

Prüfbericht - Nr.: 16004796 001

Test Report No.:

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Auftraggeber: Uni-Art Precise Products Ltd.
Client: 11-12/F., YUE XIU IND'L BLDG.
87 HUNG TO ROAD,
KWUN TONG, KOWLOON
HONG KONG

Gegenstand der Prüfung: Receiver of Wireless Headphone
Test item:

Bezeichnung: HP1392 (ARKON) **FCC ID:** MVAWHP141 - 001R
Identification: Receiver of System WHP141 **FCC ID**
(THOMSON)

Wareneingangs-Nr.: 173015906 **Eingangsdatum:** 18.03.2005
Receipt No.: **Date of receipt:**

Prüfört: Shenzhen Bureau of Quality Technical
Testing location: Supervision Shenzhen Academy of Metrology
and Quality Inspection
Bldg, of Shenzhen Academy of Metrology and
Quality Inspection, Longzhu Road, Nanshan,
Shenzhen,
P.R. China
Listed test laboratory
according to FCC rules
section 2.948 for
measuring devices under
Parts 15

Prüfgrundlage: ANSI C63.4:2001
Test specification: Conduct Emissions with limits described at FCC Part 15 subpart B section
15.107
Radiated Emissions with limits described at FCC Part 15 Subpart B section
15.109

Prüfergebnis: Der vorstehend beschriebene Prüfgegenstand wurde geprüft und
Test Result: entspricht oben genannter Prüfgrundlage.
The a. m. test item passed the test specification.

Prüflaboratorium: TÜV Rheinland (Guangdong) Ltd
Testing Laboratory

zusammengestellt/ compiled by:

kontrolliert/ reviewed by:

30. May 2005 Ricky Liu
Datum Name Unterschrift
Date Name Signature

02.06.2005 Yuxin Huang
Datum Name Unterschrift
Date Name Signature

Sonstiges/ Other Aspects:

Abkürzungen: ok / P = entspricht Prüfgrundlage
fail / F = entspricht nicht Prüfgrundlage
n.a. / N = nicht anwendbar

Abbreviations: ok / P = passed
fail / F = failed
n.a. / N = not applicable

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.
This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

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TEST SUMMARY

5.1 CONDUCTED EMISSION FOR FCC PART 15 PER SECTION 15.107(A)

RESULT: *ok*

5.2 RADIATED EMISSION FOR FCC PART 15 PER SECTION 15.109(A)

RESULT: *ok*

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix 1: Test result

2 Test Sites

2.1 Test Facilities

Shenzhen SMQ

Shenzhen Bureau of Quality Technical Supervision
Shenzhen Academy of Metrology and Quality Inspection
Bldg, of Shenzhen Academy of Metrology and Quality Inspection
Longzhu Road, Nanshan, Shenzhen,
P.R. China

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Type	S/N	Calibrated until
Antenna	Chase	CBL6112B	2591	29.01.2006
Horn Antenna	Rohde & Schwarz	HF906	100014	29.01.2006
3m Semi-anechoic chamber	Albatross Projects	9X6X6	----	29.01.2006
EMI Test Receiver	Rohde & Schwarz	ESI26	838786/013	29.01.2006
Communications Test Set	Rohde & Schwarz	CMU200	1100.0008.02	29.01.2006
Communications Test Set	HP	HP8920A	3438A05187	29.01.2006

2.3 Trace ability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for conducted emissions measurements is ± 3 dB.
The estimated combined standard uncertainty for radiated emissions measurements is ± 3 dB.

2.6 Location of original data

The original copies of all test data taken during actual testing were attached at Appendix 1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Guangzhou) file for certification follow-up purposes.

2.7 Status of facility used for testing

Shenzhen Bureau of Quality Technical Supervision, Shenzhen Academy of Metrology and Quality Inspection, Bldg. of Shenzhen Academy of Metrology and Quality Inspection, Longzhu Road, Nanshan, Shenzhen, P.R.China is listed on the US Federal Communications Commission list of facilities approved to perform measurements

3 General Product Information

Brief description of the test sample:

The submitted sample HP1392 is Wireless Headphone Receiver with three operating frequencies. Channel can be selected with a manual switch .The submitted sample has also the function of volume control.

HP1392 is the headphone receiver of the Wireless Headphone system HP1390.

The transmitter part of system HP1390 is HP1391, charge cable for HP1392 is provided from HP1391.

HP1390 also has another type designation: WHP141 with brand name: “THOMSON”.

They are identical except the name only.

3.1 Product Function and Intended Use

For details, refer to user manual.

3.2 Ratings and System Details

Frequency range	:	912.0MHz, 912.5MHz, 913.0MHz
Number of channels	:	3 (Manual switch)
Type of antenna	:	Integral antenna
FCC ID:		MVAWHP141 – 001R
Power supply	:	DC 2.4V (2×AAA 1.2V rechargeable batteries)
Ports	:	DC charge port from the transmitter, input.
Protection Class	:	III

Refer to document for further information.

3.3 Independent Operation Modes

The basic operation modes are:

Receiving with volume and freq. adjustable

For further information refer to User Manual

3.4 Submitted Documents

Block Diagram
Circuit Diagram
PCB Layout
FCC Label
User Manual
Photo Document

4 Test Set-up and Operation Mode

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Refer to Test set-up in chapter 5.

4.3 Special Accessories and Auxiliary Equipment

The product has been tested together with the following additional accessories:

Transmitter HP1391 from the same system

4.4 Countermeasures to achieve EMC Compliance

The test sample, which has been tested, contained the noise suppression parts as described in the Constructional Data Form or the Technical document. No additional measures were employed to achieve compliance.

4.5 Test set-up

Diagram 1 of Measurement Equipment Configuration for Testing Conducted Emission

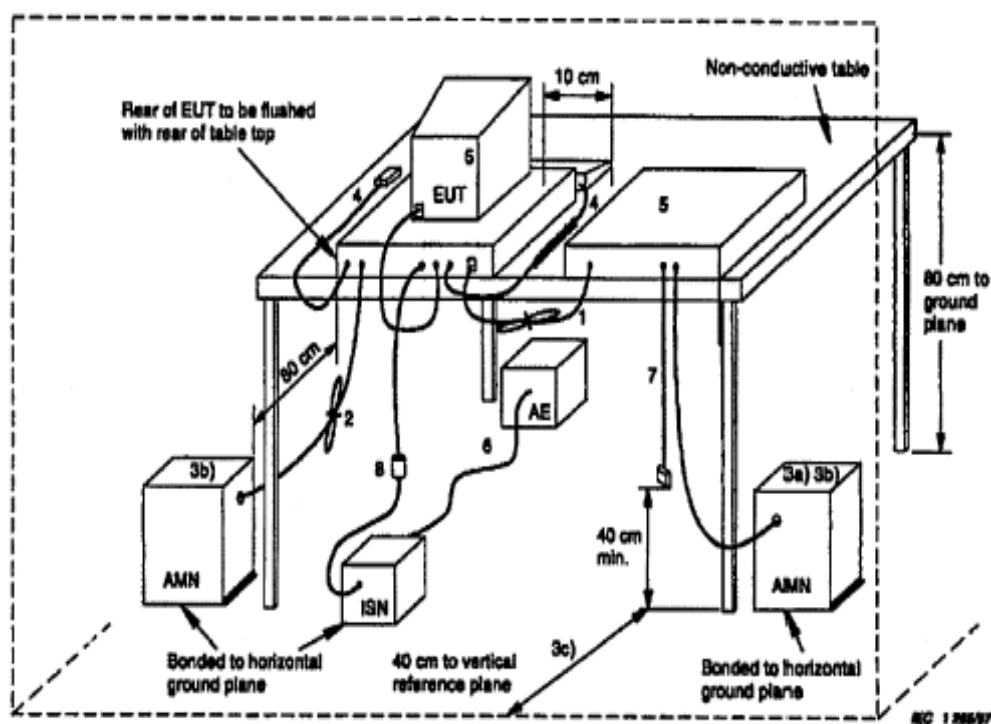
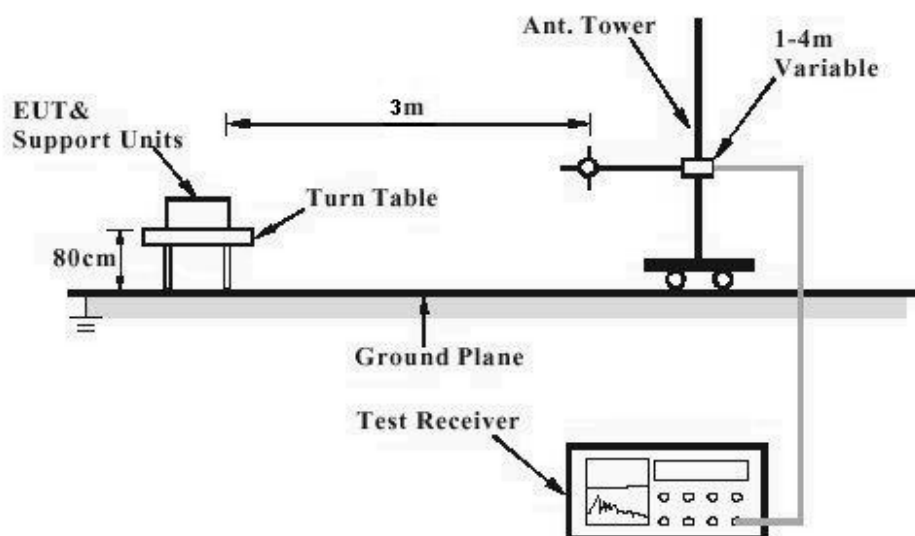


Diagram 2 of Measurement Equipment Configuration for Testing Radiated Emission



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5 Test Results EMISSION

5.1 Conducted Emission for FCC Part 15 Per Section 15.107(a)

RESULT:

ok

Date of testing : 21.03.2005
Test specification : FCC Part 15 Per Section 15.107(a)
Limits : FCC Part 15 Per Section 15.107(a)
Deviations from Standard Test procedures : None
Test procedure : Procedure specified in ANSI C63.4 were followed
Kind of test site : Shielded room
Operation mode : Charging
Temperature : 19°C
Humidity : 50%

The EUT is charged from the transmitter HP1391 via the DC charge cable, while the Conducted Emission level in the AC mains of the AC/DC adaptor of HP1391 is far below the limit. Therefore, the requirement on EUT HP1390 is deemed to be fulfilled without further testing.

The spectral diagrams in appendix 1 display the measurement of un-weighted peak values of transmitter HP1391.

If the result of the measurement with the Quasi Peak detector is below the Average limit, the measurement with Average Detector has been omitted.

Disturbances other than those mentioned are small or not detectable.

Table 2: Disturbance Voltage on AC Mains of AC/DC adaptor of transmitter HP1391.

Frequency [MHz]	Line	QP [dBµV]	AV [dBµV]	Quasi Peak Limit [dBµV]	Average Limit [dBµV]
0.183	L	43.7	14.7	64.3	54.3
0.333	L	38.4	10.8	59.4	49.4
0.685	L	30.6	6.1	56	46

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5.2 Radiated Emission for FCC Part 15 Per Section 15.109(a)

RESULT:

ok

Date of testing : 21.03.2005
Test specification : FCC Part 15 Per Section 15.109(a)
Limit : FCC Part 15 Per Section 15.109(a)
Operation mode: Receiving
Deviations from Standard Test procedures : None
Test procedure : Procedure specified in ANSI C63.4 were followed
Kind of test site : 3m Semi-anechoic chamber
Temperature : 19°C
Humidity : 50%

The final measurement for frequencies below 1000MHz is performed with Quasi Peak detector; the final measurement for frequencies above 1000MHz is performed with Average detector.

Disturbances other than those mentioned are small or not detectable.

The spectral diagrams in appendix 1 display the measurement of un-weighted peak values.

Table 3: Radiated Emission

Frequency [MHz]	QP [dB μ V/m]	AV [dB μ V/m]	Polarity	Limit [dB μ V/m]
---*				

*) The disturbance measured is far below the limit and therefore, no final measurement was performed.

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6 Photographs of the Test Set-Up

Photograph 1: Set up for Conducted Emission on AC Mains of AC/DC adaptor of HP1391



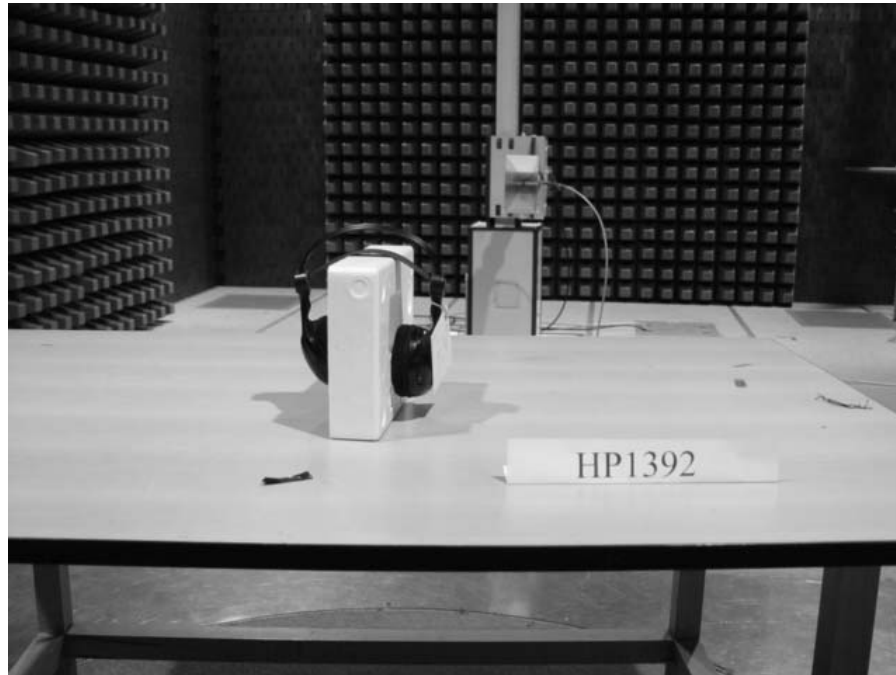
Photograph 2: Set-up for Radiation Measurement Below 1GHz



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Photograph 3: Set-up for Radiation Measurement Above 1GHz



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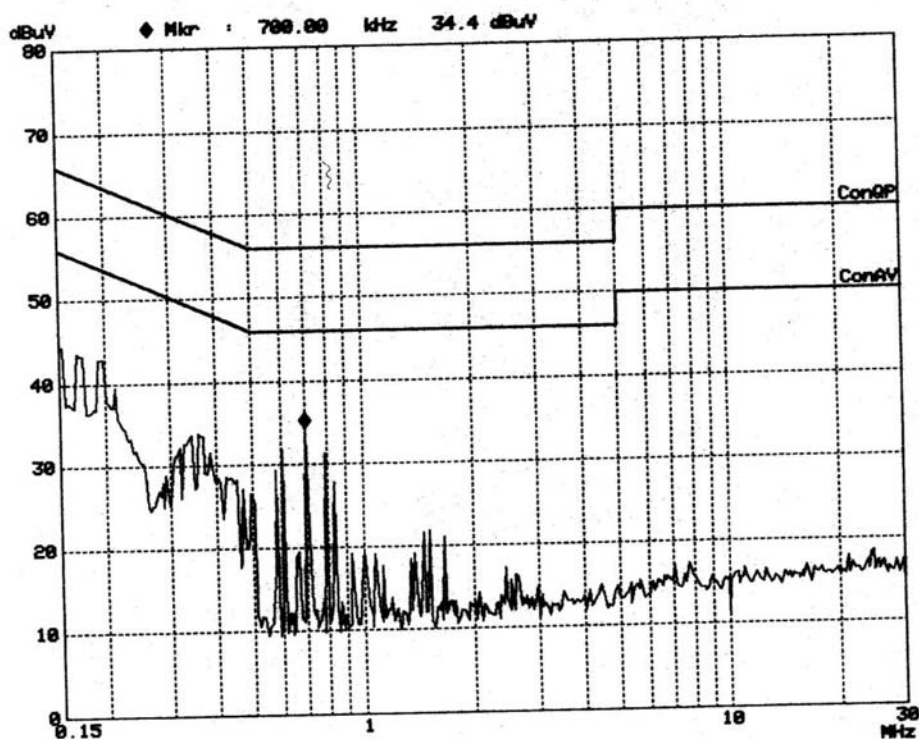
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Conducted Disturbance

EUT: M/N:SP1391
Op Cond: Charging (+MP1392)
Test Spec: N
Comment: AC 120V/60Hz
Date: 21. Mar 05 09:57



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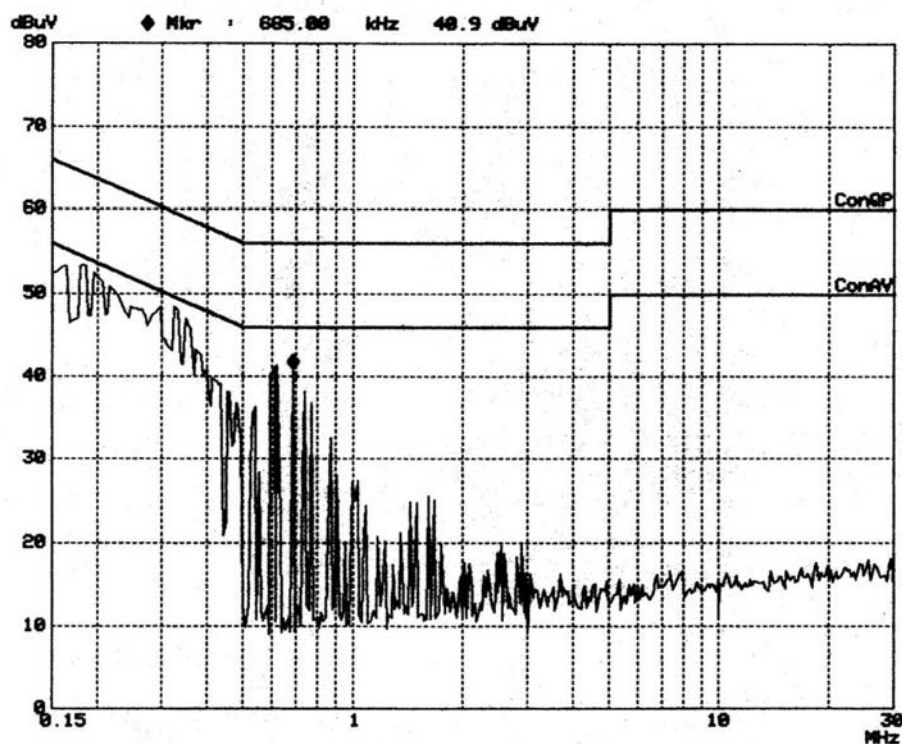
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Conducted Disturbance

EUT: M/N:SP1391
Op Cond: Chargeing (+HP1392)
Test Spec: L
Comment: AC 120V/60Hz
Date: 21. Mar 05 09:53



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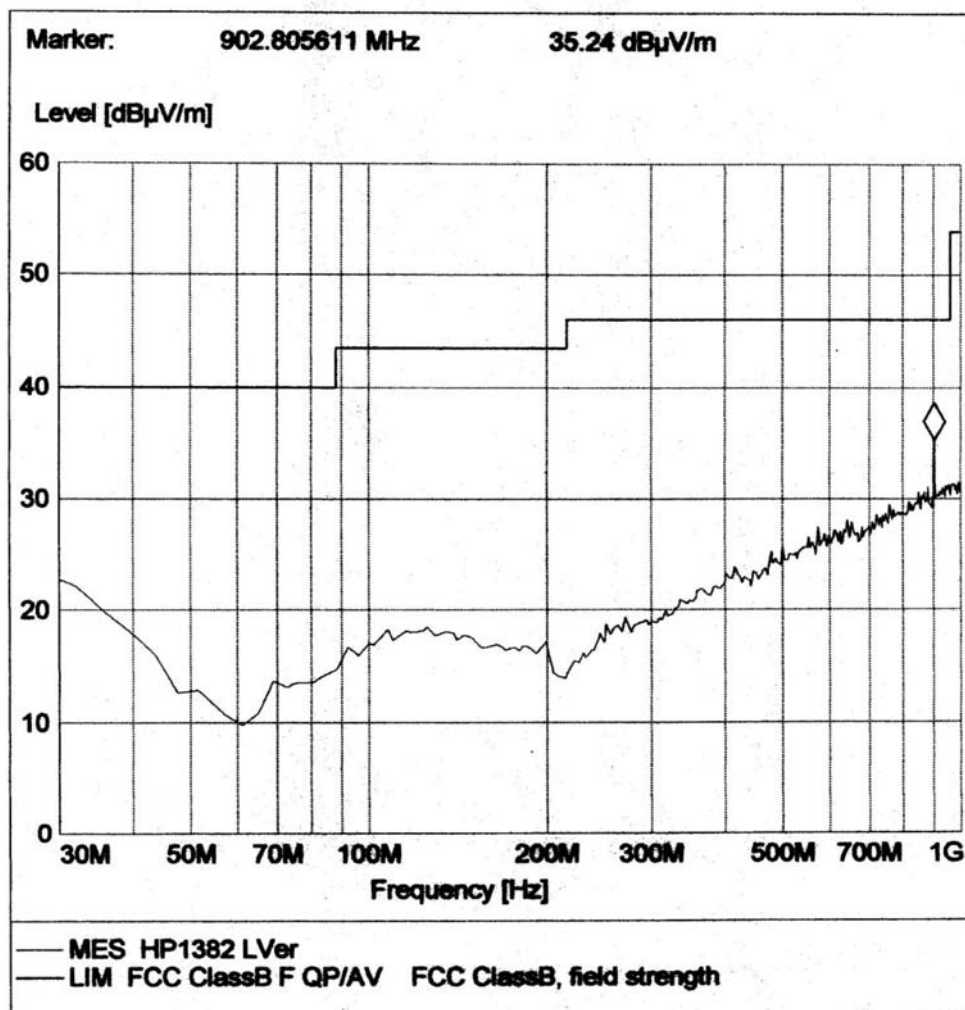
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Radiated Disturbance

FCC Part15

EUT: M/N:HP1392
Manufacturer:
Operating Condition: RX
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification: Vertical
Comment: BATTERY 1.2V*2



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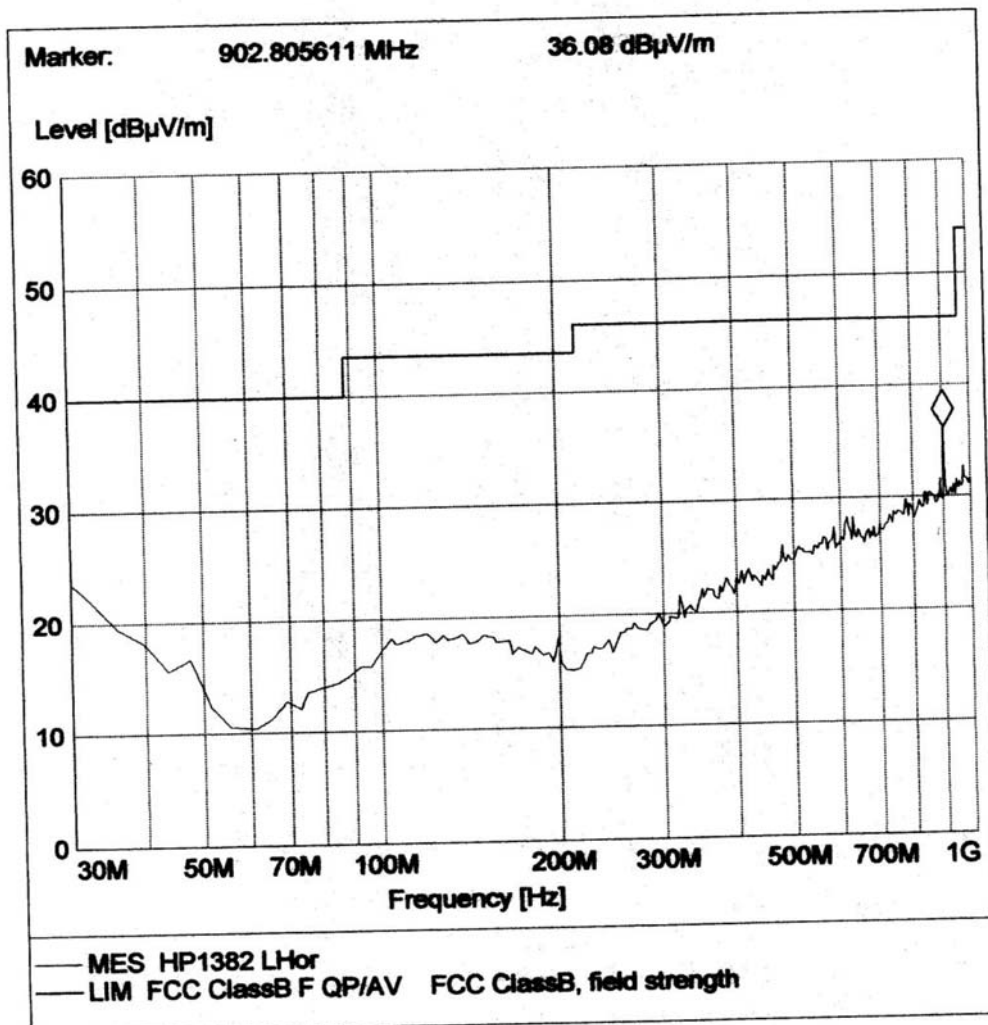
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Radiated Disturbance

FCC Part15

EUT: M/N:HP1392
Manufacturer:
Operating Condition: RX
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification: Horizontal
Comment: BATTERY 1.2V*2



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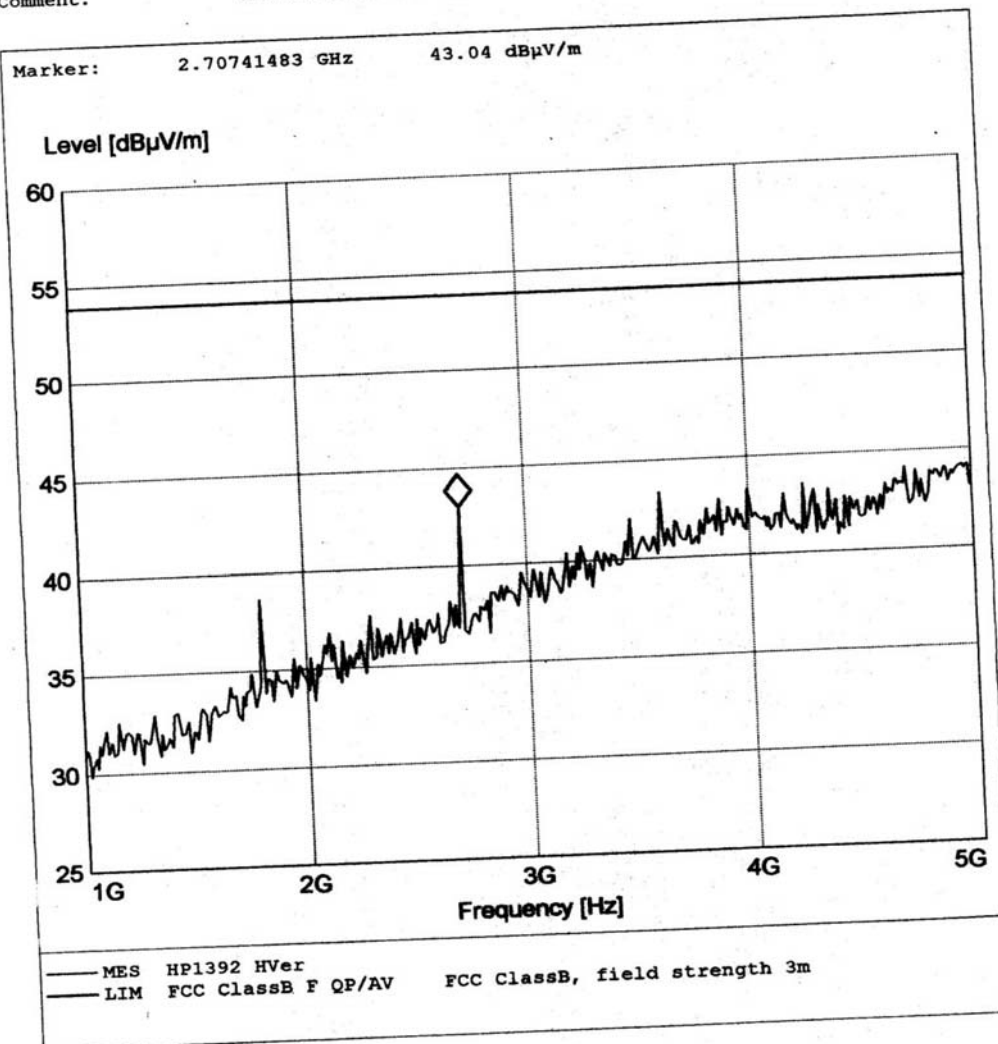
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Radiated Disturbance

FCC Part15

EUT: M/N:HP1392
Manufacturer:
Operating Condition: RX
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification: Vertical
Comment: ~~AC 120V/60Hz~~ DC2.4V



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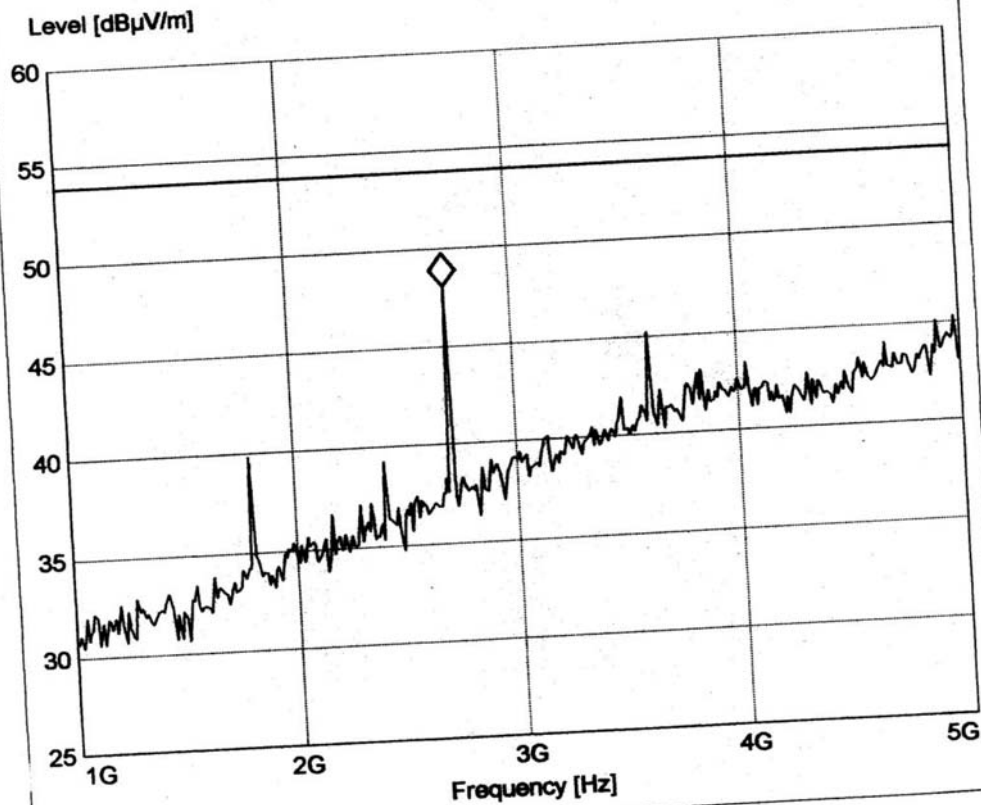
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Radiated Disturbance

FCC Part15

EUT: M/N:HP1392
Manufacturer:
Operating Condition: RX
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification: Horizontal
Comment: ~~AG 120V/60Hz~~ Dc 2.4W

Marker: 2.70741483 GHz 48.11 dBµV/m



— MES HP1392 HHor
— LIM FCC ClassB F QP/AV FCC ClassB, field strength 3m