



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 Services in Electrical Product Testing, International Certification & Information



Accredited Laboratory



Network Partner



Qualified Independent Laboratory

F C C -

TEST REPORT

REPORT NO.: 50301

Address 地址

Units 602-605, 6/F., 31 Lok Yip Rd., On Lok Tsuen, Fanling, N.T., Hong Kong

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FCC – Test Report

Date: 2008-05-15

No. 50301

Page 2 of 16

**FCC listed testlab
acc. to Section 2.948 of the FCC - Rules****in compliance with the requirements of
ANSI C63.4 - 2003****Product** : Computer Speaker**Product Class** : Class B Computing Device Peripheral**Brand Name** : Emerson**Model** : FK610**Importer** : PJP INTERNATIONAL ENTERPRISE
COMPANY LIMITED



Authorized Laboratory



Network Partner



Qualified Independent Laboratory

FCC – Test Report

Date: 2008-05-15

No. 50301

Page 3 of 16

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 and Test Support Units
7. Radiated Emission Test Configuration
8. Conducted Emission Test Configuration
9. Test Procedure
10. Test Results
11. Measurement Data – Radiated Emission
- 12-15. Measurement Data – Conducted Emission
16. Photograph of the sample

FCC – Test Report

Date: 2008-05-15

No. 50301

Page 4 of 16

LABORATORY - REPORT

APPLICANT: PJP INTERNATIONAL ENTERPRISE COMPANY LIMITED

ADDRESS: Room 29, 10/F., Shing Yip Industrial Building
19-21 Shing Yip Street
Kwun Tong, Kowloon
Hong Kong

DATE OF SAMPLE RECEIVED: 2008-04-30

DATE OF TESTING: 2008-05-08 to 2008-05-13

DESCRIPTION OF SAMPLE F:

Product:	Computer Speaker
Product class:	Class B Computing Device Peripheral
Brand name:	Emerson
Model no.:	FK610
Rating:	DC power via USB socket of host computer

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.

INTERNATIONAL ELECTRICAL CERTIFICATION CENTER, LTD.
IECEx

Authorized Signature

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FCC – Test Report

Date: 2008-05-15

No. 50301

Page 5 of 16

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**

Date: 2008-05-15

No. 50301

Page 6 of 16

TEST EQUIPMENT LIST

Equipment	Manufacturer	Model	Serial No.	Last Calibration Date	Next Calibration Date
Test Receiver	Rohde & Schwarz	ESVS 30	828525/006	30/11/2007	29/11/2008
Test Receiver	Rohde & Schwarz	ESHS 30	839667/002	2/11/2007	1/11/2008
Antenna	Schaffner	CBL6111C	2791	25/05/2005	24/05/2008
Artificial Mains Network (LISN)	Schwarzbeck	NSLK 8127	8127312	2/11/2007	1/11/2008
Impulse Limiter	Rohde & Schwarz	ESH-3-Z2	375881052	30/03/2007	29/03/2008
Antenna Mast System	Schwarzbeck	AM9104	--	--	--
Turntable with Controller	Drehtisch	DT312	--	--	--

TEST SUPPORT UNITS

The sample was tested with the following PC system :

Equipment	Manufacturer	Model	Serial No.
NoteBook	DELL	PP10S	H8893 A02
Keyboard (external)	DELL	SK-8115	--
Mouse	HP	--	RK679PA#AB2
Monitor (external)	ViewSonic	VLCD23585-1W	90S040201520
Printer	HP	C3990A	JPZT142121
Ethernet router	SURECOM	XZ840919T	6K03634

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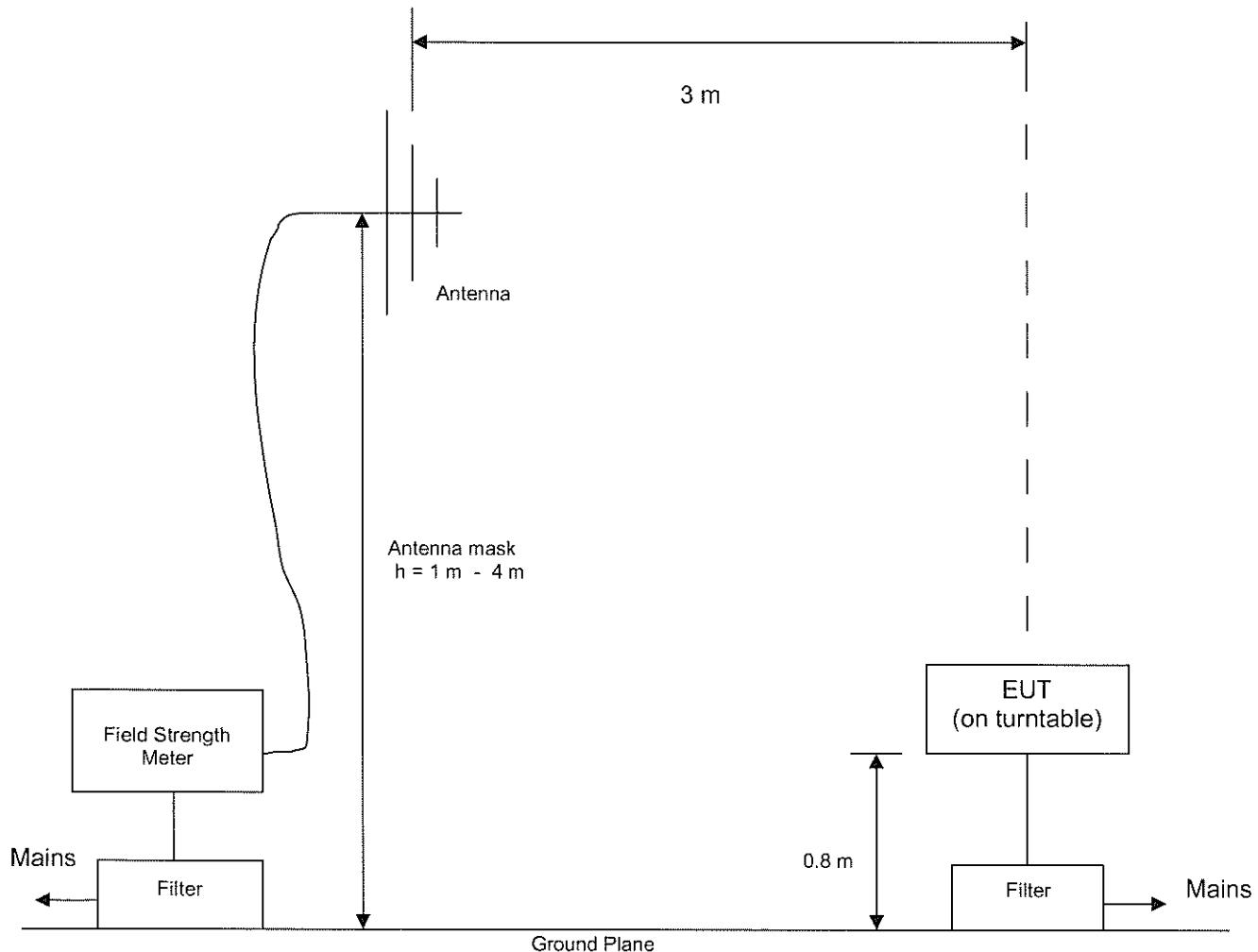
Home Page 網頁: http://www.iecc.net.cn

FCC – Test Report

Date: 2008-05-15

No. 50301

Page 7 of 16

Radiated Emission Test Setup (3 m diatance) (> 30MHz)

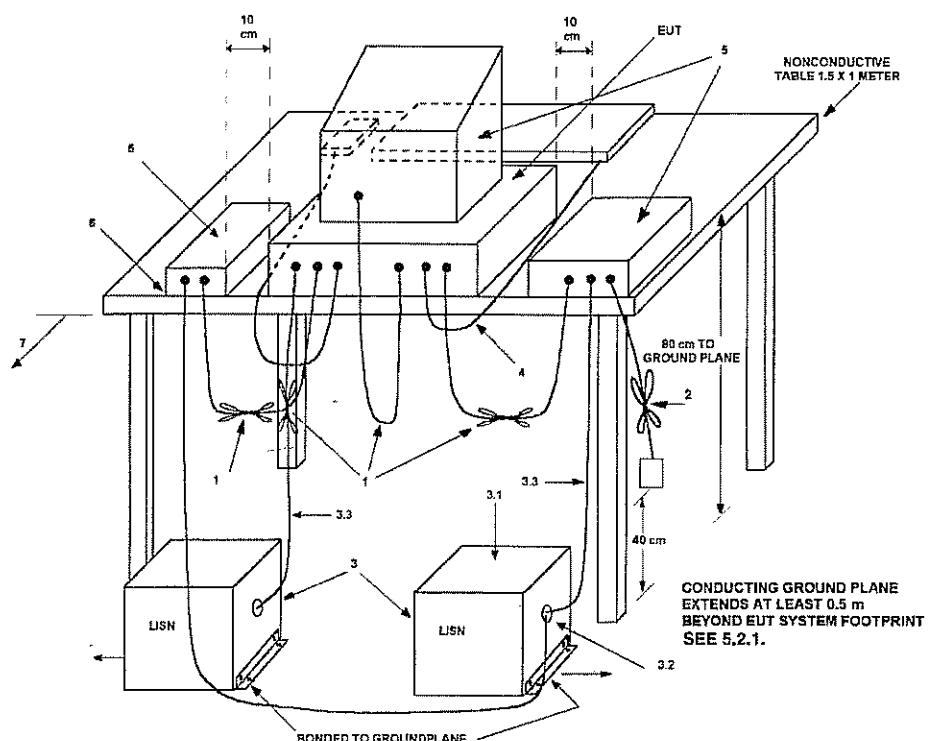
FCC – Test Report

Date: 2008-05-15

No. 50301

Page 8 of 16

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

Date: 2008-05-15

No. 50301

Page 9 of 16

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 via the USB port of the reference computer system. The computer system included a notebook computer, an external keyboard, a mouse, an external monitor, a printer and an ethernet router. The table is 0.8 meter above the reference ground plane on the Open Aera 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 Aera 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 via the USB port of the reference computer system. The computer system included a notebook computer, an external keyboard, a mouse, an external monitor, a printer and an ethernet router. The table is 0.8 meter above the floor. The reference computer was connected to the LISN which was connected to the test receiver for conducted emission measurement (150kHz – 30MHz).

FCC – Test Report

Date: 2008-05-15

No. 50301

Page 10 of 16

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 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 12 - 15 for measurement data.

IT 5/6

Date : 2008-05-15

Page 11 of 16

Radiated Emission 30MHz-1000MHz

Acc: FCC Part 15 Subpart B (15.109)

IECC Ref:	50301	
Model:	FK610	Test Equipment
Applicant:	PJP INTERNATIONAL ENTERPRISE COMPANY LIMITED	Receiver: Rohde & Schwarz ESCS 30 Antenna: Schaffner CBL6111C
Ser.Nr.:	--	
Set under test:	Computer Speaker	
Connected sets:	-	
Operating mode:	Playing an audio song with the host computer system	

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	17.7	< 33.7	< 33.7	40.0
50	< 16.0	< 16.0	8.7	< 24.7	< 24.7	40.0
100	< 16.0	< 16.0	10.1	< 26.1	< 26.1	43.5
150	< 16.0	< 16.0	11.0	< 27.0	< 27.0	43.5
500	< 16.0	< 16.0	19.1	< 35.1	< 35.1	46.0
1000	< 16.0	< 16.0	27.2	< 43.2	< 43.2	54.0

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

Note :

1. The above measured data are in Quasi-Peak values.
2. The above results were the worst case results with the sample positioned in all 3 axis during the test. No significant emission was found from the sample in all positions.

Operator : RT

U 5/6

Interference Voltage 150 KHz - 30 MHz

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

Cabin 1

Model: FK510

Spl./Ser.No.: 01 / 801673287

Client : PJP INTERNATIONAL

Product: COMPUTER SPEAKER

IECC-No.: 50301

Date: 08.05.08

Test equipment:

Rohde & Schwarz ESHS-30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

OPERATE

(L)

TEST W/ REFERENCE COMPUTER

--

RFI suppression parts:

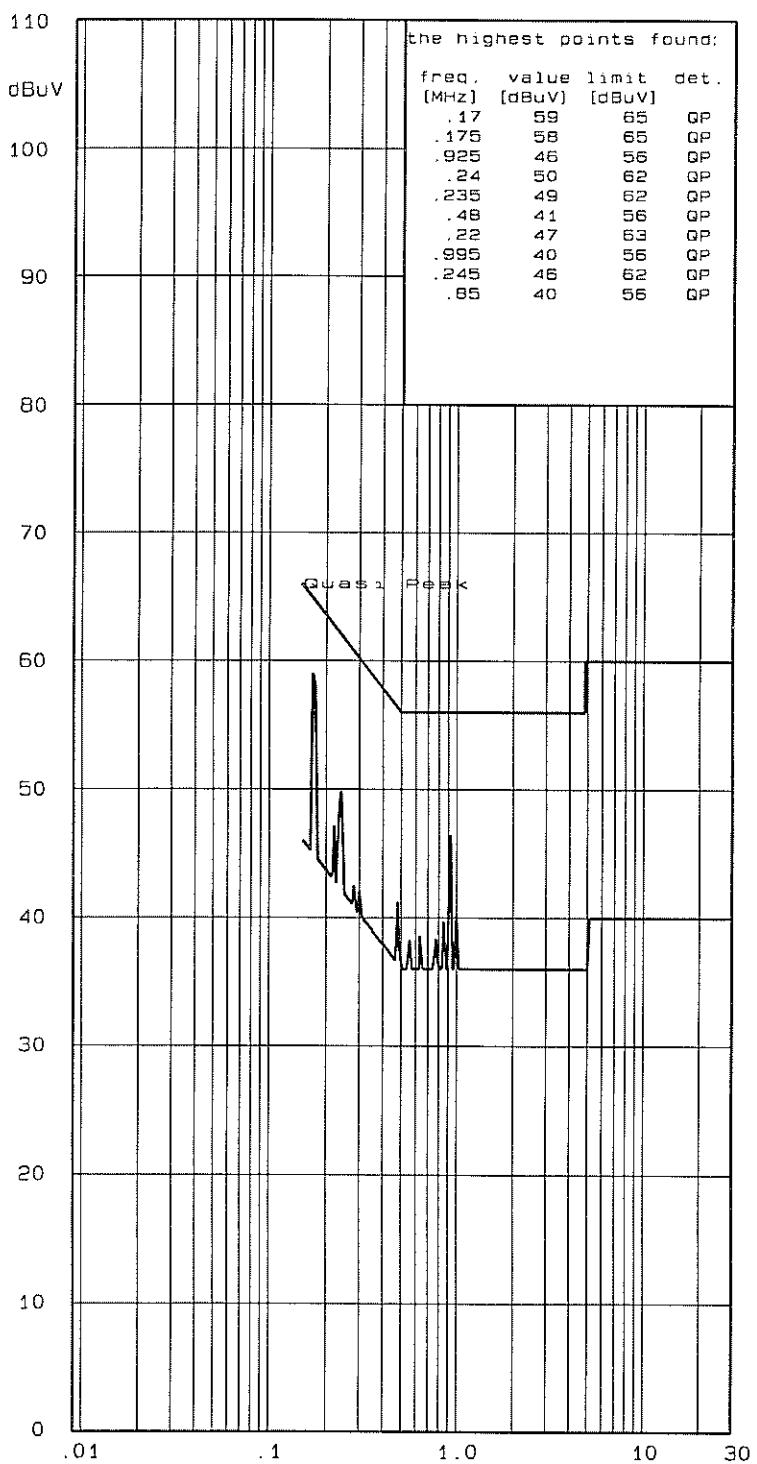
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* two dB safety margin for
type approval necessary

Operator: RT

Result: $\sigma \leq$

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: FK510

Spl./Ser.No.: 01 / 801673287

Client : PJP INTERNATIONAL

Product: COMPUTER SPEAKER

IECC-No.: 50301

Date: 08.05.08

Test equipment:

Rohde & Schwarz ESHS-30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

OPERATE

(L)

TEST W/ REFERENCE COMPUTER

--

RFI suppression parts:

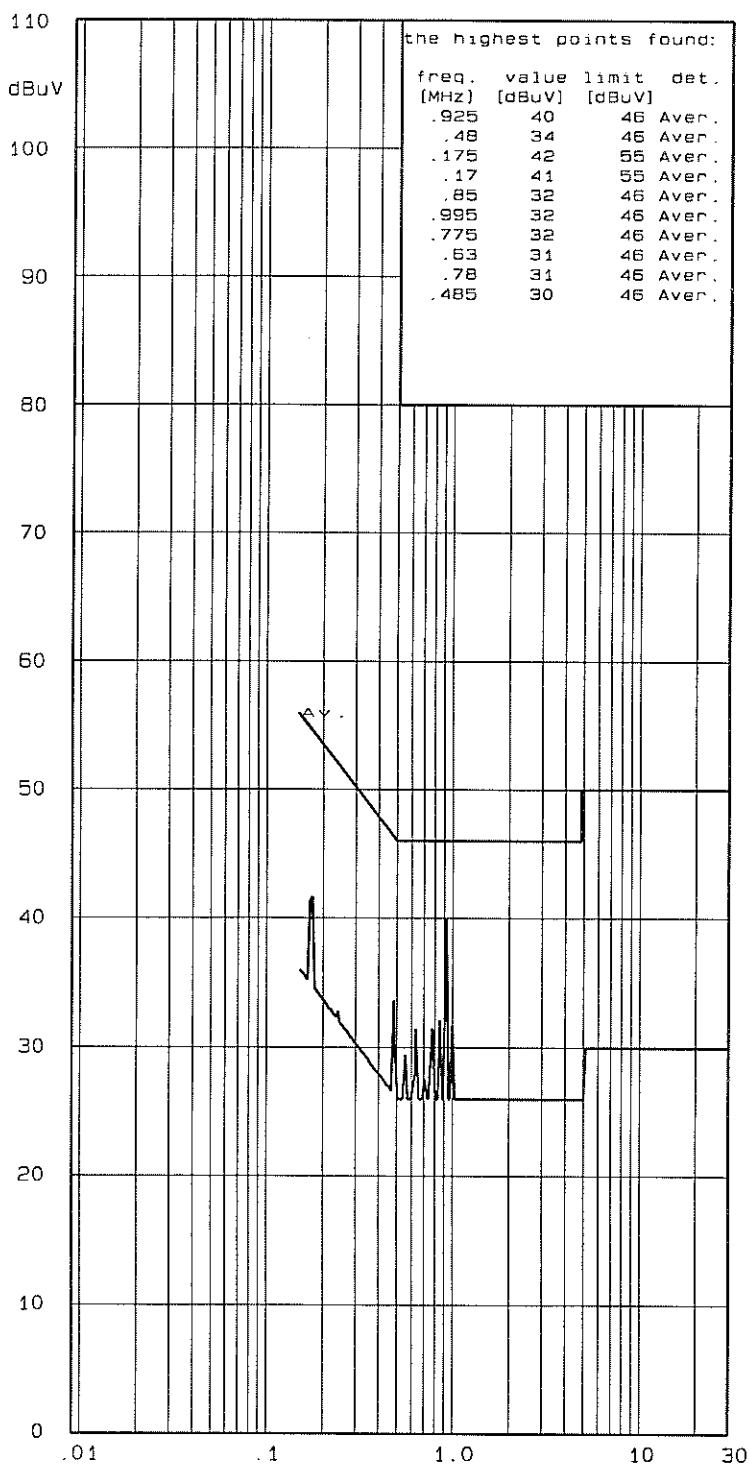
--

* two dB safety margin for
type approval necessary

Operator: RT

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: FK610

Spl./Ser.No.: 01 / 801673287

Client : PJP INTERNATIONAL

Product: COMPUTER SPEAKER

IECC-No.: 50301

Date: 08.05.08

Test equipment:

Rohde & Schwarz ESHS-30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

OPERATE

(N)

TEST W/ REFERENCE COMPUTER

--

RFI suppression parts:

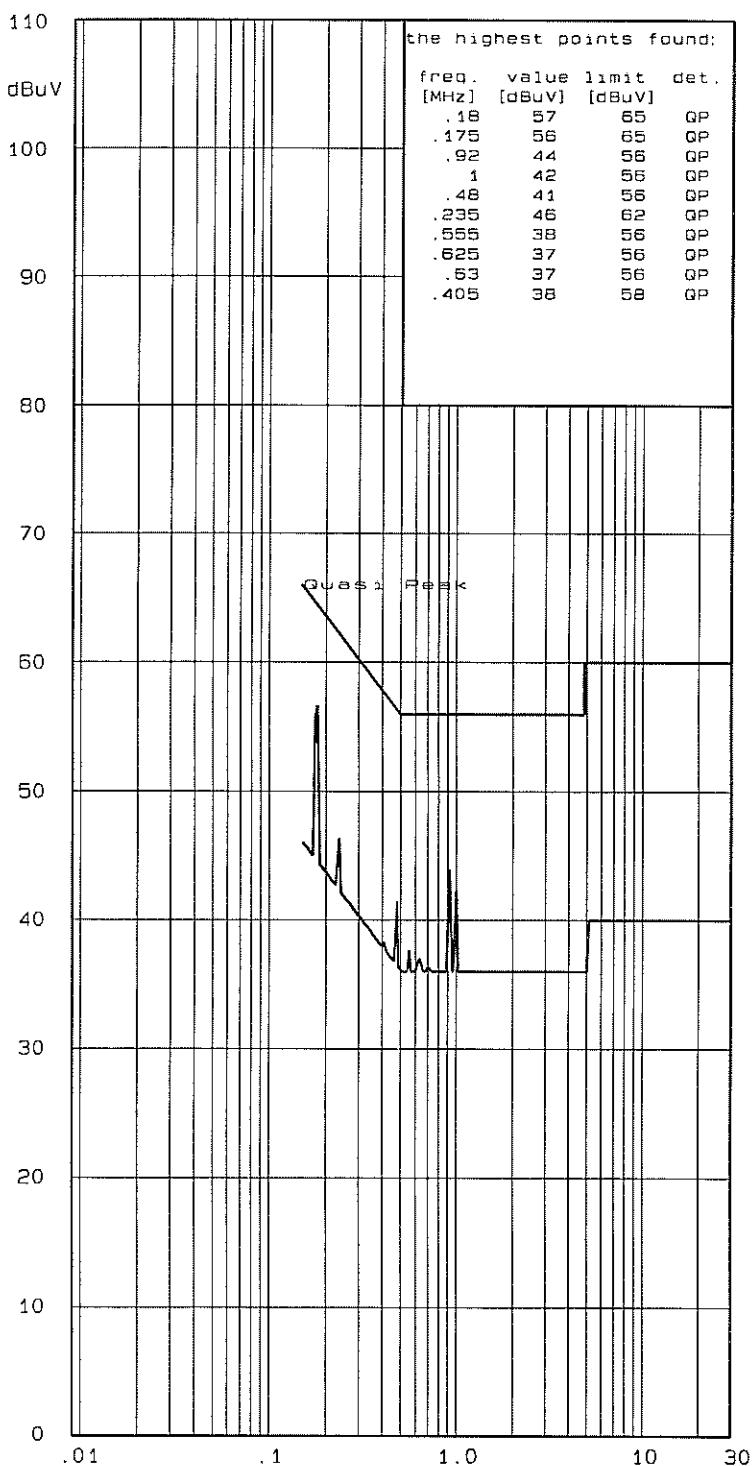
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* two dB safety margin for
type approval necessary

Operator: RT

Result: **u/c**

IECC



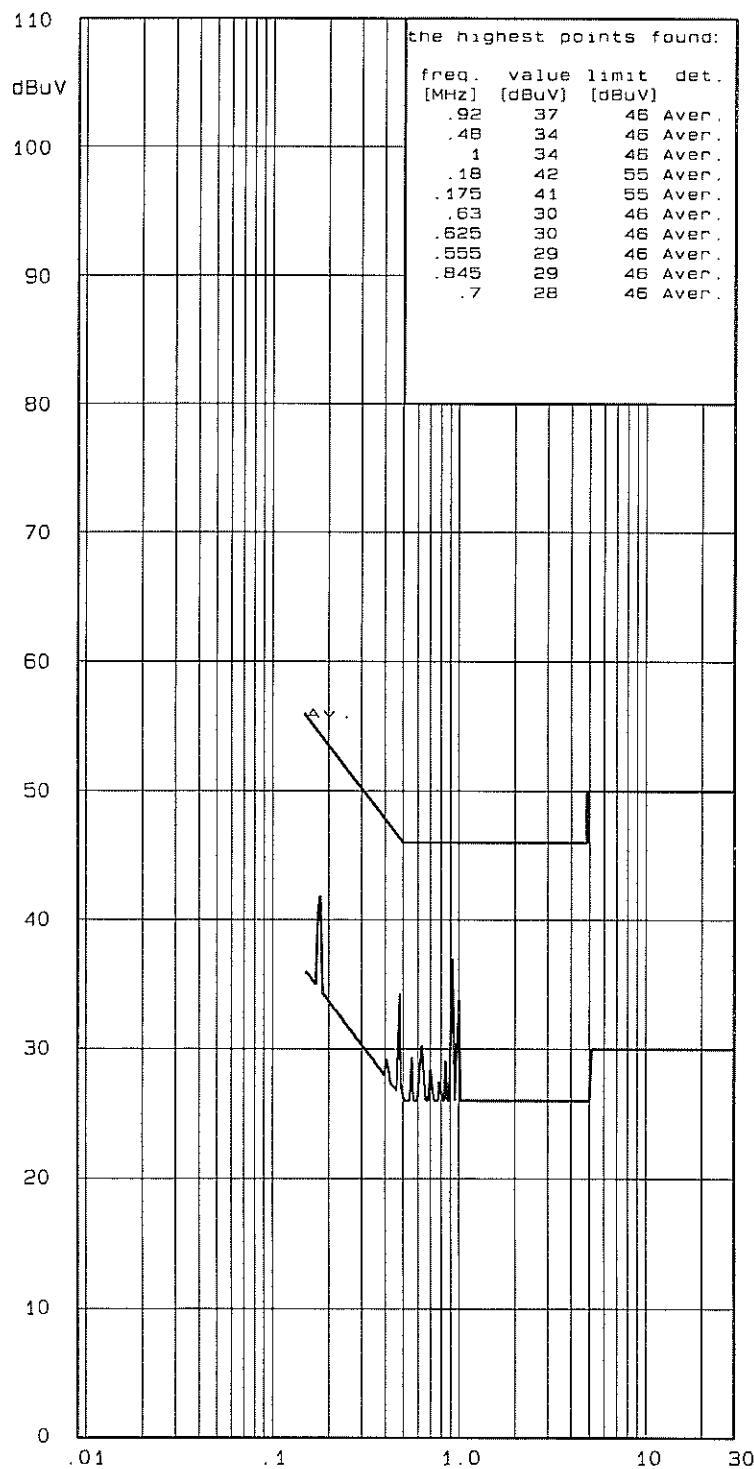
U 5/6

Interference Voltage 150 KHz - 30 MHz

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

Cabin 1

Model: FK610



Spl./Ser.No.: 01 / 801673287

Client : PJP INTERNATIONAL

Product: COMPUTER SPEAKER

IECC-No.: 50301

Date: 08.05.08

Test equipment:

Rohde & Schwarz ESHS-30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

OPERATE

(N)

TEST W/ REFERENCE COMPUTER

--

RFI suppression parts:

--

* two dB safety margin for
type approval necessary

Operator: RT

Result: 6|S

IECC

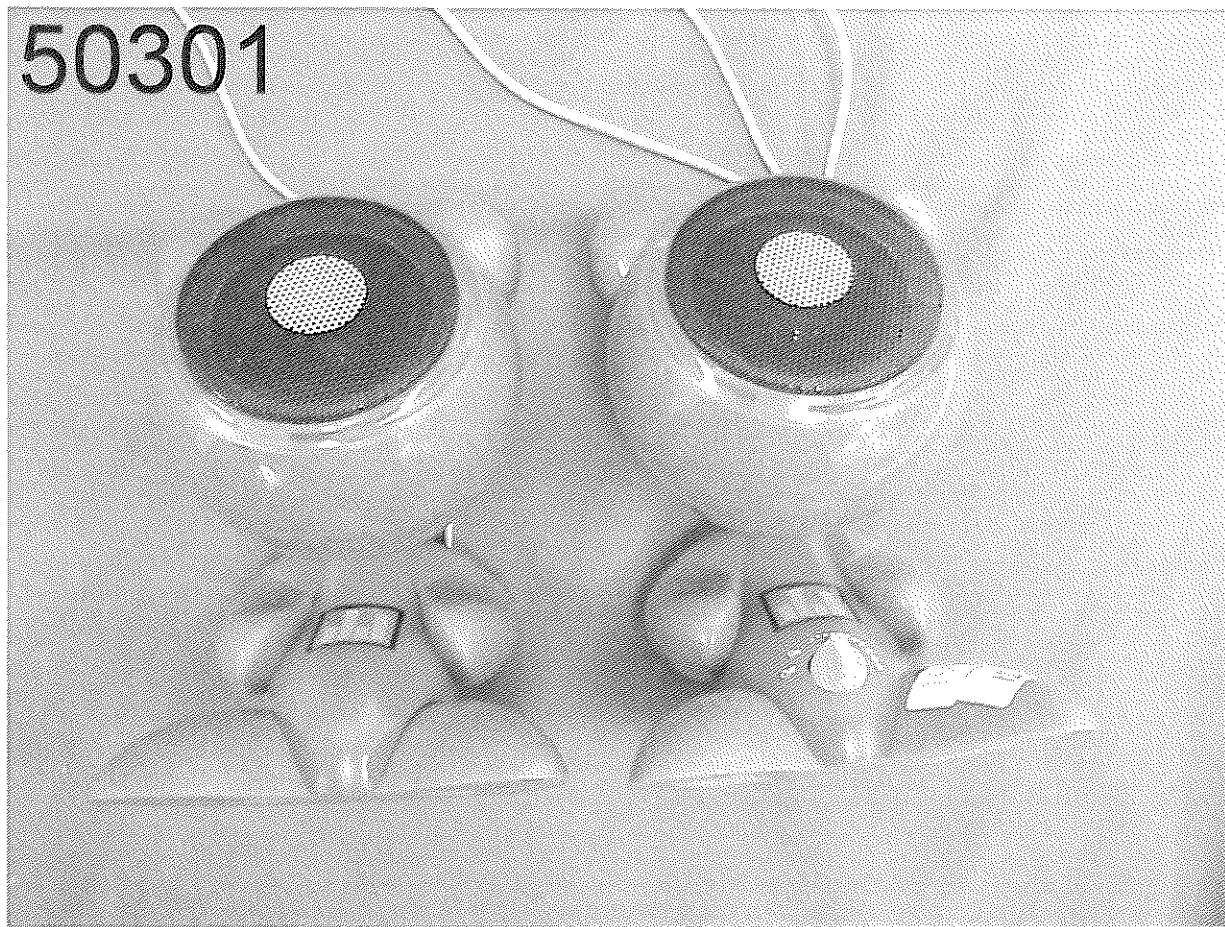
FCC – Test Report

Date: 2008-05-15

No. 50301

Page 16 of 16

Photograph Of The Sample



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