

FCC – Test Report

Date: 2009-11-12

No. 52892

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LABORATORY - REPORT

APPLICANT: S.T.I. ELECTRONICS LIMITED
ADDRESS: Room 1308, 13/F., Lippo Sun Plaza
28 Canton Road
Tsim Sha Tsui, Kowloon
Hong Kong

DATE OF SAMPLE RECEIVED: 2009-09-23

DATE OF TESTING: 2009-09-30 to 2009-10-07

DESCRIPTION OF SAMPLE:

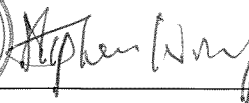
Product: Spheric Speaker iPod Docking
Product class: Class B Computing Device Peripheral
Model No.: IPD-4200
FCC ID number: XUPIP-4200
Rating: AC/DC adaptor : KSS24_240_1000U, Input : AC 100-240V 50/60Hz
600mA, Output : DC 24V 1000mA

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.



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 |
| Test Receiver | Rohde & Schwarz | ESHS 30 | 839667/002 | 07/01/2009 | 06/01/2010 |
| Artificial Mains Network (LISN) | Schwarzbeck | NSLK 8127 | 8127309 | 11/02/2009 | 10/02/2010 |
| Antenna | Schaffner | CBL6111C | 2791 | 22/07/2008 | 21/07/2010 |
| 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 | VLCDS23585-1W | 90S040201520 |
| Printer | HP | 6L | JPZT102346 |
| Ethernet router | D-Link | DES-1008D | DRE9158000047 |

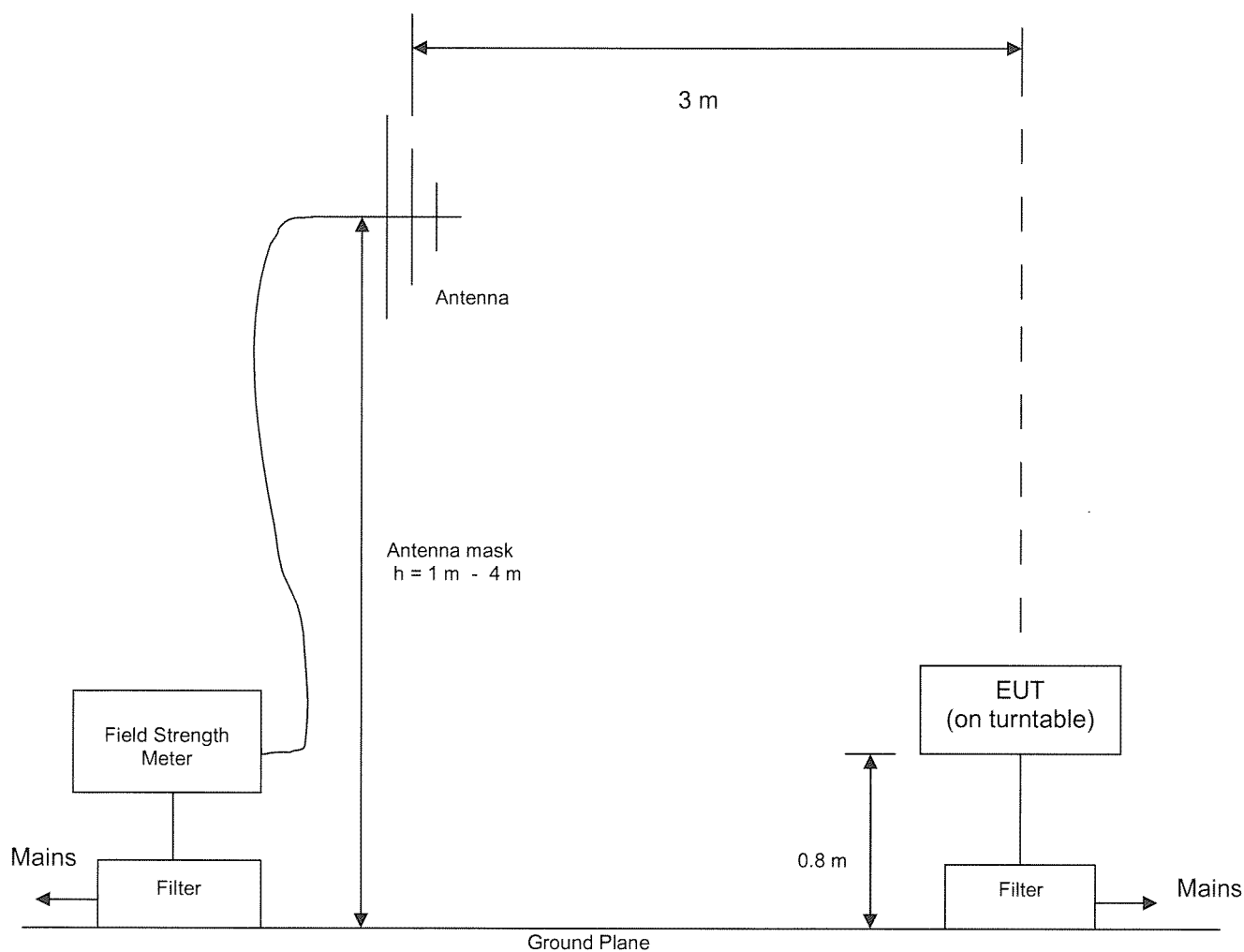
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Radiated Emission Test Setup (3 m distance)



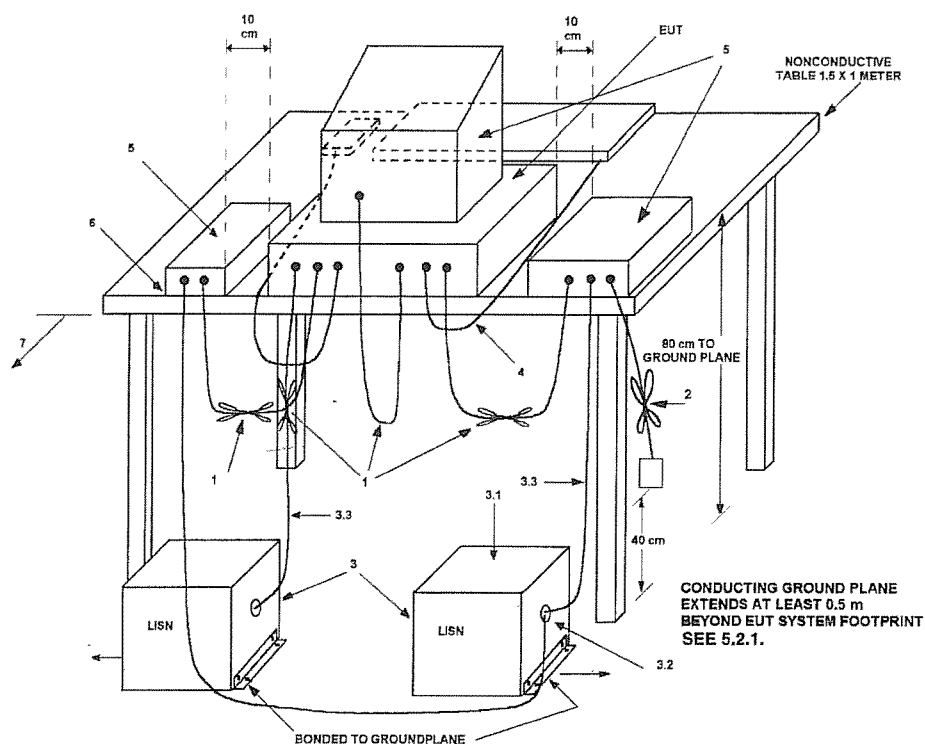
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Conducted Emission Test Setup



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).

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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) to the AC/DC adaptor. 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 - 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.

During the data transfer mode (i-Tunes operation), the sample was operated with the host computer. The computer system included a notebook computer, an external keyboard, a mouse, an external monitor, a printer and an ethernet router was connected to the sample during the test.

An initial pre-scan was performed to find out the maximum emission level of the sample placed at 3 orthogonal planes. Final measurement 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 to the AC/DC adaptor. The table is 0.8 meter above the floor. The LISN was connected to the test receiver for conducted emission measurement (150kHz – 30MHz).

During the data transfer mode (i-Tunes operation), the sample was operated with the host computer. The computer system included a notebook computer, an external keyboard, a mouse, an external monitor, a printer and an ethernet router was connected to the sample during the test.

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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 9 - 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 - 19 for measurement data.

IT 5/6

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Radiated Emission

Acc: FCC Part 15 Subpart B (15.109)

IECC Ref: 52892

Model: IPD-4200

Applicant: S.T.I. ELECTRONICS LIMITED

Test Equipment

Receiver: Rohde & Schwarz ESCS 30

Antenna: Schaffner CBL6111C

Ser.Nr.: --

Set under test: Spheric Speaker iPod Docking

Operating mode: Data Transfer (iTunes operation)

| 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 |
| 59.5 | < 16.0 | < 29.0 | 6.2 | < 22.2 | < 35.2 | 40.0 |
| 70 | < 16.0 | < 16.0 | 7.0 | < 23.0 | < 23.0 | 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 positioned in all 3 axis during the test.
The worst test data were obtained with the sample placed normally on the table.

Operator : ON

IT 5/6

Date : 2009-11-12

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Radiated Emission

Acc: FCC Part 15 Subpart B (15.109)

IECC Ref: 52892

Model: IPD-4200

Applicant: S.T.I. ELECTRONICS LIMITED

Test Equipment

Receiver: Rohde & Schwarz ESCS 30

Antenna: Schaffner CBL6111C

Ser.Nr.: --

Set under test: Spheric Speaker iPod Docking

Operating mode: AUX IN (External MP3 source)

| 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 |
| 55.9 | < 16.0 | 28.0 | 6.7 | < 22.7 | 34.7 | 40.0 |
| 85 | 27.0 | < 16.0 | 8.5 | 35.5 | < 24.5 | 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 positioned in all 3 axis during the test.
The worst test data were obtained with the sample placed normally on the table.

Operator : ON

IT 5/6

Date : 2009-11-12

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Radiated Emission

Acc: FCC Part 15 Subpart B (15.109)

IECC Ref: 52892

Model: IPD-4200

Applicant: S.T.I. ELECTRONICS LIMITED

Test Equipment

Receiver: Rohde & Schwarz ESCS 30

Antenna: Schaffner CBL6111C

Ser.Nr.: --

Set under test: Spheric Speaker iPod Docking

Operating mode: iPod Playing

| 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 |
| 55.9 | < 16.0 | 28.0 | 6.7 | < 22.7 | 34.7 | 40.0 |
| 85 | 27.0 | < 16.0 | 8.5 | 35.5 | < 24.5 | 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 positioned in all 3 axis during the test.
The worst test data were obtained with the sample placed normally on the table.

Operator : ON

IT 1 / 2

Interference Voltage 150 KHz - 30 MHz

acc. FCC PART 15 Class B (15.107)

Model: IPD-4200

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

Client : S.T.I. ELEC. LTD.

Product: SPEAKER IPOD DOCKING

IECC-No.: 52892

Date: 30 Sep 2009

Test equipment:

Rohde & Schwarz ESHS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

DATA TRANSFER

(L)

TEST W/ REFERENCE COMPUTER


--

RFI suppression parts:

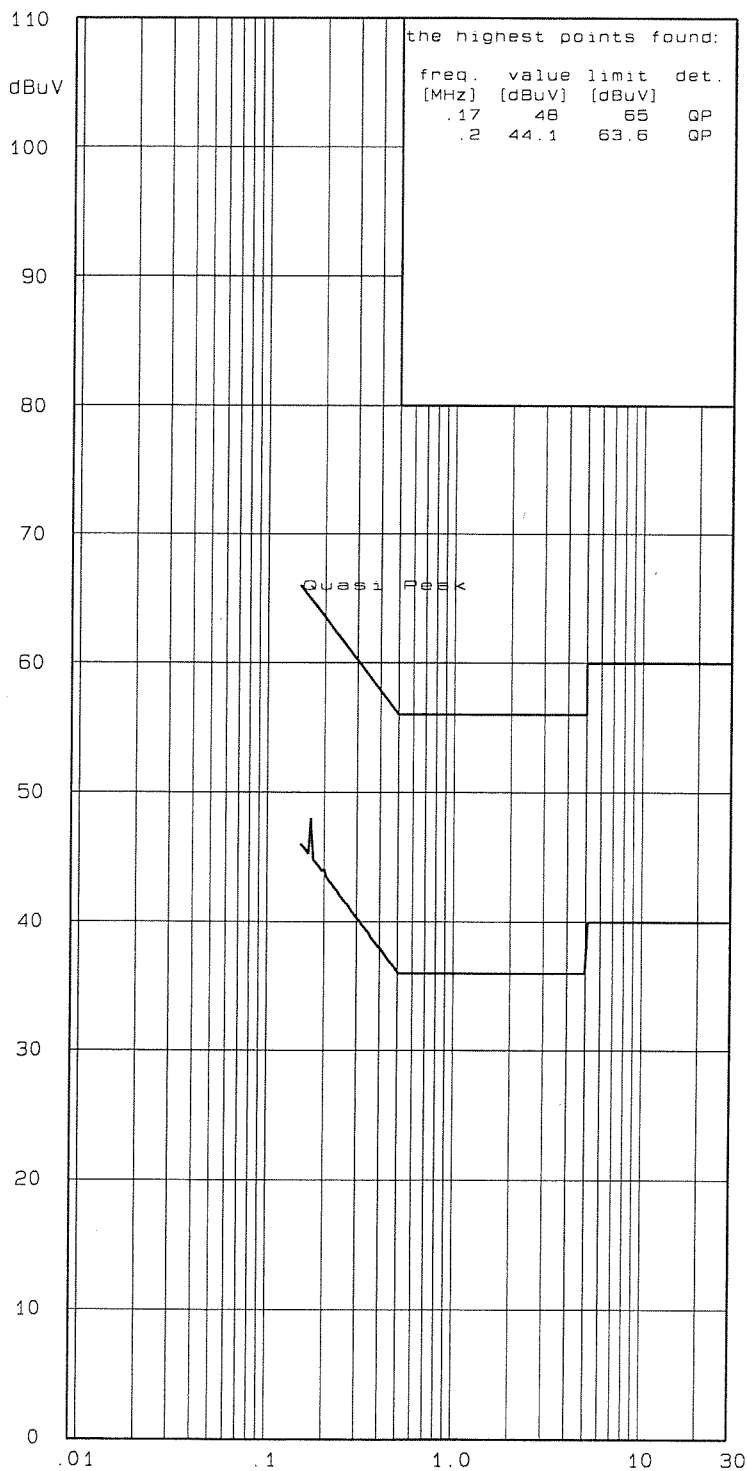
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* two dB safety margin for
type approval necessary

Operator: WH

Result: 

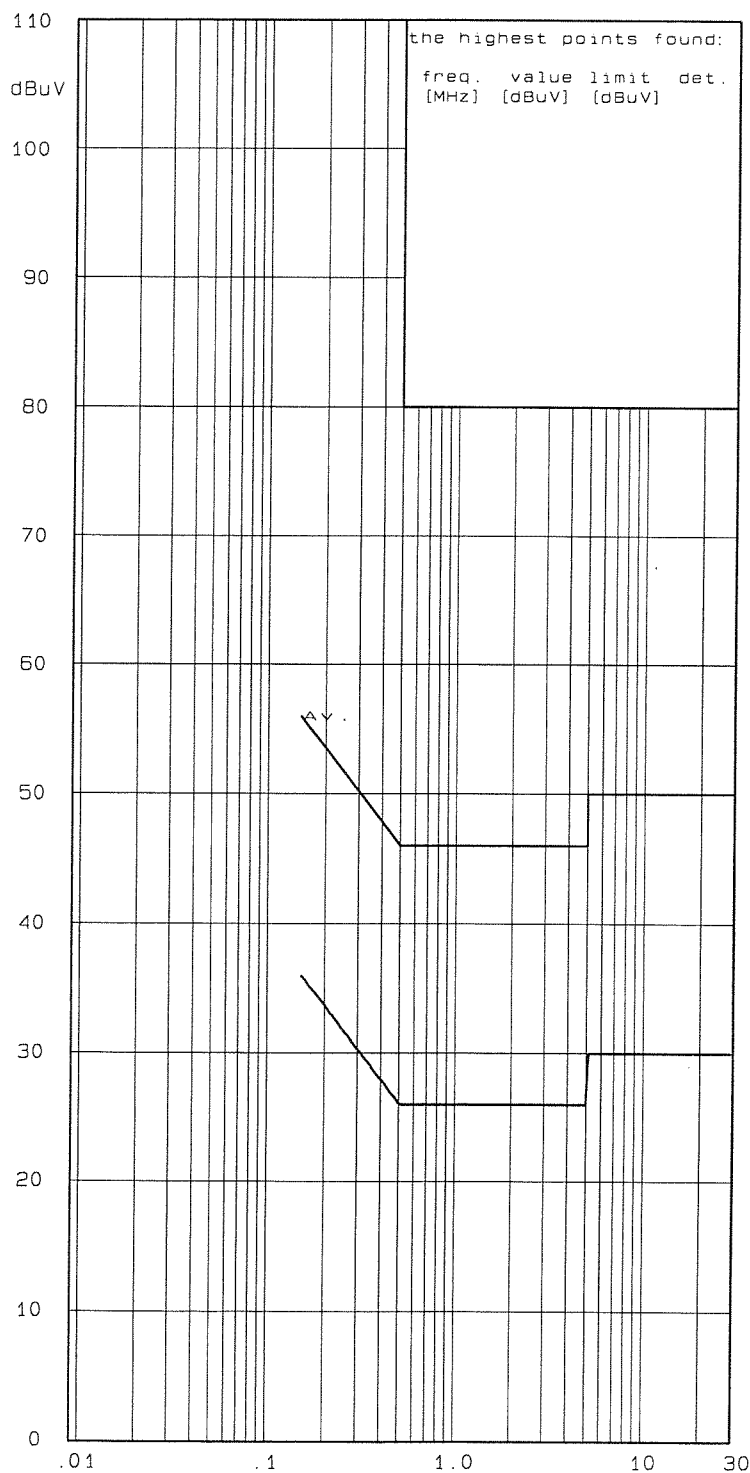
IECC



IT 1 / 2

Interference Voltage 150 KHz - 30 MHz

acc. FCC PART 15 Class B (15.107)



Model: IPD-4200

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

Client : S.T.I. ELEC. LTD.

Product: SPEAKER IPOD DOCKING

IECC-No.: 52892

Date: 30 Sep 2009

Test equipment:

Rohde & Schwarz ESHS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

DATA TRANSFER

(L)

TEST W/ REFERENCE COMPUTER

--

RFI suppression parts:

--

* two dB safety margin for
type approval necessary

Operator: WH

Result: ok

IECC

IT 1 / 2

Interference Voltage 150 KHz - 30 MHz

acc. FCC PART 15 Class B (15.107)

Model: IPD-4200

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

Client : S.T.I. ELEC. LTD.

Product: SPEAKER IPOD DOCKING

IECC-No.: 52892

Date: 30 Sep 2009

Test equipment:

Rohde & Schwarz ESHS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

DATA TRANSFER

(N)

TEST W/ REFERENCE COMPUTER


--

RFI suppression parts:

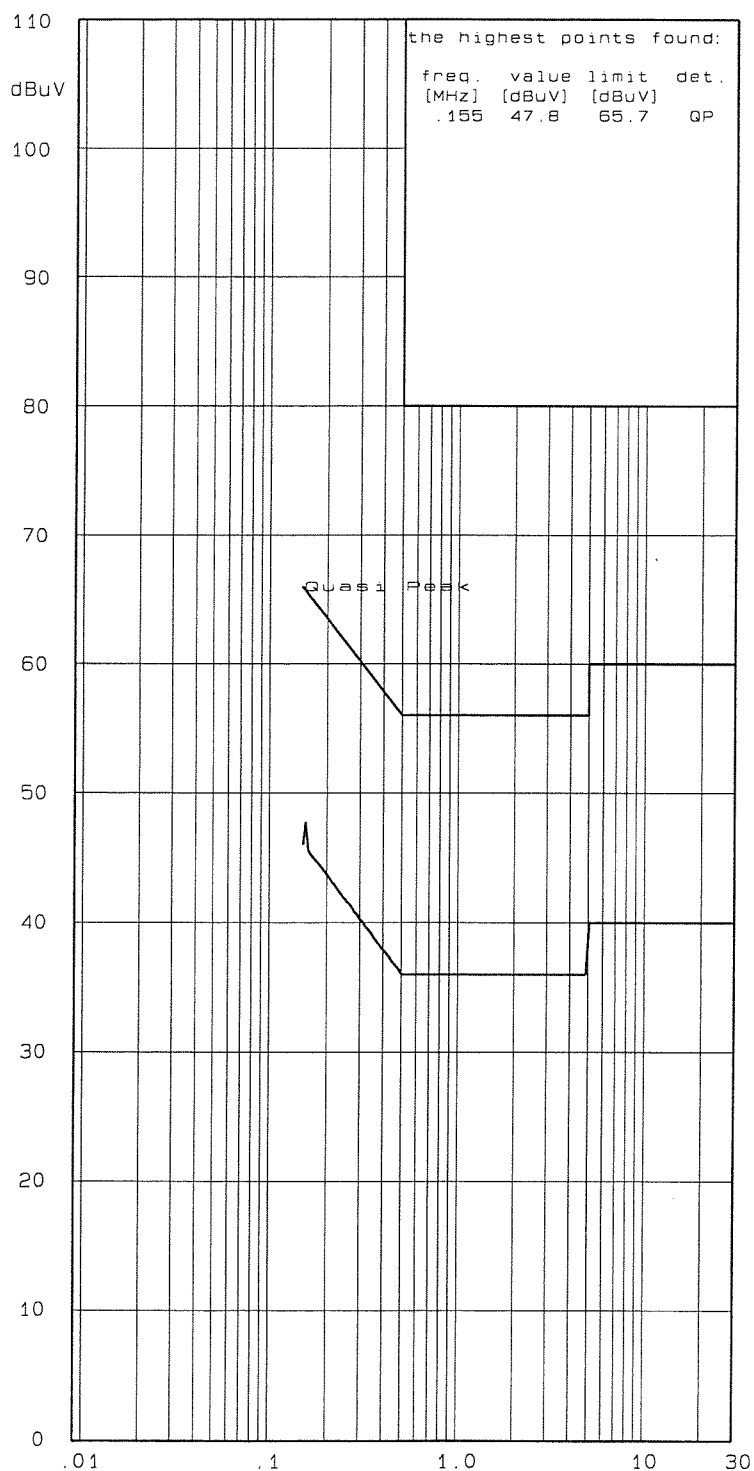
--

* two dB safety margin for
type approval necessary

Operator: WH

Result: 

IECC





IT 1 / 2

Interference Voltage 150 KHz - 30 MHz

acc. FCC PART 15 Class B (15.107)

Model: IPD-4200

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

Client : S.T.I. ELEC. LTD.

Product: SPEAKER IPOD DOCKING

IECC-No.: 52892

Date: 30 Sep 2009

Test equipment:

Rohde & Schwarz ESHS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

DATA TRANSFER

(N)

TEST W/ REFERENCE COMPUTER

--

RFI suppression parts:

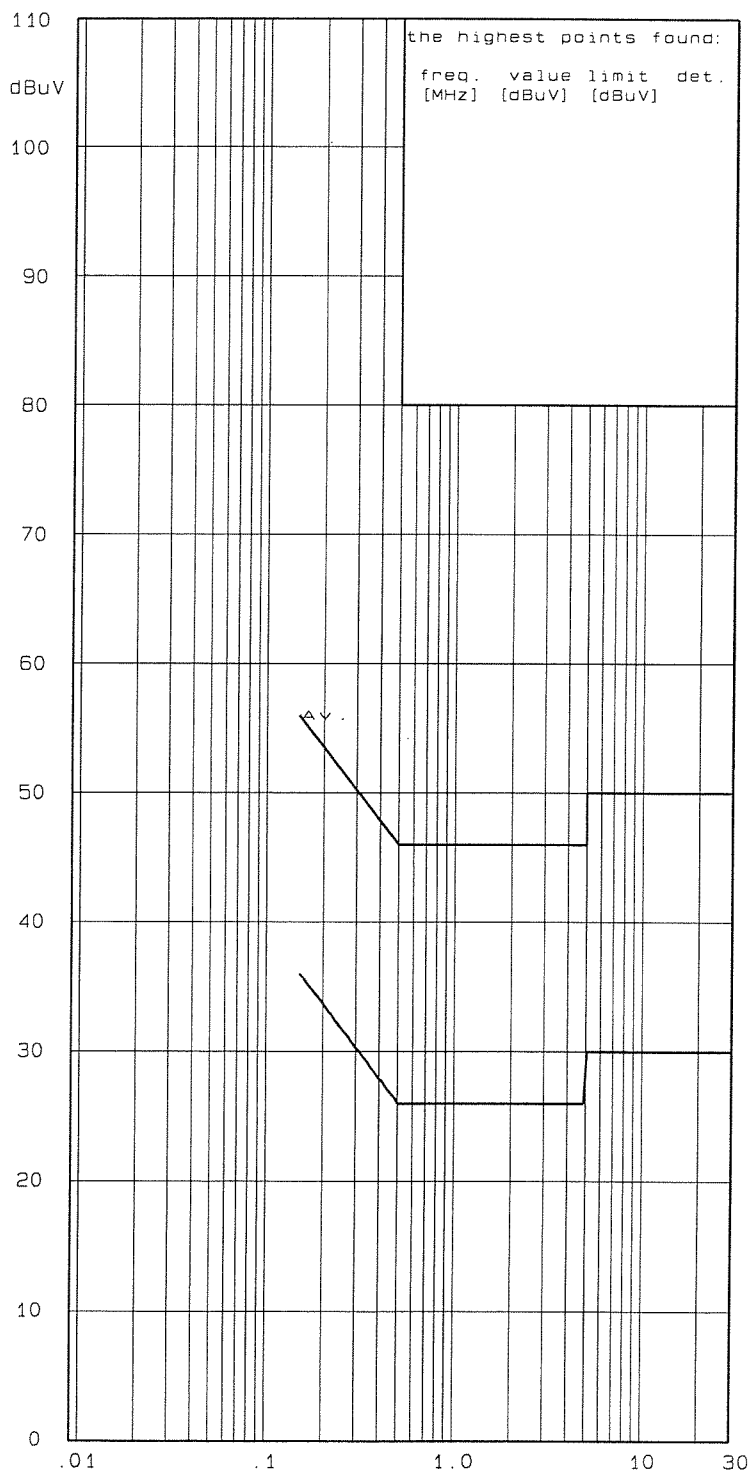
--

* two dB safety margin for
type approval necessary

Operator: WH

Result:

IECC



U 5 / 6

Interference Voltage 150 KHz - 30 MHz

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

Model: IPD-4200

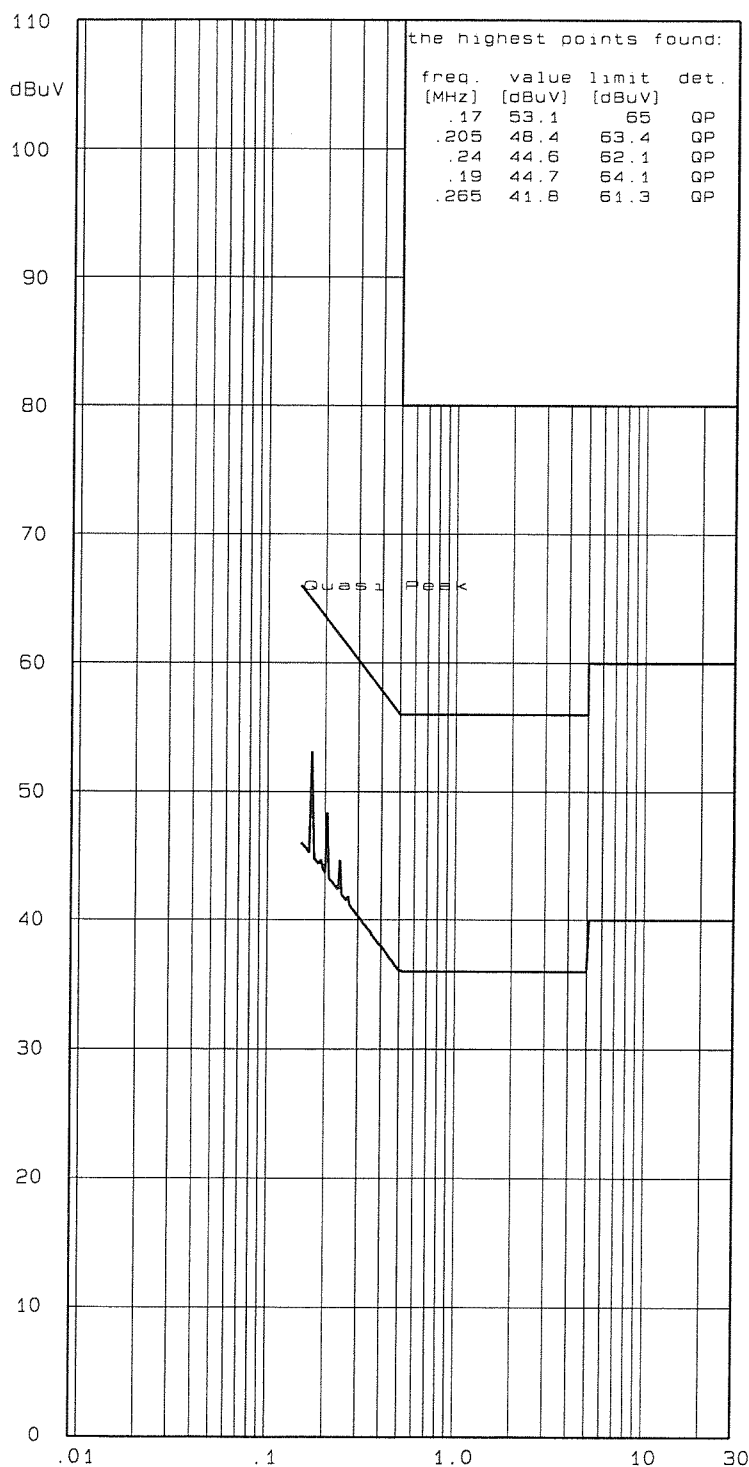
Spl./Ser.No.: 01/--

Client : S.T.I. ELEC. LTD.

Product: SPEAKER IPOD DOCKING

IECC-No.: 52892

Date: 30 Sep 2009



Test equipment:

Rohde & Schwarz ESHS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

AUX

(L)

--

RFI suppression parts:

--

* two dB safety margin for
type approval necessary

Operator: WH

Result:

IECC



U 5 / 6

Interference Voltage 150 KHz - 30 MHz

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

Model: IPD-4200

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

Client : S.T.I. ELEC. LTD.

Product: SPEAKER IPOD DOCKING

IECC-No.: 52892

Date: 30 Sep 2009

Test equipment:

Rohde & Schwarz ESHS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

AUX
(L)

--

RFI suppression parts:

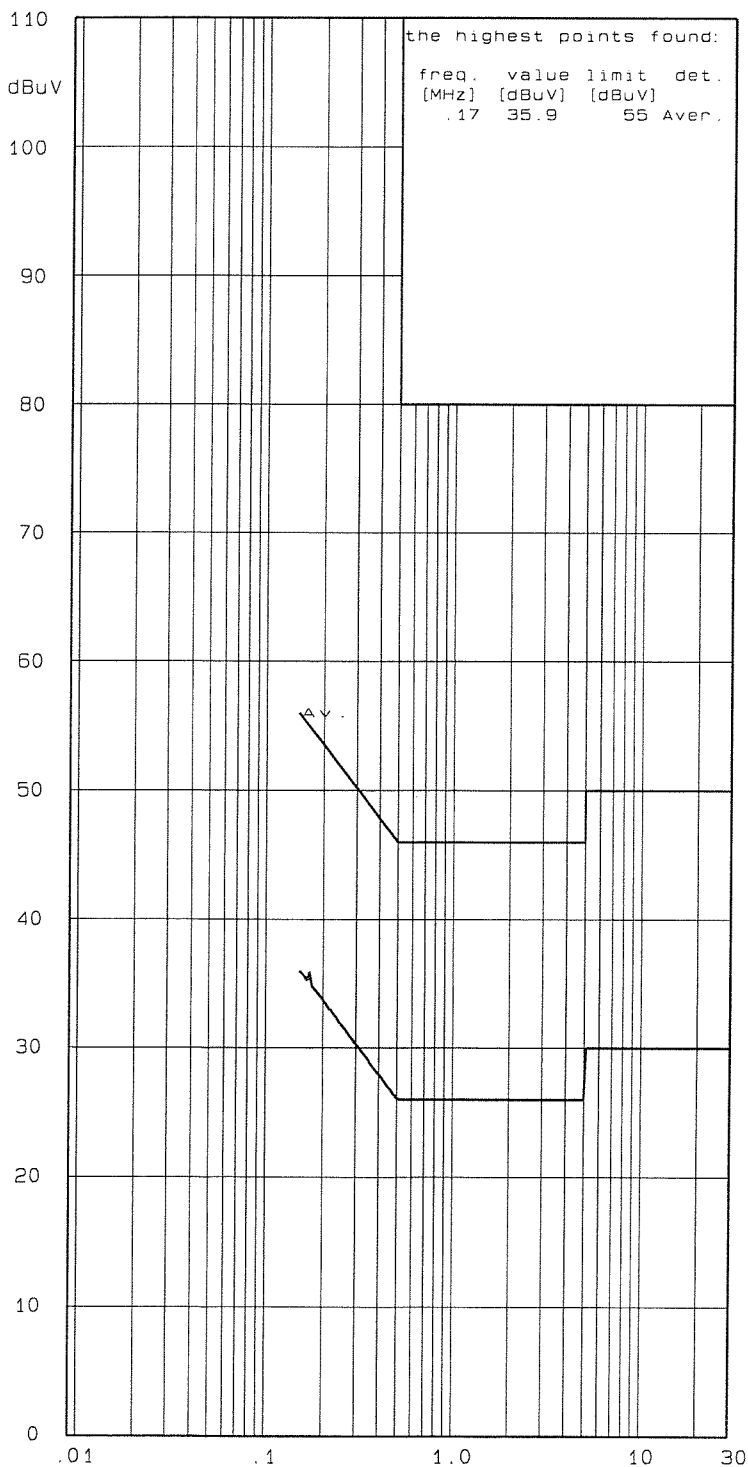
--

* two dB safety margin for
type approval necessary

Operator: WH

Result: *ok*

IECC



U 5 / 6

Interference Voltage 150 KHz - 30 MHz

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

Model: IPD-4200

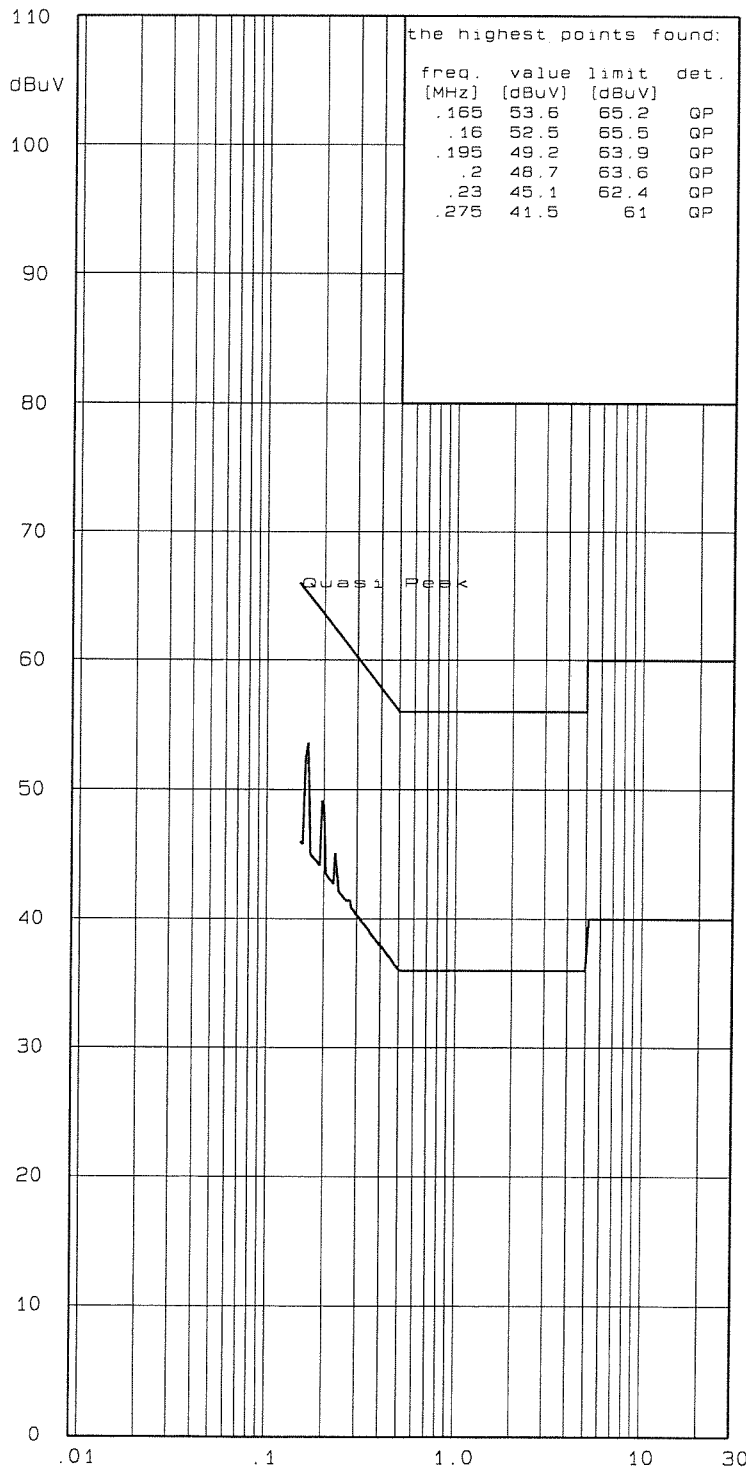
Spl./Ser.No.: 01/--

Client : S.T.I. ELEC. LTD.

Product: SPEAKER IPOD DOCKING

IECC-No.: 52892

Date: 30 Sep 2009



Test equipment:

Rohde & Schwarz ESHS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

AUX
(N)

--

RFI suppression parts:

--

* two dB safety margin for
type approval necessary

Operator: WH

Result: *OK*

IECC



U 5 / 6

Interference Voltage 150 KHz - 30 MHz

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

Model: IPD-4200

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

Client : S.T.I. ELEC. LTD.

Product: SPEAKER IPOD DOCKING

IECC-No.: 52892

Date: 30 Sep 2009

Test equipment:

Rohde & Schwarz ESHS30

Schwarzbeck NSLK8127

Connected sets:

--

Operating mode:

AUX
(N)

--

RFI suppression parts:

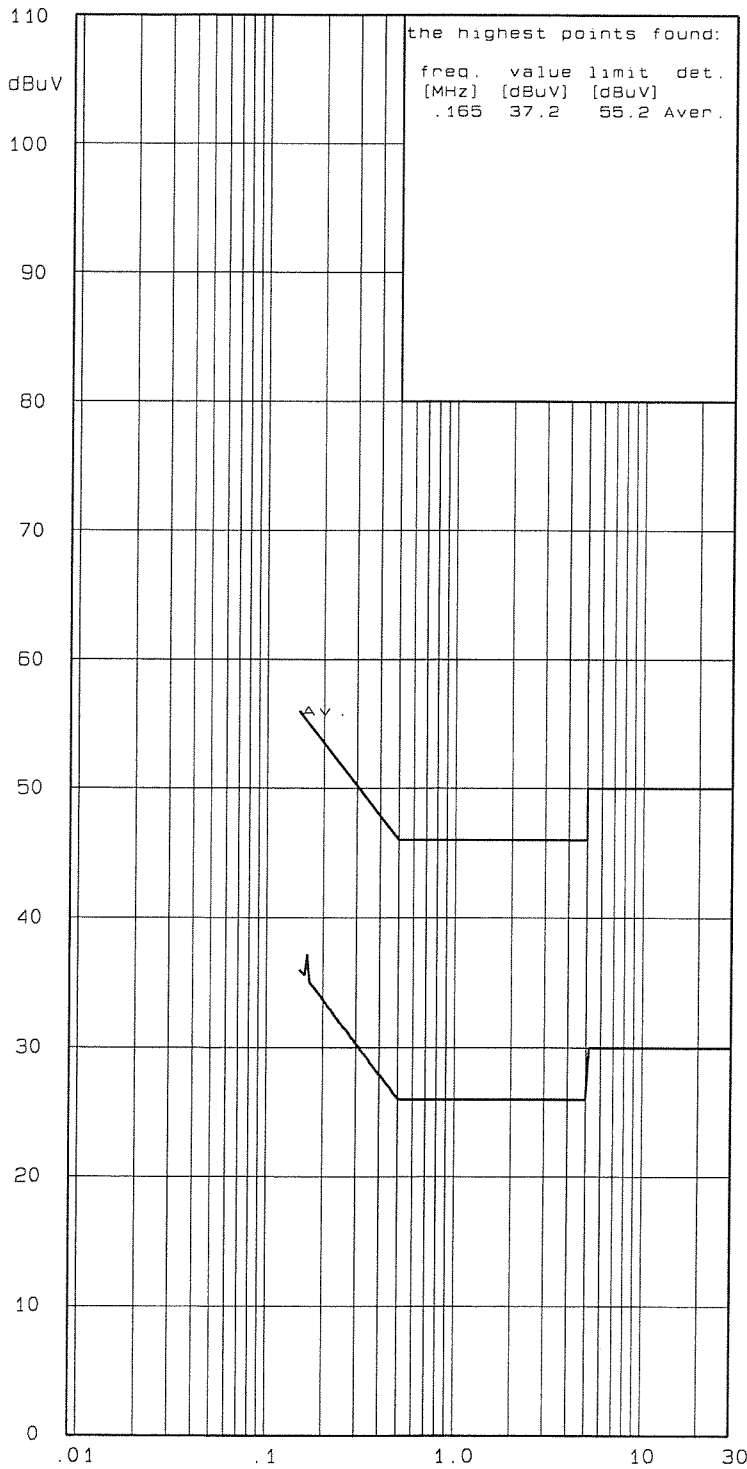
--

* two dB safety margin for
type approval necessary

Operator: WH

Result:

IECC



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Photo of Sample



Sample Outlook



AC/DC Adaptor – Rating Plate

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

China 中國: IECC (Guangzhou) Services Co., Ltd. 廣州時並進技術服務有限公司

Address 地址: Flat A, 2/F., Block 3, 56 Shuiyin Road, Guangzhou, P.R. of China.
廣州市水蔭路56號3棟2A室 Postcode 郵政編號: 510075

Tel 電話: (852) 2305 2570

Fax 傳真: (852) 2756 4480

Tel 電話: (86-20) 8768 4838

Fax 傳真: (86-20) 8768 3918

E-mail 電子郵件: info@iecc.com.hk

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