127312	20/12/2006	19/12/2007
Antenna	Schaffner	CBL6111C	2791	25/05/2005	24/05/2008
Antenna Mast System	Schwarzbeck	AM9104	--	--	--
Turntable with Controller	Drehtisch	DT312	--	--	--

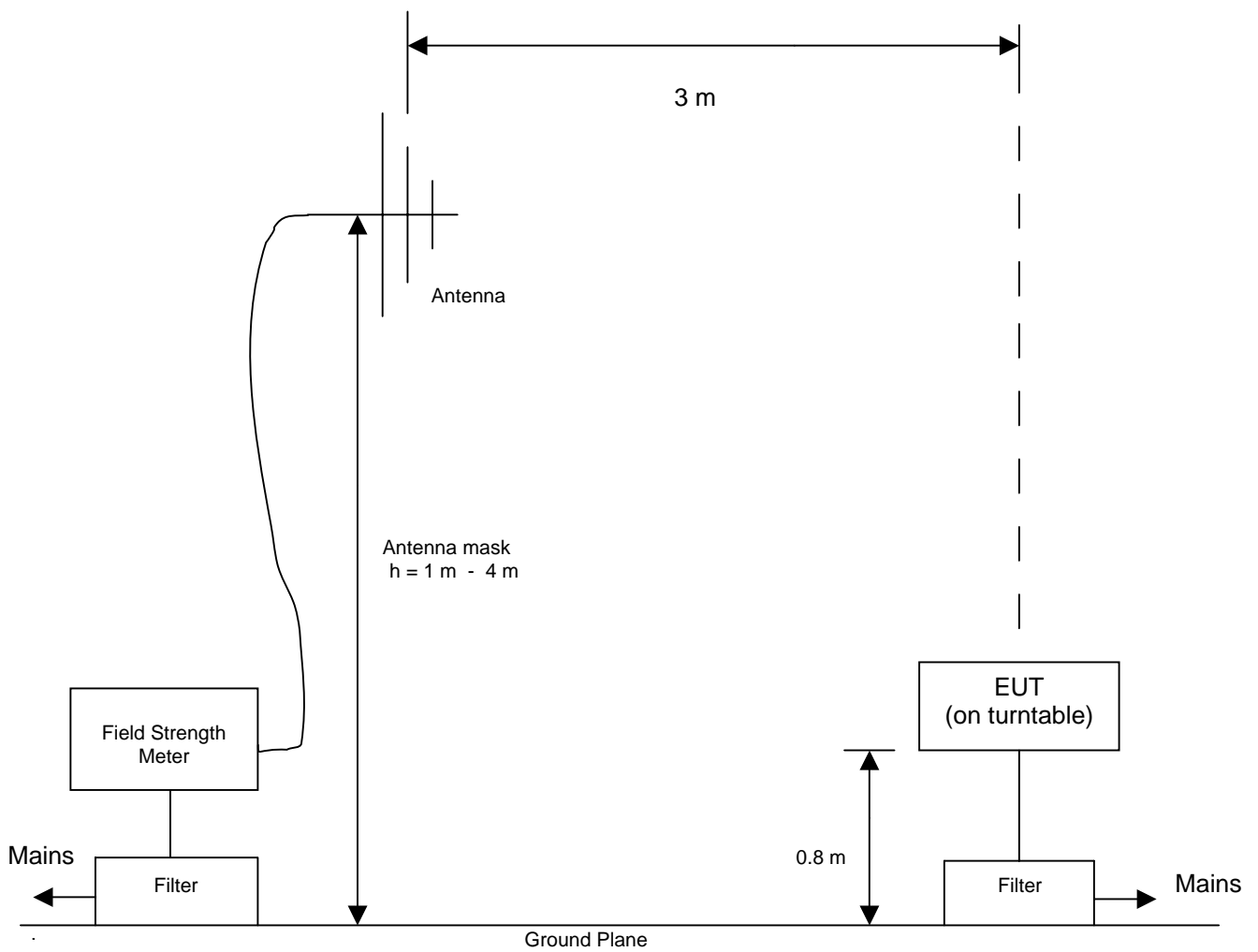
FCC – Test Report

No. 47279

Date: 2007-03-24

Page 7 of 20

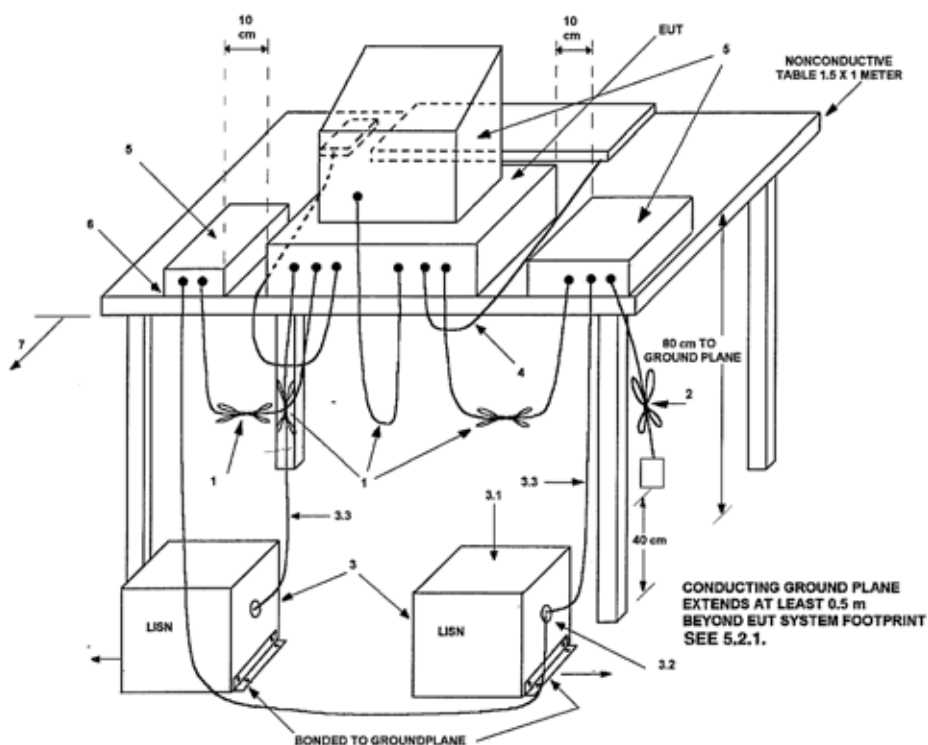
Radiated Emission Test Setup (3 m distance)



No. 47279

Date: 2007-03-24
Page 8 of 20

Conducted Emission Test Setup



LEGEND:

- 1) Interconnecting cables that hang closer than 40 cm to the groundplane shall be folded back and forth in the center forming a bundle 30 to 40 cm long (see 6.1.4 and 11.2.4).
- 2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m (see 6.1.4).
- 3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω . LISN can be placed on top of, or immediately beneath, reference groundplane (see 5.2.3 and 7.2.1).
 - 3.1) All other equipment powered from additional LISN(s).
 - 3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.
 - 3.3) LISN at least 80 cm from nearest part of EUT chassis.
- 4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use (See 6.2.1.3 and 11.2.4).
- 5) Non-EUT components of EUT system being tested (see also Figure 13).
- 6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop (see 6.2.1.1 and 6.2.1.2).
- 7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the groundplane (see 5.2.2 for options).

FCC – Test Report

No. 47279

Date: 2007-03-24

Page 9 of 20

Test Procedure

Radiated Emission :

The EUT was tested according to ANSI 63.4-2003 for the requirements of FCC Part 15 Subpart B Section 15.109.

During the test, the sample was placed on a turn table and operated under various modes with supply at rated AC voltage (i.e AC120V 60Hz). The sample was fitted with the provided antenna wire (length = 0.48 m) which was fully extended during the test. In addition, the fixed telescopic antenna was also fully extended during the test. The table is 0.8 meter above the reference ground plane on the Open Area Test Site and can rotate 360 degrees to determine the position of the maximum emission level. A broad-band antenna for the frequency range 30 - 1000 MHz, connected with 10 meters coaxial cable to the test receiver was used for measurement. The antenna is capable of measuring both horizontal and vertical polarizations. The antenna was raised from 1 to 4 meters to find out the maximum emission level from the EUT.

An initial pre-scan was performed to find out the maximum emission level of the sample placed at 3 orthogonal planes. Final measurement (30 MHz –1000 MHz) was then performed to record the data for the emissions under worst-case condition for combination of the antenna orientation / height and turn table position.

Note : The Open Area Test Site located at IECC was placed on file with the FCC Pursuant to Section 2.948 of the FCC Rules (FCC Registration No. : 97774).

Conducted Emission :

The EUT was tested according to ANSI 63.4-2003 for the requirements of FCC Part 15 Subpart B Section 15.107.

During the test, the sample was placed on a wooden table and operated under various modes with supply at rated AC voltage (i.e AC120V 60Hz) via the LISN. The sample was fitted with the provided antenna wire (length = 0.48 m) which was fully extended during the test. In addition, the fixed telescopic antenna was also fully extended during the test. The table is 0.8 meter above the floor. The LISN which was connected to the test receiver for conducted emission measurement (150kHz – 30MHz).

FCC – Test Report

No. 47279

Date: 2007-03-24

Page 10 of 20

Test Results

Radiated Emission :

Test Requirement:	FCC Part 15 Subpart B Section 15.109
Test Method:	ANSI C63.4 : 2003
Deviations from Standard Test Method:	Nil
Frequency Range:	30MHz – 1000MHz
Measurement Distance:	3 m
Class:	Class B
Detector:	Quasi-Peak

Refer to page 11- 15 for measurement data.

Conducted Emission :

Test Requirement:	FCC Part 15 Subpart B Section 15.107
Test Method:	ANSI C63.4 : 2003
Deviations from Standard Test Method:	Nil
Frequency Range:	150kHz – 30MHz
Class:	Class B
Detector:	Quasi-Peak / Average

Refer to page 16 - 19 for measurement data.

U1

Date : 2007-03-24

Page 11 of 20

Radiated Emission
According: FCC Part 15 Subpart B (15.109)

IECC Ref: 47279
Model: CKW2000
Applicant: LASCO INDUSTRIES LIMITED
Ser.Nr.: --
Oper. Mode: FM Mode
InterFreq: 10.7 MHz

Test Equipment
Receiver: ESVP Rohde & Schwarz
Antenna: Schaffner CBL6111C

Receiving - frequency (MHz)	Oscillator-frequency (MHz)	Harmonics	Reading dBμV	Polarization	Correction Factor (dB)	Test Result dB(μV/m)	Limit dB(μV/m)
89.8	201.0	1	27.0	H	8.6	35.6	43.5
	402.0	2	< 16.0	H	16.9	< 32.9	46.0
	603.0	3	< 16.0	H	20.9	< 36.9	46.0
	804.0	4	< 16.0	H	24.0	< 40.0	46.0
98.3	218.0	1	32.0	H	8.7	40.7	46.0
	436.0	2	< 16.0	H	17.8	< 33.8	46.0
	654.0	3	< 16.0	H	21.6	< 37.6	46.0
	872.0	4	< 16.0	H	25.3	< 41.3	46.0
108.0	237.4	1	29.0	H	11.0	40.0	46.0
	474.8	2	< 16.0	H	18.7	< 34.7	46.0
	712.2	3	< 16.0	H	22.9	< 38.9	46.0
	949.6	4	< 16.0	H	27.6	< 43.6	46.0

The measurement results indicate that the test unit meets the FCC requirements

Note :

The above results were the worse case results with the sample positioned in all 3 axis during the test

Operator : KS

U1

Date : 2007-03-24

Page 12 of 20

Radiated Emission
According: FCC Part 15 Subpart B (15.109)

IECC Ref: 47279
Model: CKW2000
Applicant: LASCO INDUSTRIES LIMITED
Ser.Nr.: --
Oper. Mode: FM Mode
InterFreq: 10.7 MHz

Test Equipment
Receiver: ESVP Rohde & Schwarz
Antenna: Schaffner CBL6111C

Receiving - frequency (MHz)	Oscillator-frequency (MHz)	Harmonics	Reading dBμV	Polarization	Correction Factor (dB)	Test Result dB(μV/m)	Limit dB(μV/m)
89.8	201.0	1	26.0	V	8.6	34.6	43.5
	402.0	2	< 16.0	V	16.9	< 32.9	46.0
	603.0	3	< 16.0	V	20.9	< 36.9	46.0
	804.0	4	< 16.0	V	24.0	< 40.0	46.0
98.3	218.0	1	29.0	V	8.7	37.7	46.0
	436.0	2	< 16.0	V	17.8	< 33.8	46.0
	654.0	3	< 16.0	V	21.6	< 37.6	46.0
	872.0	4	< 16.0	V	25.3	< 41.3	46.0
108.0	237.4	1	21.0	V	11.0	32.0	46.0
	474.8	2	< 16.0	V	18.7	< 34.7	46.0
	712.2	3	< 16.0	V	22.9	< 38.9	46.0
	949.6	4	< 16.0	V	27.6	< 43.6	46.0

The measurement results indicate that the test unit meets the FCC requirements

Note :

The above results were the worse case results with the sample positioned in all 3 axis during the test

Operator : KS

IT 5/6

Date : 2007-03-24

Page 13 of 20

Radiated Emission
Acc: FCC Part 15 Subpart B (15.109)

IECC Ref: 47279

Model: CKW2000

Applicant: LASCO INDUSTRIES LIMITED

Ser.Nr.: --

Set under test: AM/FM Weather Alarm Clock Radio with SAME

Connected sets: -

Operating mode: Weather Band

Test Equipment

Receiver: ESVP Rohde & Schwarz

Antenna: Schaffner CBL6111C

Receiving Frequency : 162.4 MHz

Frequency (MHz)	Horz. Reading dB(μV)	Vert. Reading dB(μV)	Corr. Factor (dB)	Horiz. Test Result dB(μV/m)	Vert. Test Result dB(μV/m)	Limit dB(μV/m)
30	< 16.0	< 16.0	17.6	< 33.6	< 33.6	40.0
40	< 16.0	< 16.0	13.0	< 29.0	< 29.0	40.0
80	< 16.0	< 16.0	7.2	< 23.2	< 23.2	40.0
120	< 16.0	< 16.0	11.2	< 27.2	< 27.2	43.5
173.1	< 16.0	< 16.0	9.2	< 25.2	< 25.2	43.5
346.2	< 16.0	< 16.0	15.2	< 31.2	< 31.2	46.0
519.3	< 16.0	< 16.0	19.5	< 35.5	< 35.5	46.0
692.4	< 16.0	< 16.0	22.2	< 38.2	< 38.2	46.0
865.5	< 16.0	< 16.0	25.4	< 41.4	< 41.4	46.0
1000	< 16.0	< 16.0	27.3	< 43.3	< 43.3	54.0

The measurement results indicate that the test unit meets the FCC requirements

Note :

The above results were the worse case results with the sample positioned in all 3 axis during the test

Operator : KS

IT 5/6

Date : 2007-03-24

Page 14 of 20

Radiated Emission
Acc: FCC Part 15 Subpart B (15.109)

IECC Ref: 47279

Model: CKW2000

Applicant: LASCO INDUSTRIES LIMITED

Ser.Nr.: --

Set under test: AM/FM Weather Alarm Clock Radio with SAME

Connected sets: -

Operating mode: Weather Band

Test Equipment

Receiver: ESVP Rohde & Schwarz

Antenna: Schaffner CBL6111C

Receiving Frequency : 162.475 MHz

Frequency (MHz)	Horz. Reading dB(μV)	Vert. Reading dB(μV)	Corr. Factor (dB)	Horiz. Test Result dB(μV/m)	Vert. Test Result dB(μV/m)	Limit dB(μV/m)
30	< 16.0	< 16.0	17.6	< 33.6	< 33.6	40.0
40	< 16.0	< 16.0	13.0	< 29.0	< 29.0	40.0
80	< 16.0	< 16.0	7.2	< 23.2	< 23.2	40.0
120	< 16.0	< 16.0	11.2	< 27.2	< 27.2	43.5
173.2	< 16.0	< 16.0	9.2	< 25.2	< 25.2	43.5
346.4	< 16.0	< 16.0	15.2	< 31.2	< 31.2	46.0
519.5	< 16.0	< 16.0	19.5	< 35.5	< 35.5	46.0
692.7	< 16.0	< 16.0	22.3	< 38.3	< 38.3	46.0
865.9	< 16.0	< 16.0	25.4	< 41.4	< 41.4	46.0
1000	< 16.0	< 16.0	27.3	< 43.3	< 43.3	54.0

The measurement results indicate that the test unit meets the FCC requirements

Note :

The above results were the worse case results with the sample positioned in all 3 axis during the test

Operator : KS

IT 5/6

Date : 2007-03-24

Page 15 of 20

Radiated Emission
Acc: FCC Part 15 Subpart B (15.109)

IECC Ref: 47279

Model: CKW2000

Applicant: LASCO INDUSTRIES LIMITED

Ser.Nr.: --

Set under test: AM/FM Weather Alarm Clock Radio with SAME

Connected sets: -

Operating mode: Weather Band

Test Equipment

Receiver: ESVP Rohde & Schwarz

Antenna: Schaffner CBL6111C

Receiving Frequency : 162.55 MHz

Frequency (MHz)	Horz. Reading dB(μV)	Vert. Reading dB(μV)	Corr. Factor (dB)	Horiz. Test Result dB(μV/m)	Vert. Test Result dB(μV/m)	Limit dB(μV/m)
30	< 16.0	< 16.0	17.6	< 33.6	< 33.6	40.0
40	< 16.0	< 16.0	13.0	< 29.0	< 29.0	40.0
80	< 16.0	< 16.0	7.2	< 23.2	< 23.2	40.0
120	< 16.0	< 16.0	11.2	< 27.2	< 27.2	43.5
173.3	< 16.0	< 16.0	9.2	< 25.2	< 25.2	43.5
346.5	< 16.0	< 16.0	15.2	< 31.2	< 31.2	46.0
519.8	< 16.0	< 16.0	19.5	< 35.5	< 35.5	46.0
693	< 16.0	< 16.0	22.3	< 38.3	< 38.3	46.0
866.3	< 16.0	< 16.0	25.4	< 41.4	< 41.4	46.0
1000	< 16.0	< 16.0	27.3	< 43.3	< 43.3	54.0

The measurement results indicate that the test unit meets the FCC requirements

Note :

The above results were the worse case results with the sample positioned in all 3 axis during the test

Operator : KS

U 5 / 6

Interference Voltage 150 KHz - 30 MHz

acc. FCC PART 15 Subpart B Section 15.107(a) Class B

Cabin 1

Model: CKW2000

Spl./ Ser. No.: 01/--

Client : LASCO

Product: AM/FM CLOCK RADIO

IECC-No.: 47279

Date: 5 MAR 2007

Test equipment:

Rohde & Schwarz ESHS-30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

FM
(L)
--

RFI suppression parts:

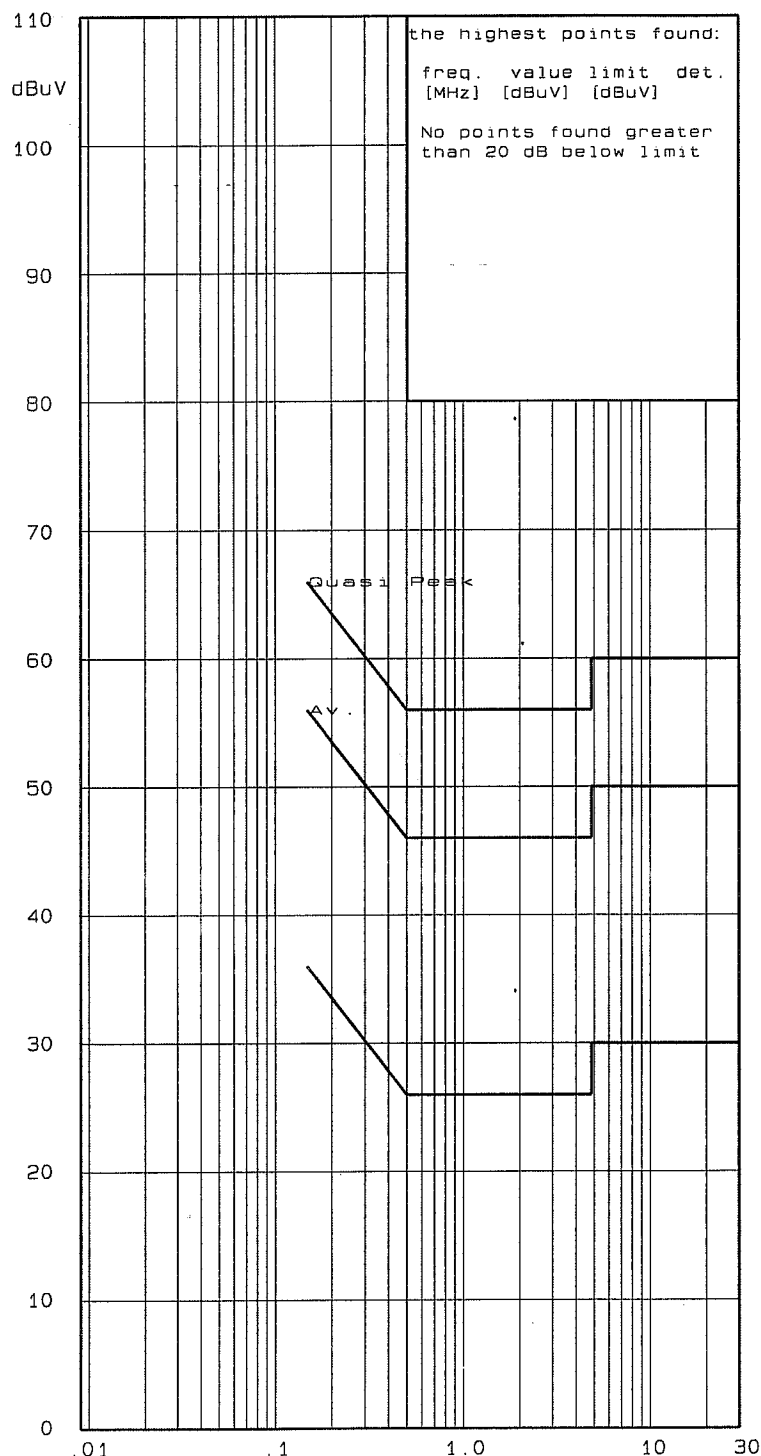
--

* two dB safety margin for
type approval necessary

Operator: KT

Result: ok

IECC



U 5 / 6

Interference Voltage 150 KHz - 30 MHz

acc. FCC PART 15 Subpart B Section 15.107(a) Class B

Cabin 1

Model: CKW2000

Spl./ Ser. No.: 01/--

Client : LASCO

Product: AM/FM CLOCK RADIO

IECC-No.: 47279

Date: 5 MAR 2007

Test equipment:

Rohde & Schwarz ESHS-30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

FM
(N)
--

RFI suppression parts:

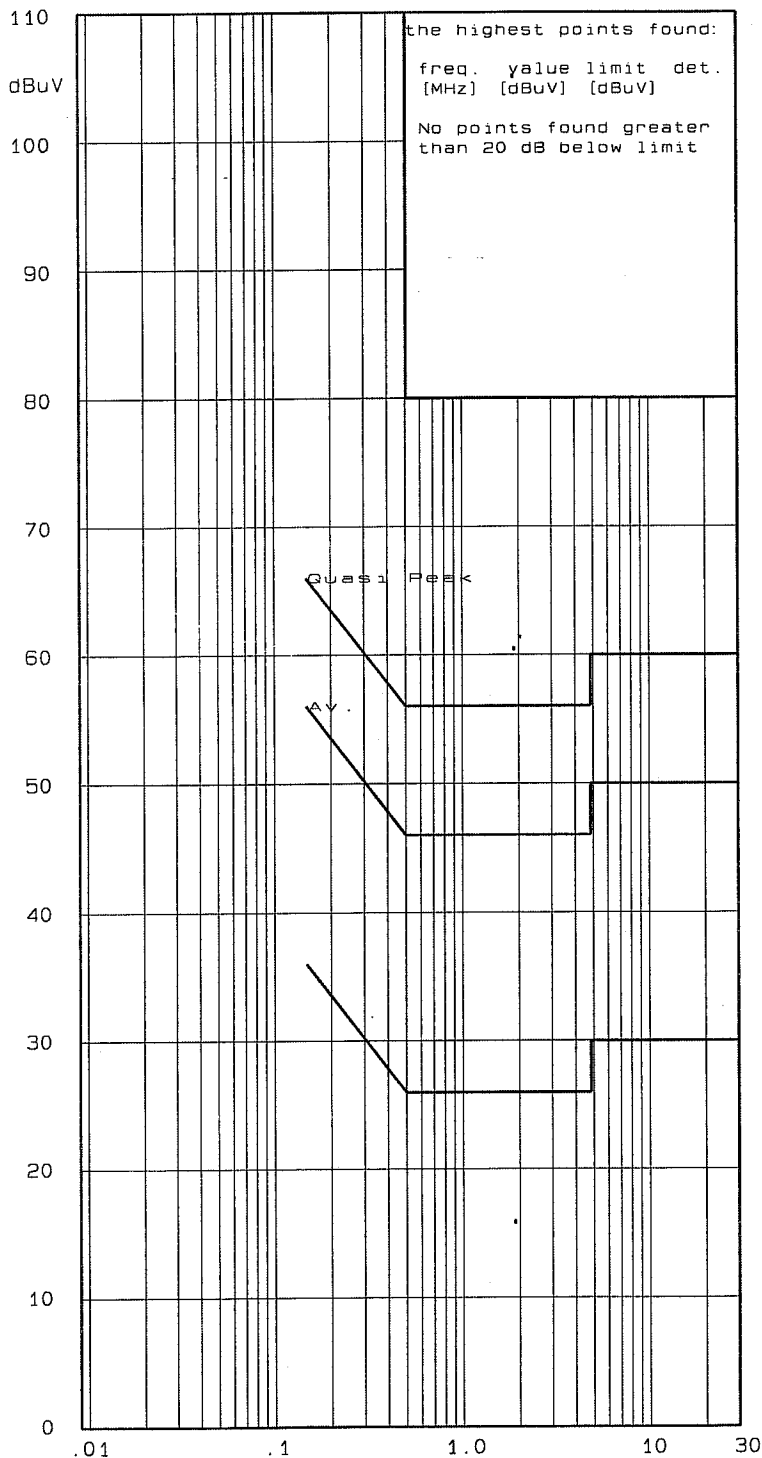
--

* two dB safety margin for
type approval necessary

Operator: KT

Result: *ok*

IECC



U 5 / 6

Interference Voltage 150 KHz - 30 MHz

acc. FCC PART 15 Subpart B Section 15.107 (a) Class B

Cabin 1

Model: CKW2000

Spl./ Ser. No.: 01/--

Client : LASCO

Product: RADIO W/WEATHER BAND

IECC-No.: 47279

Date: **05 MAR 2007**

Test equipment:

Rohde & Schwarz ESHS-30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

WEATHER BAND
(L)
--

RFI suppression parts:

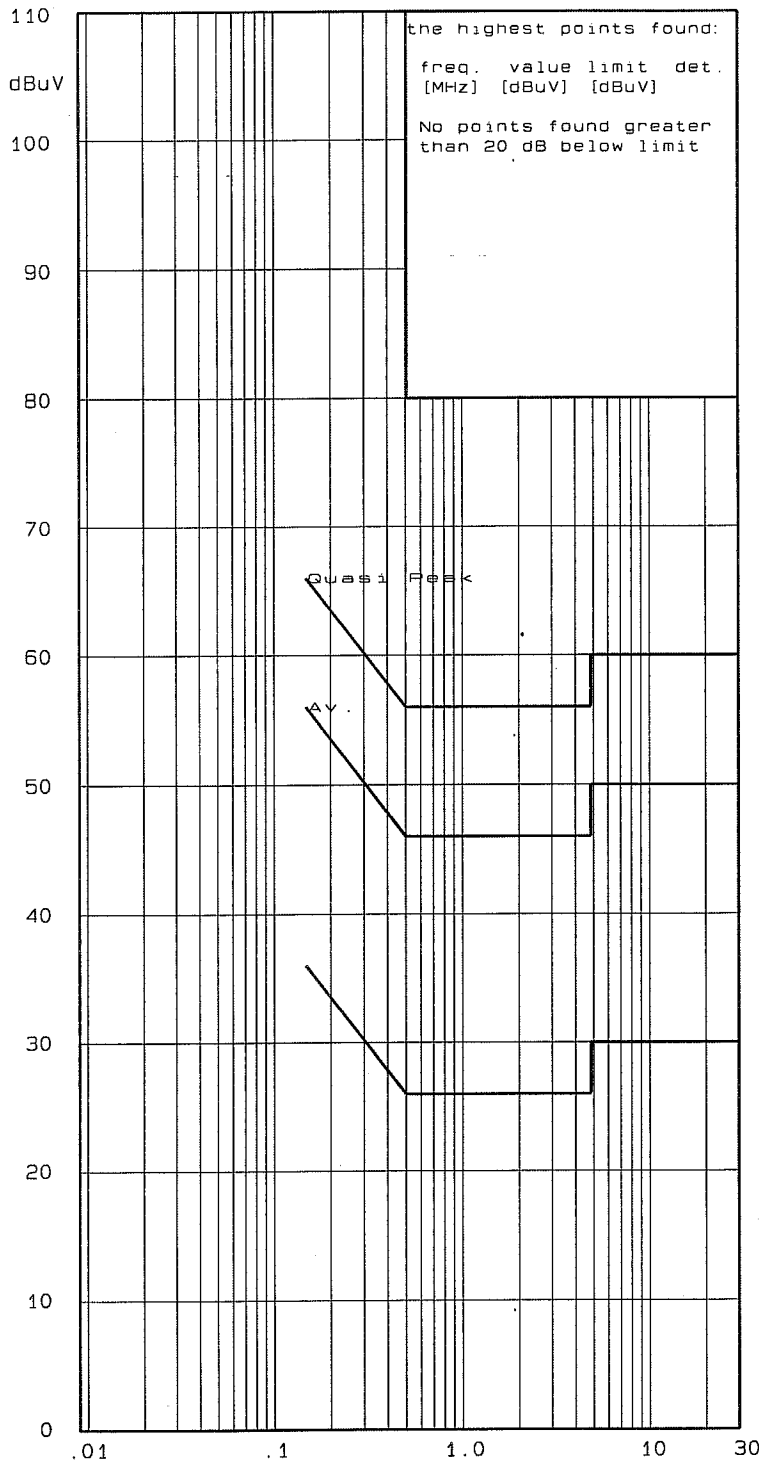
--

* two dB safety margin for
type approval necessary

Operator: KS

Result: **OK**

IECC



U 5 / 6

Interference Voltage 150 KHz - 30 MHz

acc. FCC PART 15 Subpart B Section 15.107(a) Class B

Cabin 1

Model: CKW2000

Spl./ Ser. No.: 01/--

Client : LASCO

Product: RADIO W/WEATHER BAND

IECC-No.: 47279

Date: **05 MAR 2007**

Test equipment:

Rohde & Schwarz ESHS-30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

WEATHER BAND
(N)
--

RFI suppression parts:

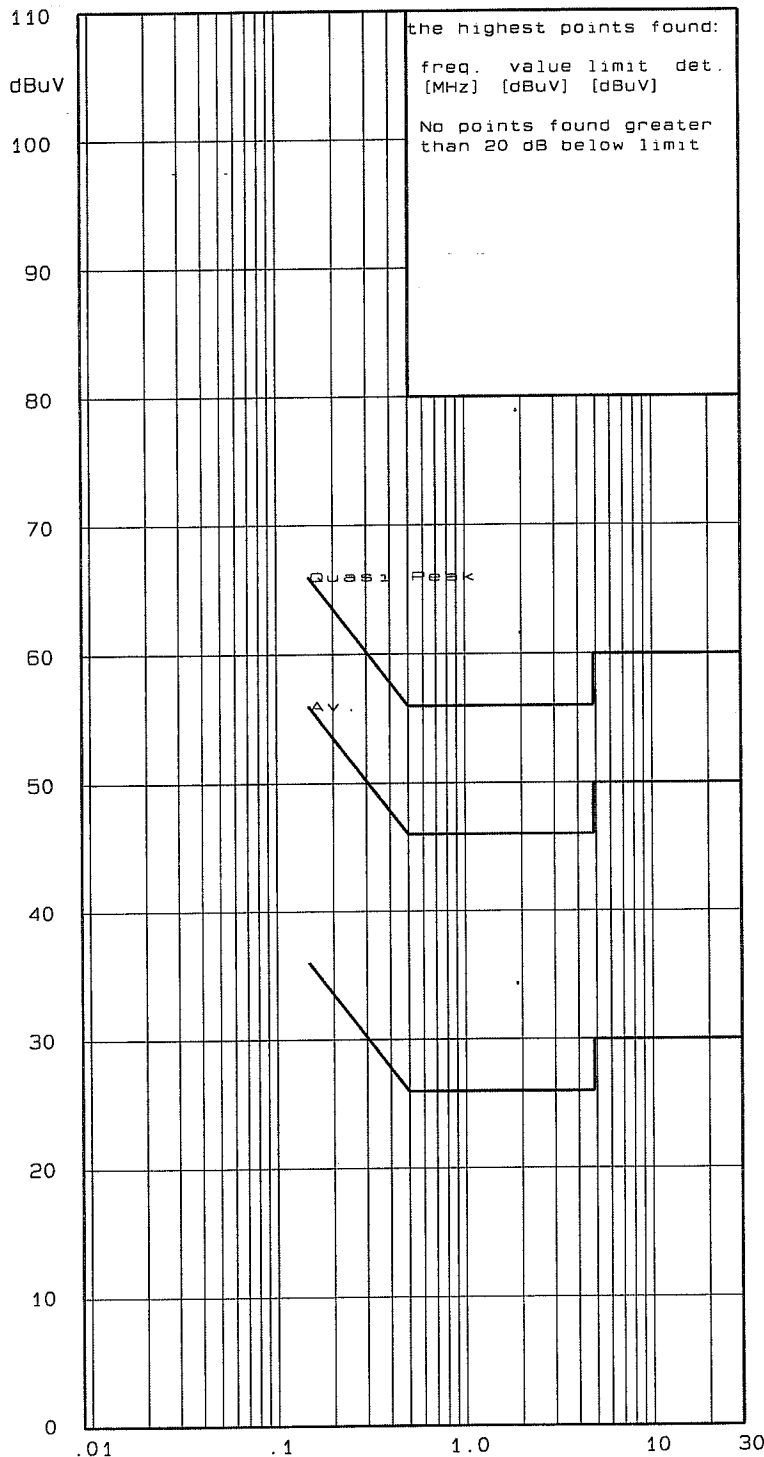
--

* two dB safety margin for
type approval necessary

Operator: KS

Result: **OK**

IECC



FCC – Test Report

No. 47279

Date: 2007-03-24
Page 20 of 20

Photo of Sample

