

FCC – Test Report

Date: 2010-06-08

No. 53838

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LABORATORY - REPORT

APPLICANT: HONG KONG MODERN MARKETING MANUFACTURING LIMITED
ADDRESS: Room 1024, 10/F., Beverley Commercial Centre
87-105 Chatham Road
Tsim Sha Tsui, Kowloon
Hong Kong

DATE OF SAMPLE RECEIVED: 2010-04-22

DATE OF TESTING: 2010-05-11 to 2010-05-17

DESCRIPTION OF SAMPLE:

Product: IJuke CD, iPod Player
Product class: Part 18 Consumer Device, and
Class B Digital Devices and Peripherals
Model No.: CR1702A-CH
Brand Name: CROSLEY
FCC ID number: S4W1702A-CH
Rating: AC120V 60Hz

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 18 – Industrial, Scientific, and Medical Equipment
- 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.



Stephen C.N. Wong
Technical Manager

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Test Locations

International Electrical Certification Centre Ltd.
Units 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

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TEST EQUIPMENT LIST

Equipment	Manufacturer	Model	Serial No.	Last Calibration Date	Next Calibration Date
Test Receiver	Rohde & Schwarz	ESCS 30	100388	10/9/2009	9/9/2010
Artificial Mains Network (LISN)	Schwarzbeck	NSLK 8127	8127312	11/1/2010	10/1/2011
Antenna	Schaffner	CBL6111C	2791	22/07/2008	21/07/2010
Antenna Mast System	Schwarzbeck	AM9104	—	—	—
Turntable with Controller	Drehtisch	DT312	—	—	—

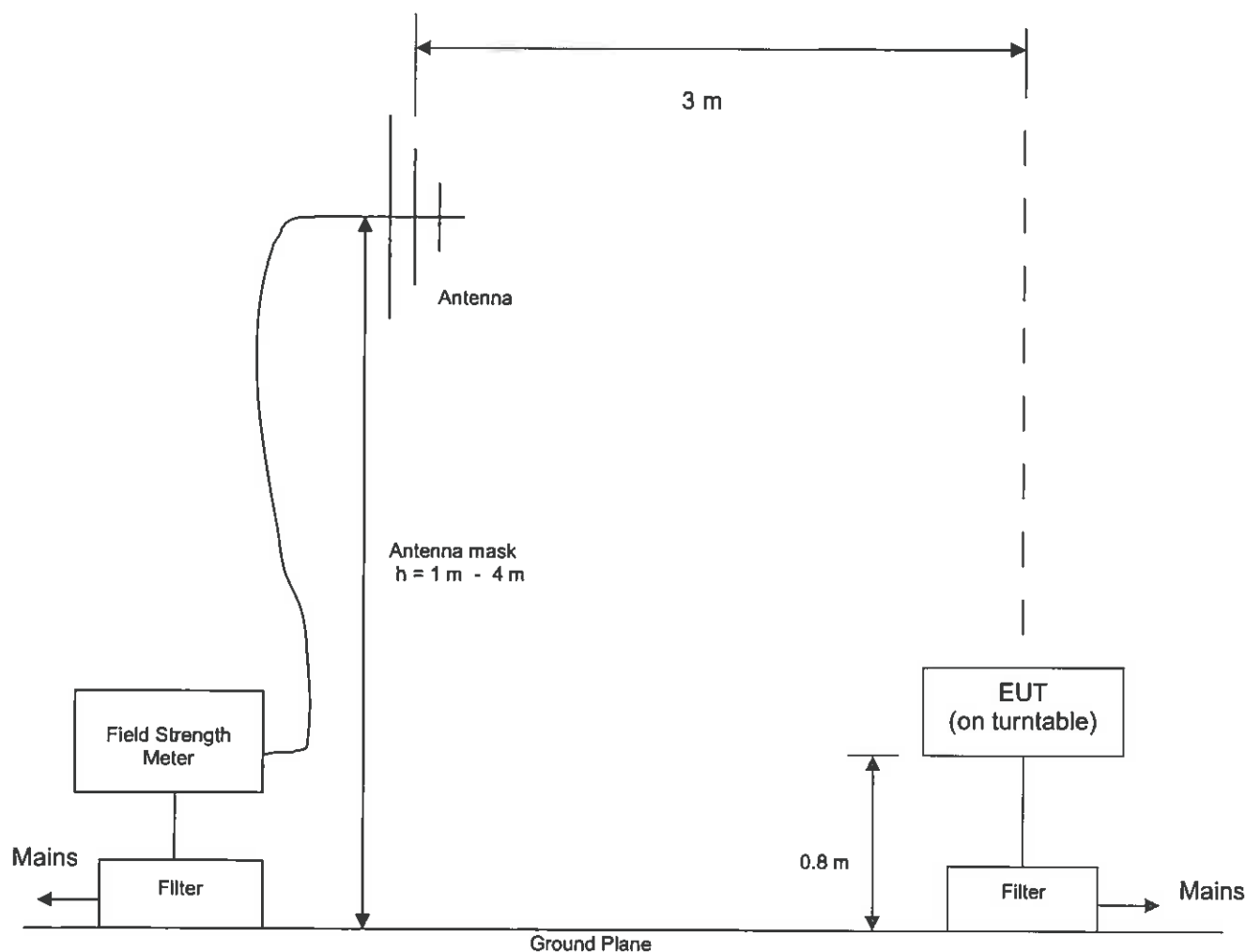
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Radiated Emission Test Setup (3 m distance)



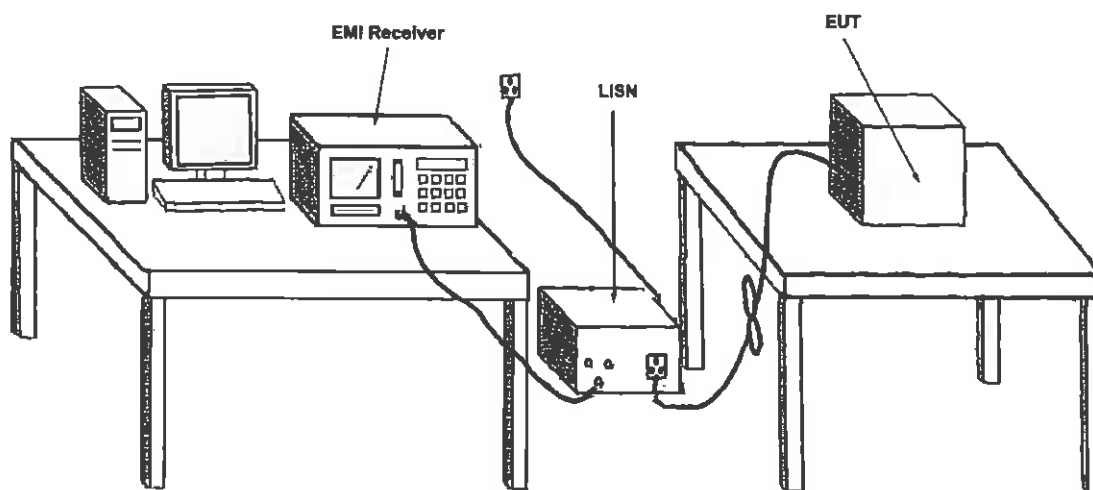
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Conducted Emission Test Setup (according to FCC Measurement Procedure MP-5)



1. The above measurement is made in a shielded room.
2. The EUT is placed on a wooden table (0.8 m high) which is located in front of an earth grounded conducting wall over 2 meters square.
3. The EUT is placed 40 cm from the earth grounded conducting wall and at least 80 cm from any other earthed conducting surface.
4. The flexible power cable of the EUT is plugged into the LISN for measurement.
5. The length of the power cable in excess of 80 cm separating the EUT from the LISN is folded back and forth so as to form a bundle not exceeding 30 to 40 cm in length.
6. The LISN ground is adequately bonded to the earth grounded conducting wall.

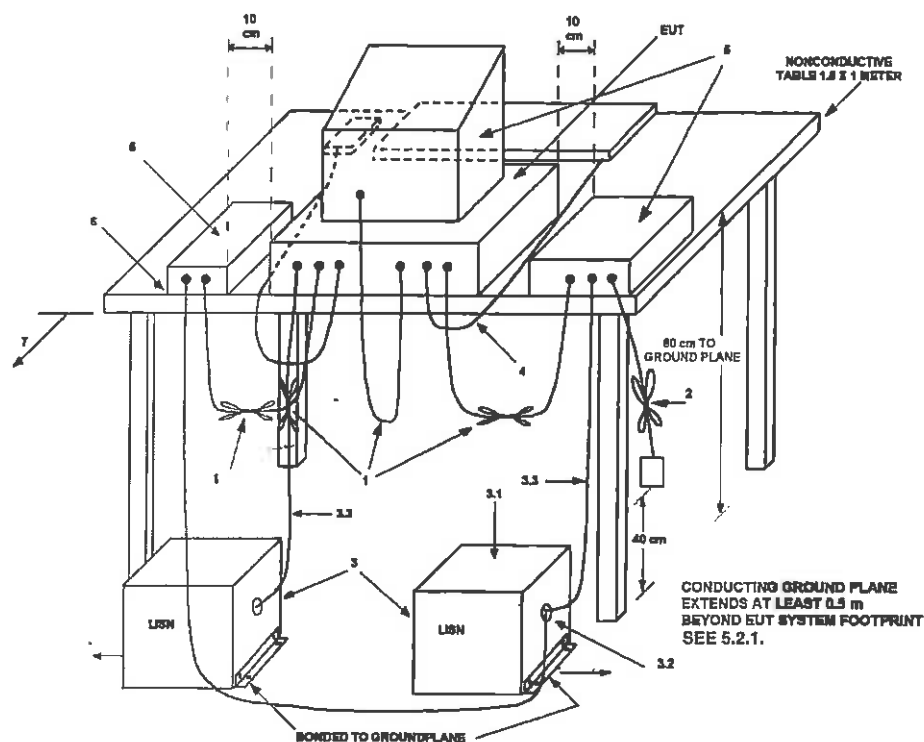
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Conducted Emission Test Setup (according to ANSI 63.4-2003)



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).

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Test Procedure

Radiated Emission :

Lighting Mode :

According to Section 18.309, for products with operation frequency below 1.705 MHz, field strength measurements are conducted up to 30MHz. No field strength limits is specified in Section 18.305 for measurements below 30MHz.

In view of the above, since the test model is operated at 24 kHz, no field strength measurement is required.

Audio Playing Modes :

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 audio playing modes with supply at rated AC voltage (i.e AC120V 60Hz). The table is 0.8 meter above the reference ground plane on the Test Site and can rotate 360 degrees to determine the position of the maximum emission level. Broad-band antennas for the frequency range 30 - 2000 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 –2000 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).

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Test Procedure

Conducted Emission :

Lighting Mode :

The EUT was tested according to FCC Measurement Procedure MP-5 for the requirements of FCC Part 18 Subpart C Section 18.307.

During the test, the sample was placed on a wooden table and operated under the lighting mode with supply at rated AC voltage (i.e AC120V 60Hz) via the LISN. The table is 0.8 meter above the floor. The LISN was connected to the test receiver for conducted emission measurement (450kHz – 30MHz). The measurement was conducted after the fluorescent lamps were turned on for more than 30 minutes for warm up purpose.

Audio Playing Modes :

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 audio playing modes with supply at rated AC voltage (i.e AC120V 60Hz) via the LISN. The table is 0.8 meter above the floor. The LISN was connected to the test receiver for conducted emission measurement (150kHz – 30MHz).

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Test Results**Radiated Emission :****Lighting Mode :**

Not Applicable

Audio Playing Modes :

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 12 – 13 for measurement data.

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Test Results**Conducted Emission :****Lighting Mode :**

Test Requirement:	FCC Part 18 Subpart C Section 18.307
Test Method:	FCC Measurement Procedure MP-5
Deviations from Standard Test Method:	Nil
Frequency Range:	450kHz – 30MHz
Detector:	Quasi-Peak

Refer to page 14 - 15 for measurement data.

Audio Playing Modes :

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 - 23 for measurement data.

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

IECC Ref: 53838
Model: CR1702A-CH
Applicant: HONG KONG MODERN MARKETING
MANUFACTURING LIMITED
Ser.Nr.: --
Set under test: iJuke CD, iPod Player
Operating mode: CD Playing + Light ON

Test Equipment
Receiver: Rohde & Schwarz ESCS 30
Antenna: Schaffner CBL6111C

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	19.1	< 35.1	< 35.1	40.0
50.656	< 16.0	21.4	7.6	< 23.6	29.0	40.0
100.8	17.0	21.0	9.7	26.7	30.7	43.5
134.8	19.0	25.0	11.0	30.0	36.0	43.5
185.2	24.0	< 16.0	9.5	33.5	< 25.5	43.5
202.7	26.0	30.0	8.8	34.8	38.8	43.5
219.2	24.0	25.0	9.6	33.6	34.6	46.0
320	22.0	21.0	14.4	36.4	35.4	46.0
330	< 16.0	< 16.0	14.7	< 30.7	< 30.7	46.0
500	< 16.0	< 16.0	18.9	< 34.9	< 34.9	46.0
1000	< 16.0	< 16.0	26.2	< 42.2	< 42.2	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 placed normally on the table.

Operator : YH

IT 5/6

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Radiated Emission

Acc: FCC Part 15 Subpart B (15.109)

IECC Ref: 53838

Model: CR1702A-CH

Applicant: HONG KONG MODERN MARKETING
MANUFACTURING LIMITED

Ser.Nr.: —

Set under test: iJuke CD, iPod Player

Operating mode: iPod Playing + Light ON

Test Equipment

Receiver: Rohde & Schwarz ESCS 30

Antenna: Schaffner CBL6111C

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	19.1	< 35.1	< 35.1	40.0
50	< 16.0	< 16.0	7.7	< 23.7	< 23.7	40.0
100	< 16.0	< 16.0	9.5	< 25.5	< 25.5	43.5
300	< 16.0	< 16.0	14.2	< 30.2	< 30.2	46.0
500	< 16.0	< 16.0	18.9	< 34.9	< 34.9	46.0
1000	< 16.0	< 16.0	26.2	< 42.2	< 42.2	54.0

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

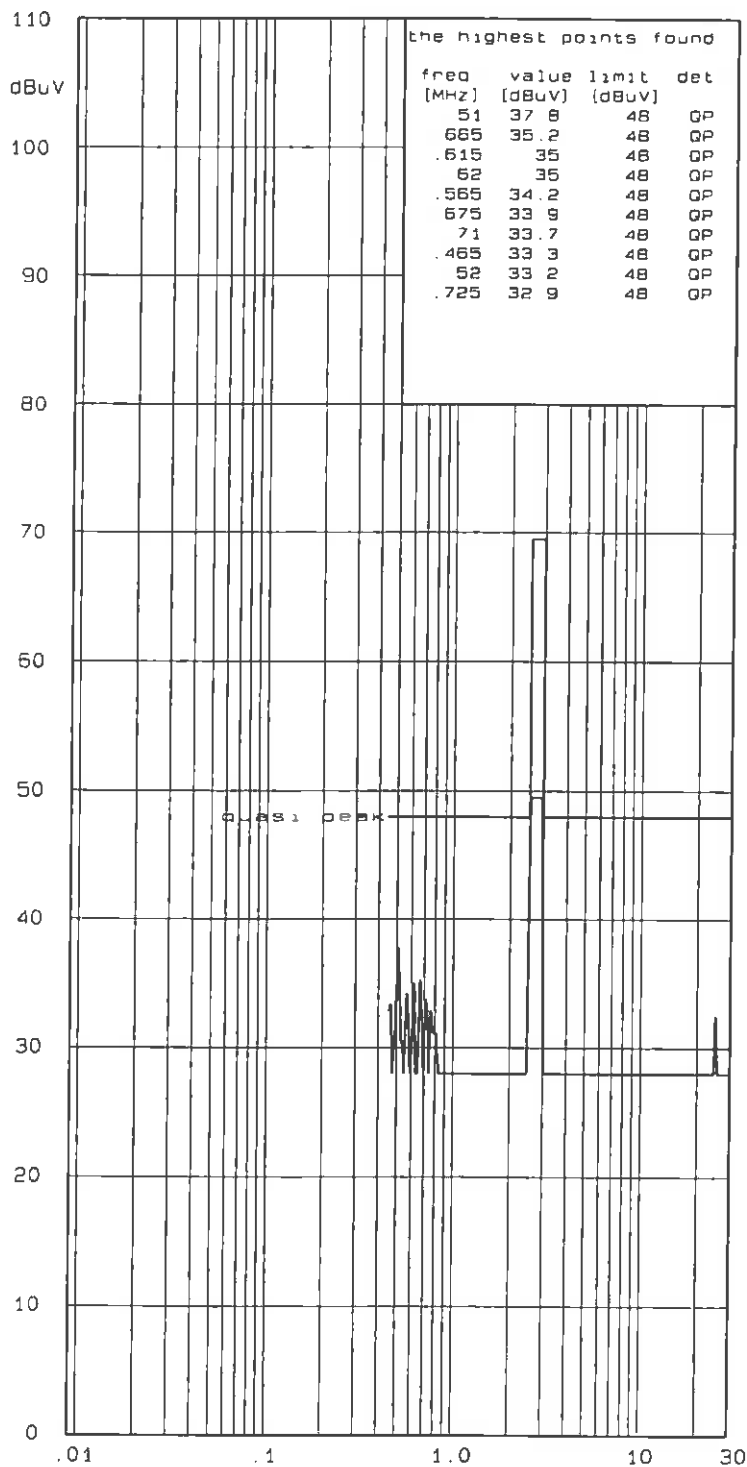
Note :

1. The above measured data are in Quasi-Peak values.
2. The above results were the worst case results with the sample placed normally on the table.
No significant radiated interference were measured during the test.

Operator : YH

ISM 1 / 2

Interference Voltage 450 KHz - 30 MHz
acc. FCC PART 18 Subpart C Section 18.307 (c)



Ref.-No.: 53838

Product : CD/IPOD PLAYER

Sample : 01

Date : 13 May 2010

Test equipment:

Rohde & Schwarz ESC530

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

LIGHT ON
(L)

--

RFI suppression parts:

--

* two dB safety margin for
type approval necessary

Operator: KT

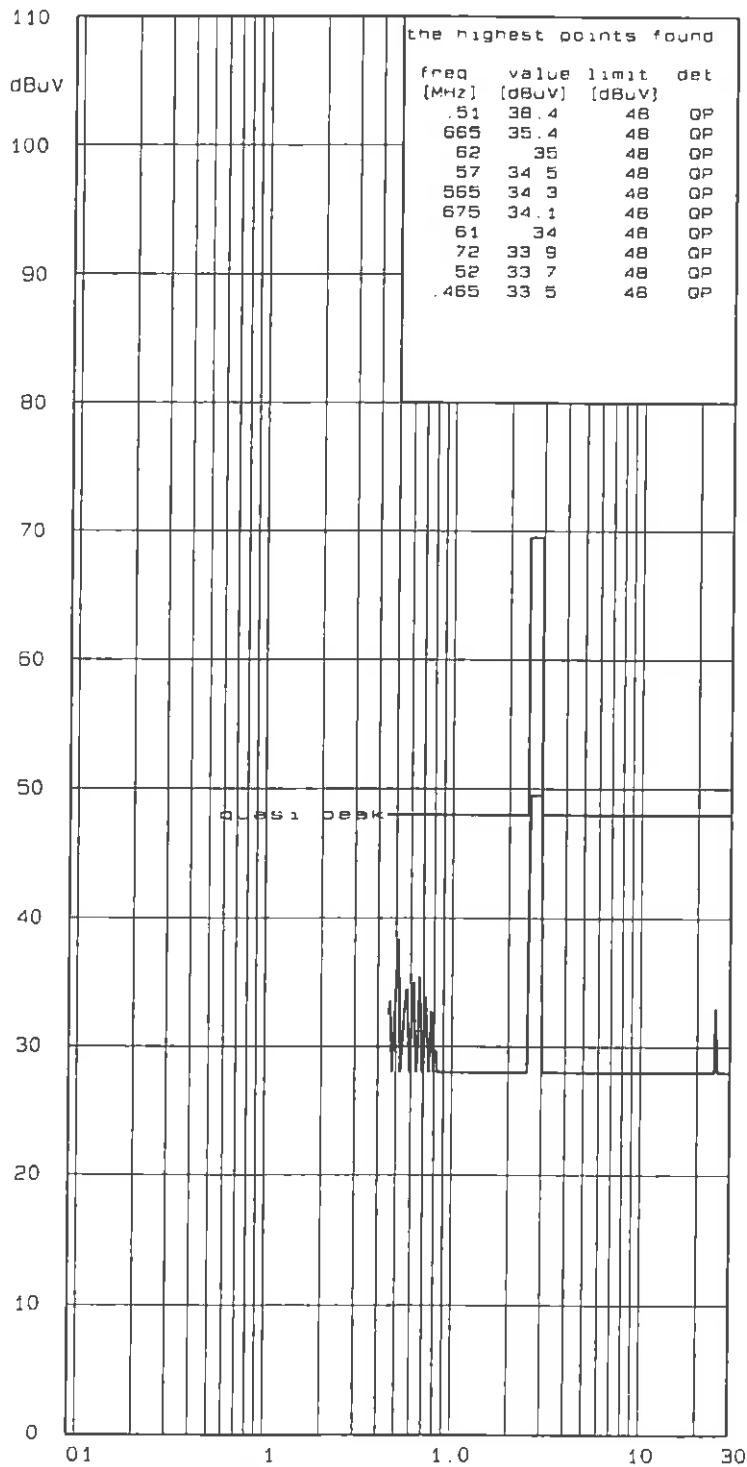
Result : pass [X] fail []

IECC

f [MHz]

ISM 1 / 2

Interference Voltage 450 KHz - 30 MHz
acc. FCC PART 18 Subpart C Section 18.307 (c)



Ref.-No.: 53838

Product : CD/IPOD PLAYER

Sample : 01

Date : 13 May 2010

Test equipment:

Rohde & Schwarz ESCS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

LIGHT ON
(N)

--

RFI suppression parts:

--

* two dB safety margin for
type approval necessary

Operator: KT

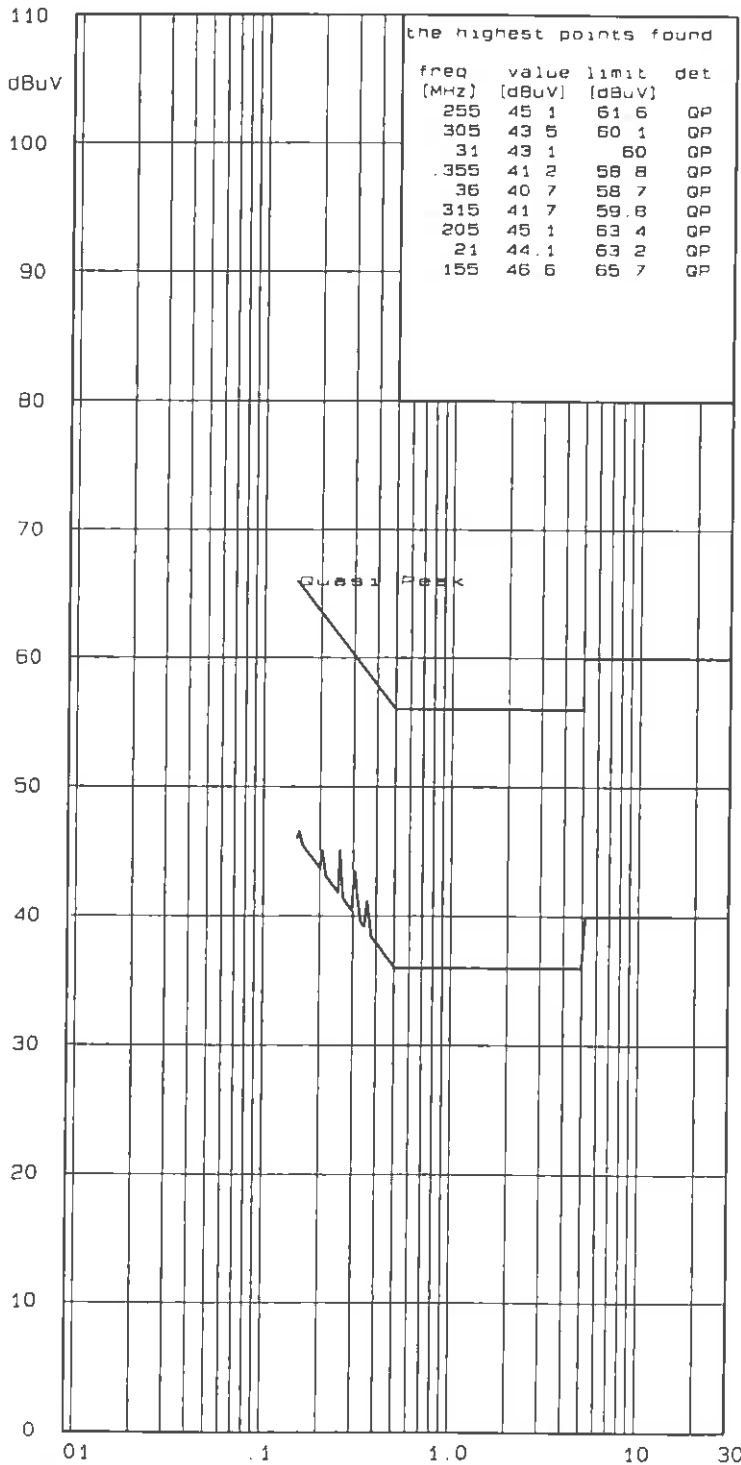
Result : pass ☒ fail ☐

IECC

U 5 / 6

Interference Voltage 150 KHz ~ 30 MHz

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



Ref.-No.: 53838

Product : CD/IPOD PLAYER

Sample : 01

Date : 13 May 2010

Test equipment:

Rohde & Schwarz ESCS30

Schwarzbeck NSLK8127

Connected sets.

--

Operating mode:

CD PLAYING
(L)

--

RFI suppression parts:

--

* two dB safety margin for
type approval necessary

Operator: KT

Result : pass [X] fail []

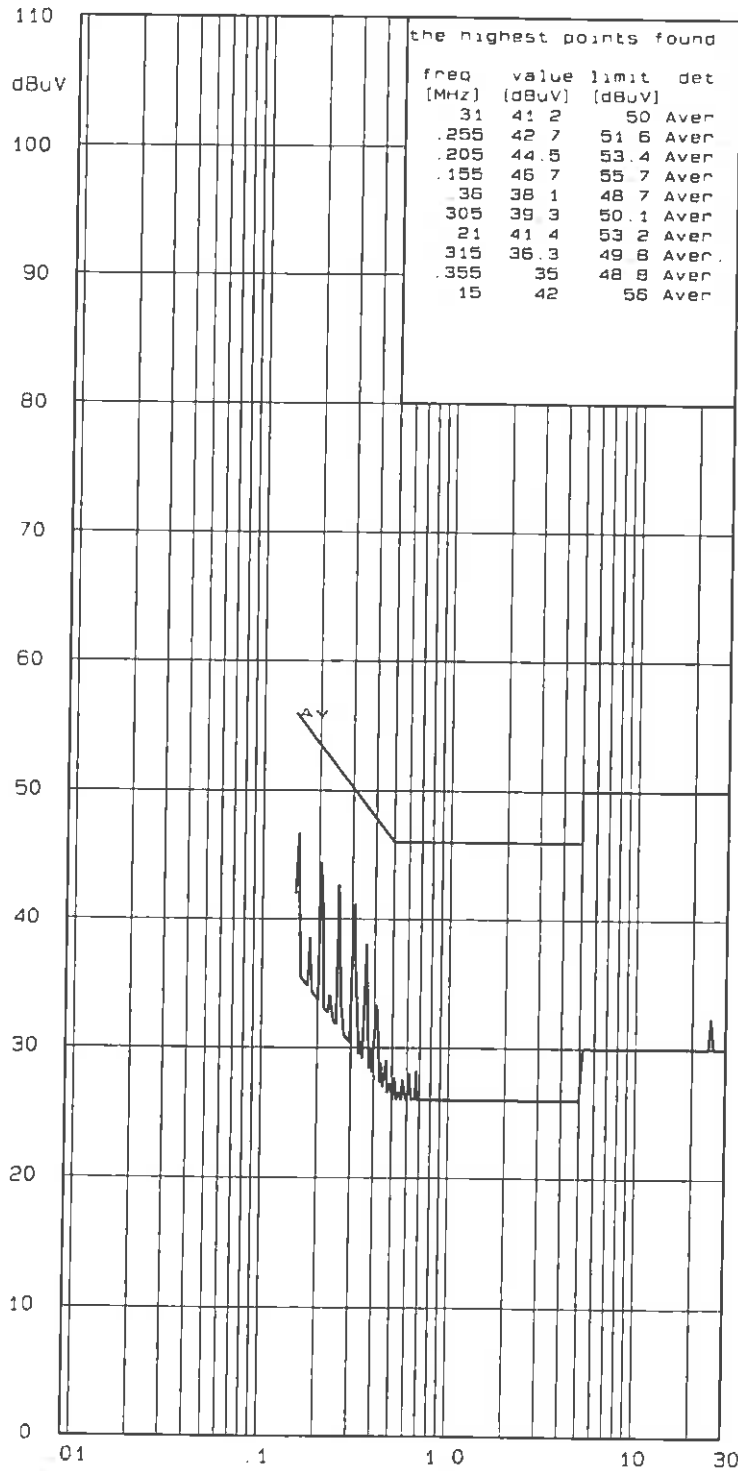
IECC

f [MHz]

U 5 / 6

Interference Voltage 150 KHz - 30 MHz

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



Ref.-No.: 53838

Product : CD/IPOD PLAYER

Sample : 01

Date : 13 May 2010

Test equipment:

Rohde & Schwarz ESCS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

CD PLAYING
(L)

--

RFI suppression parts:

--

* two dB safety margin for
type approval necessary

Operator: KT

Result : pass (X) fail []

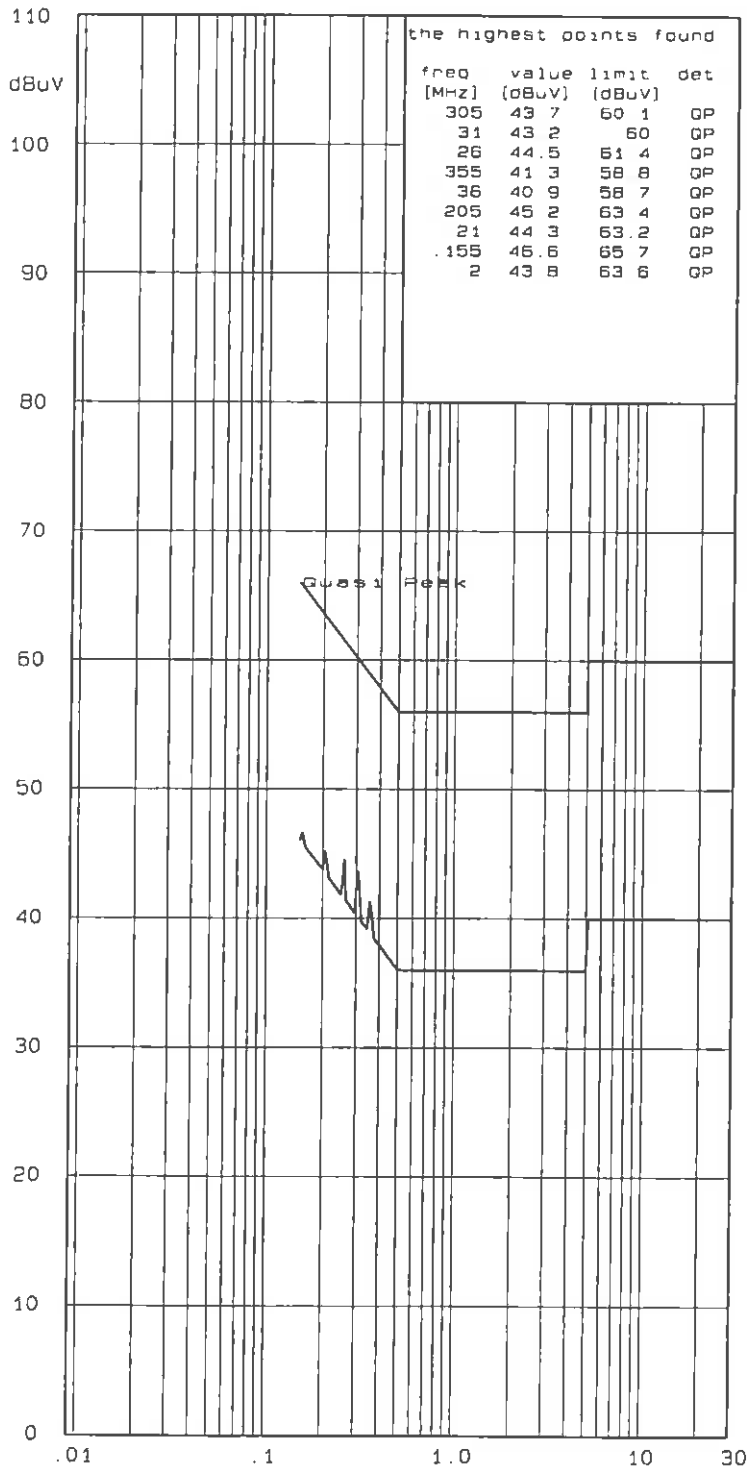
IECC

f [MHz]

U 5 / 6

Interference Voltage 150 KHz ~ 30 MHz

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



Ref.-No.: 53838

Product : CD/IPOD PLAYER

Sample : 01

Date : 13 May 2010

Test equipment:

Rohde & Schwarz ESCS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

CD PLAYING
(N)

--

RFI suppression parts:

--

* two dB safety margin for
type approval necessary

Operator: KT

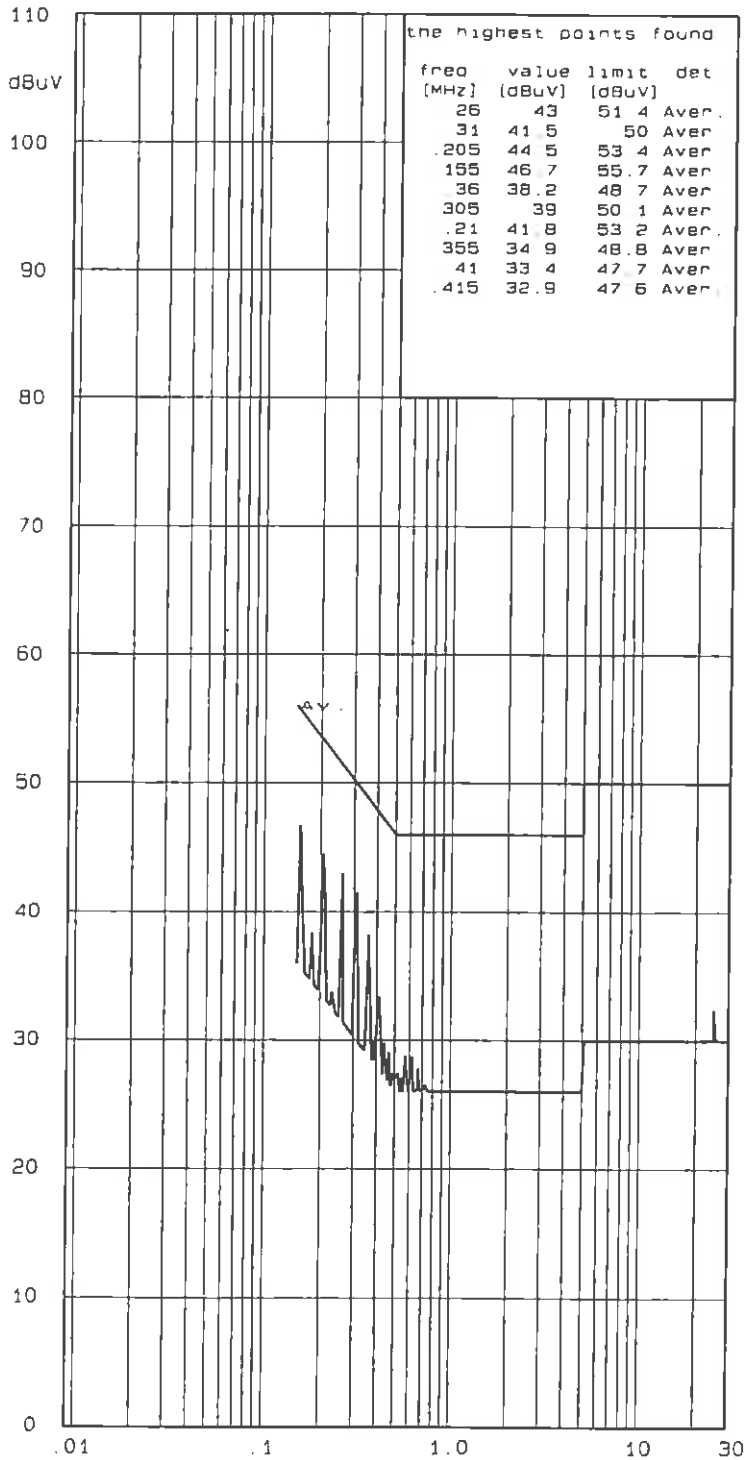
Result : pass ☒ fail []

IECC

U 5 / 6

Interference Voltage 150 KHz - 30 MHz

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



Ref.-No.: 53838

Product : CD/IPOD PLAYER

Sample : 01

Date : 13 May 2010

Test equipment:

Rohde & Schwarz ESCS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

CD PLAYING
(N)

--

RFI suppression parts:

--

* two dB safety margin for
type approval necessary

Operator: KT

Result : pass ☒ fail ☐

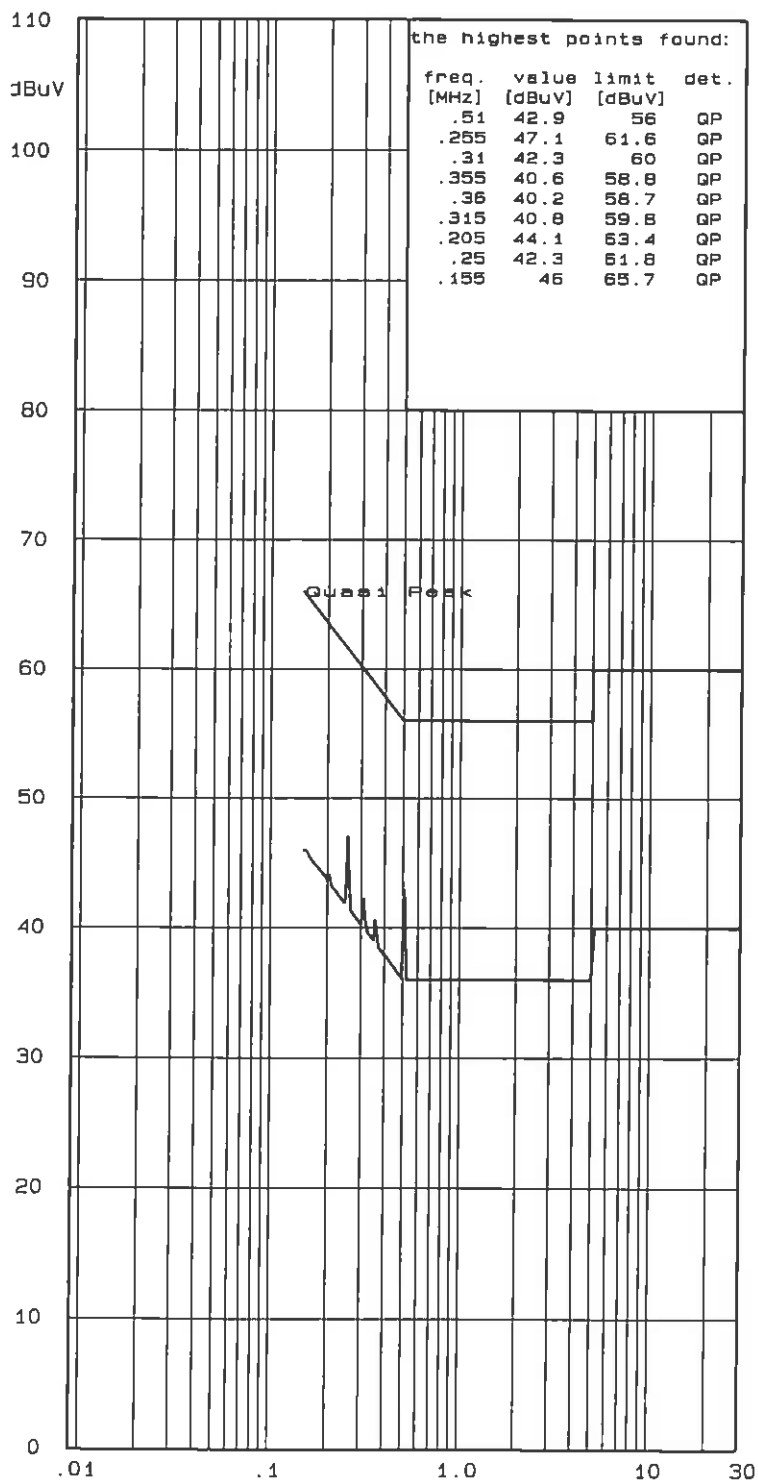
IECC

f [MHz]

U 5 / 6

Interference Voltage 150 KHz - 30 MHz

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



Ref.-No.: 53838

Product : CD/IPOD PLAYER

Sample : 01

Date : 13 May 2010

Test equipment:

Rohde & Schwarz ESCS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

IPOD PLAYING
(L)

--

RFI suppression parts:

--

* two dB safety margin for
type approval necessary

Operator: KT

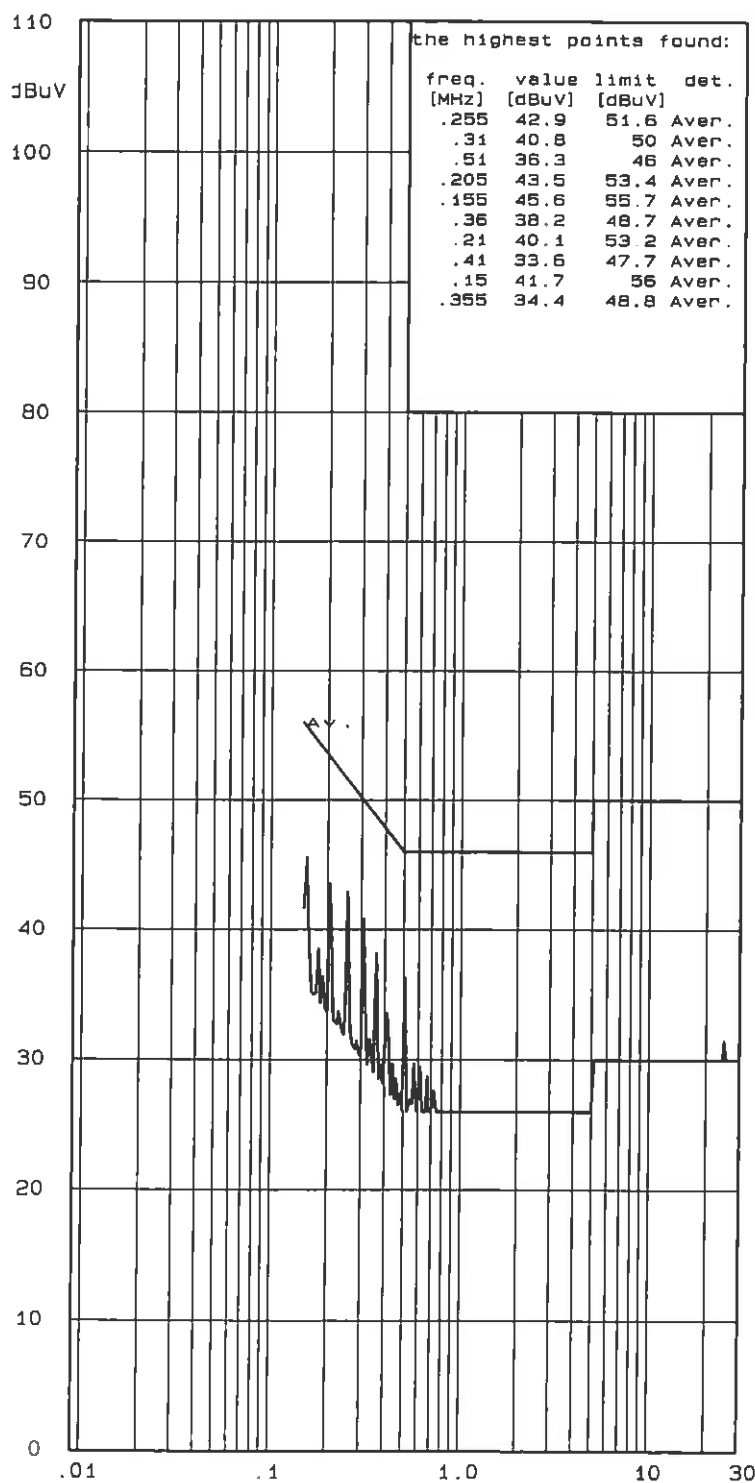
Result : pass [X] fail []

IECC

U 5 / 6

Interference Voltage 150 KHz - 30 MHz

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



Ref.-No.: 53838

Product : CD/IPOD PLAYER

Sample : 01

Date : 13 May 2010

Test equipment:

Rohde & Schwarz ESCS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

IPOD PLAYING
(L)

--

RFI suppression parts:

--

* two dB safety margin for
type approval necessary

Operator: KT

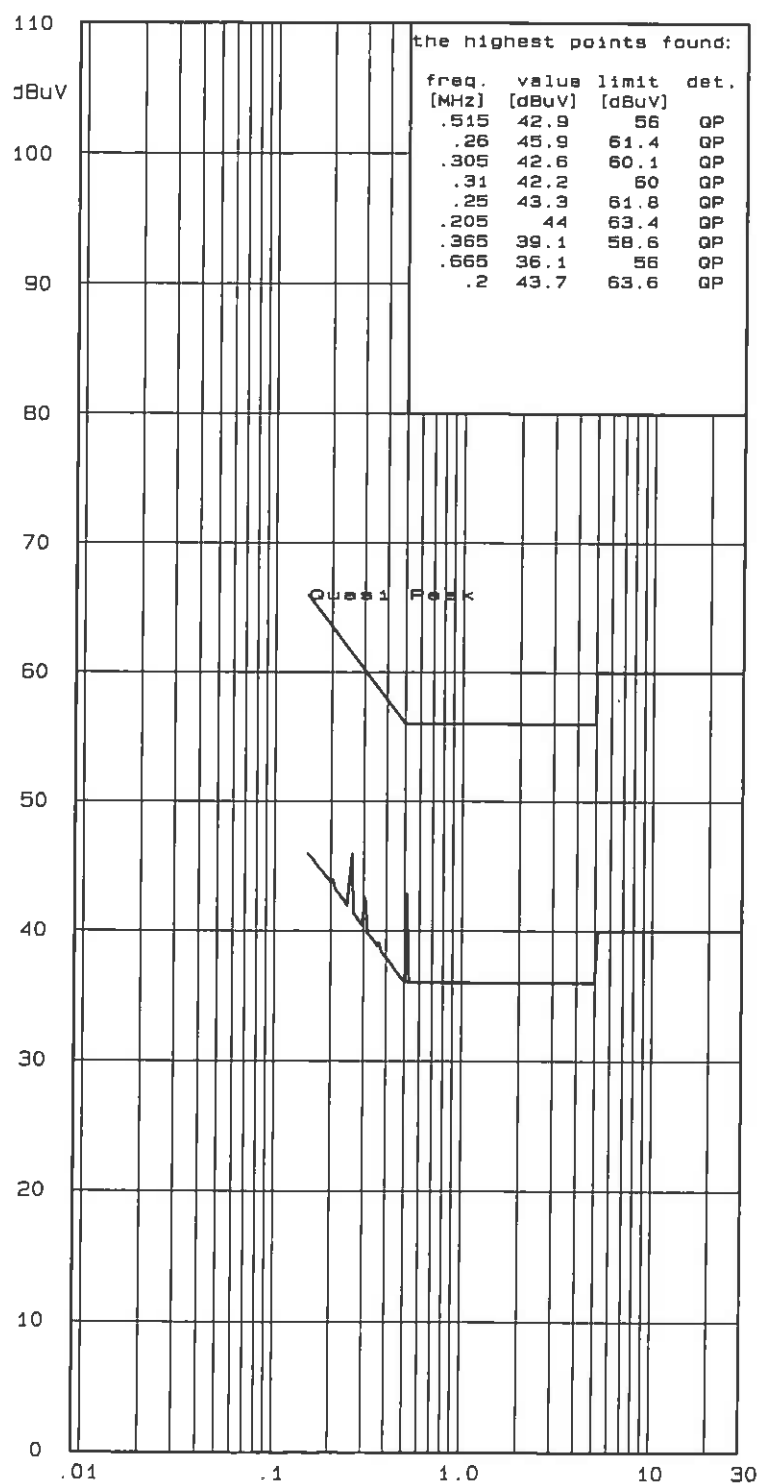
Result : pass ☒ fail ☐

IECC

U 5 / 6

Interference Voltage 150 KHz - 30 MHz

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



Ref.-No.: 53838

Product : CD/IPOD PLAYER

Sample : 01

Date : 13 May 2010

Test equipment:

Rohde & Schwarz ESCS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

IPOD PLAYING
(N)

--

RFI suppression parts:

--

* two dB safety margin for
type approval necessary

Operator: KT

Result : pass ☒ fail ☐

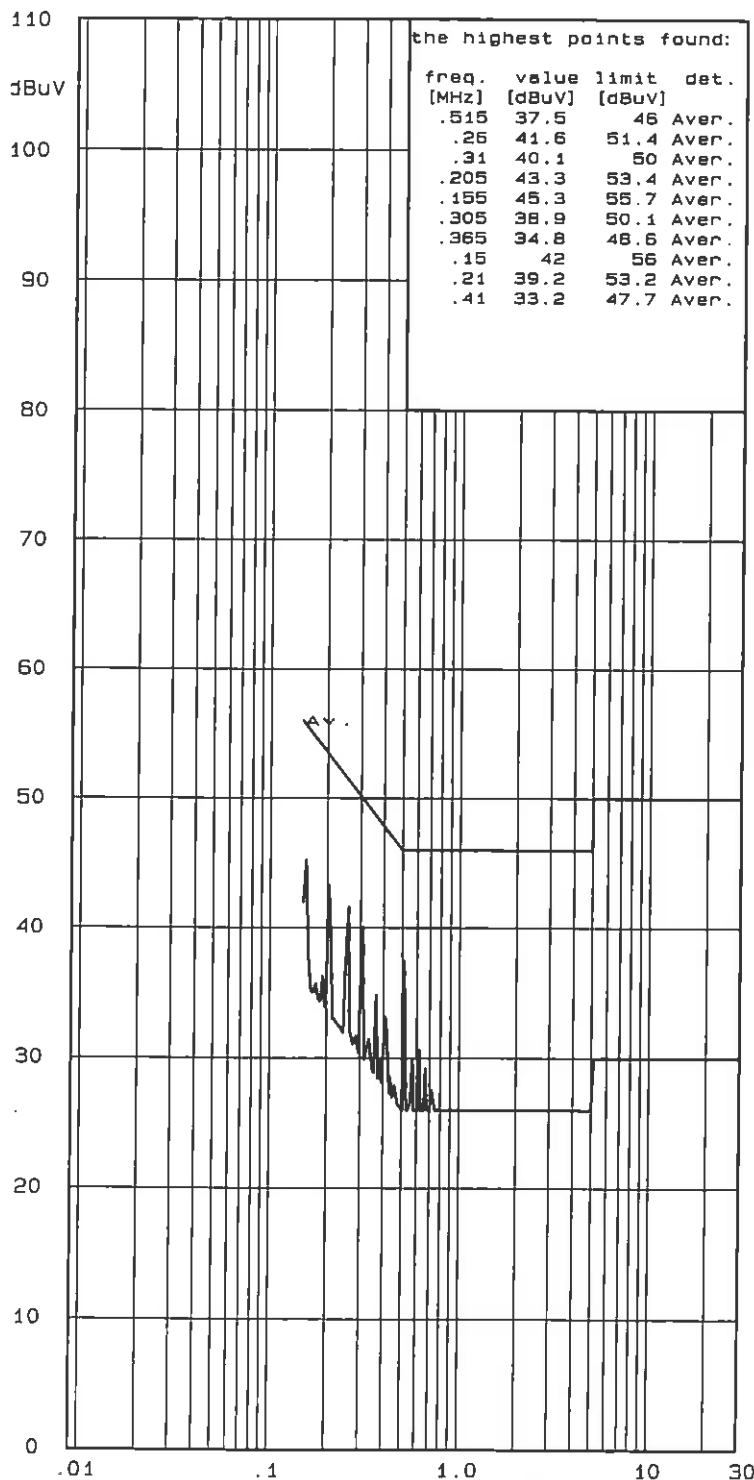
IECC

f [MHz]

U 5 / 6

Interference Voltage 150 KHz - 30 MHz

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



Ref.-No.: 53838

Product : CD/IPOD PLAYER

Sample : 01

Date : 13 May 2010

Test equipment:

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Connected sets:

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Operating mode:

IPOD PLAYING
(N)

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RFI suppression parts:

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type approval necessary

Operator: KT

Result : pass ☒ fail []

IECC

f [MHz]

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Photo of Sample