Prüfbericht - Nr.: *Test Report No.:*	16009965 001	**Seite 1 von 14** *Page 1 of 14*

Auftraggeber: *Client:*	**Uni-Art Precise Products Ltd.** **11-12/F., YUE XIU IND'L BLDG.** **87 HUNG TO ROAD,** **KWUN TONG, KOWLOON** **HONG KONG**		
Gegenstand der Prüfung: *Test item:*	**Wireless Headphone Receiver**		
Bezeichnung: *Identification:*	**HP3992, HP4092**	**FCC ID:** *FCC ID*	**MVAHP4090-001R**
Wareneingangs-Nr.: *Receipt No.:*	**173029547**	**Eingangsdatum:** *Date of receipt:*	**26.03.2007**
Prüfort: *Testing location:*	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		Listed test laboratory according to FCC rules section 2.948 for measuring devices under Parts 15
Prüfgrundlage: *Test specification:*	**ANSI C63.4:2003** **Radiated Emissions with limits described at FCC Part 15 Subpart B section 15.109** **38 dB rejection described at FCC Part 15 Subpart B section 15.121**		
Prüfergebnis: *Test Result:*	**Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).** *The test item passed the test specification(s).*		
Prüflaboratorium: *Testing Laboratory:*	**TÜV Rheinland (Guangdong) Ltd.**		

geprüft/ *tested by:*

Datum / *Date*	Name/Stellung / *Name/Position*	Unterschrift / *Signature*
27 June 2007	Ricky Liu/Project Engineer	Ricky Liu

kontrolliert/ *checked by:*

Datum / *Date*	Name/Stellung / *Name/Position*	Unterschrift / *Signature*
29. Jun. 2007	Dave Xie/Project Manager	Dave Xie

Sonstiges/ Other Aspects:

Abkürzungen:				*Abbreviations:*			
	P(ass)	=	*entspricht Prüfgrundlage*		*P(ass)*	=	*passed*
	F(ail)	=	*entspricht nicht Prüfgrundlage*		*F(ail)*	=	*failed*
	N/A	=	*nicht anwendbar*		*N/A*	=	*not applicable*
	N/T	=	*nicht getestet*		*N/T*	=	*not tested*

TEST SUMMARY

5. 1 RADIATED EMISSION FOR FCC PART 15 PER SECTION 15.109(A)
RESULT: *Pass*

5. 2 38 DB REJECTION SIGNAL FROM CELLULAR FREQUENCY BAND
RESULT: *Pass*

Contents

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	29.01.2008
Horn Antenna	Rohde & Schwarz	HF906	100014	29.01.2008
3m Semi-anechoic chamber	Albatross Projects	9X6X6	----	29.01.2008
EMI Test Receiver	Rohde & Schwarz	ESI26	838786/013	29.01.2008
Communications Test Set	Rohde & Schwarz	CMU200	1100.0008.02	29.01.2008
Communications Test Set	HP	HP8920A	3438A05187	29.01.2008

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

Uncertainty for radiated emissions measurements is ± 4.5dB (30MHz-1GHz), ± 4.6dB (>1GHz).

The reported expanded uncertainty is based on a standard uncertainty multiply by a coverage factor k=2, providing a level of confidence of approximately 95%.

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 TUV 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 with registration number 97379.

3 General Product Information

Brief description of the test sample:

The EUTs are Wireless Headphone Receiver with 3 operating frequencies. Auto tune function can be found in the samples: in case there is not signal detected, the local oscillator is continuously switching for these 3 receiving frequencies.

These two EUTs HP3992 and HP4092 have identical schematic circuit diagram, RF design and main PCB layout.

HP3992 is charged by its relative transmitter via the charge jack. HP4092 is charged by its relative transmitter via the contact charge port. They only differ slightly in the PCB layout of the small DC charge PCB due to above mentioned reason.

The difference of them will do little influence to their Radio and EMC character. All necessary tests are performed to HP3992 only

3.1 Product Function and Intended Use

For details, refer to user manual.

3.2 Ratings and System Details

Frequency range	:	912.00MHz, 912.5MHz, 913.00MHz
Number of channels	:	3 (auto tunable)
Type of antenna	:	Integral antenna
FCC ID:		MVAHP4090– 001R
Power supply	:	2×"AAA" size rechargeable batteries
Ports	:	DC charge port
Protection Class	:	III

Refer to document for further information

3.3 Independent Operation Modes

The basic operation modes are:

Receiving with volume, freq. auto adjustable, charging

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

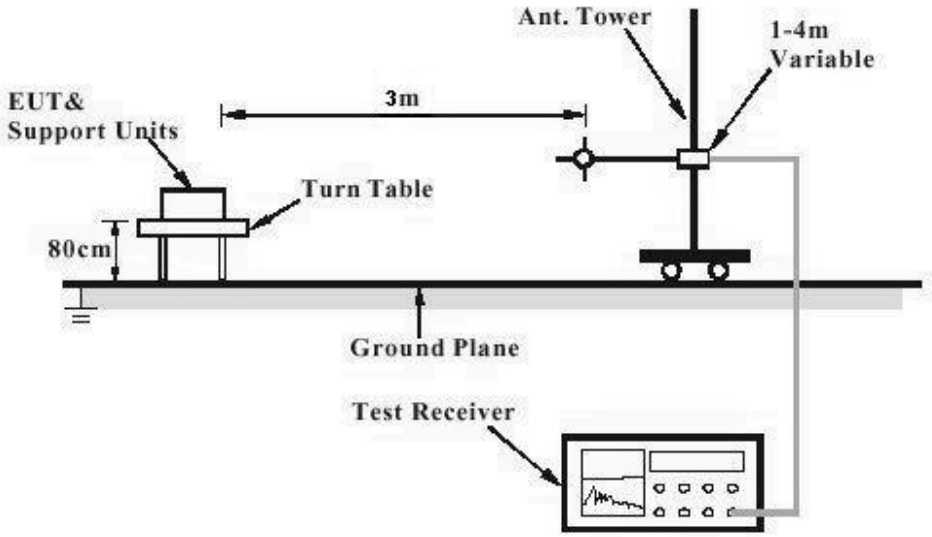
None

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 Radiated Emission



5 Test Results E M I S S I O N

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

RESULT: **Pass**

Date of testing	:	25.04.2007
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	:	23°C
Humidity	:	64%

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 2: Radiated Emission

Frequency [MHz]	**QP** [dBµV/m]	**AV** [dBµV/m]	**Polarity**	**Limit** [dBµV/m]
902.375	39.3	---	H	46.0
902.375	37.5	---	V	46.0

5.2 38 dB rejection signal from Cellular Frequency band

RESULT: **Pass**

Date of testing	:	25.04.2007
Test specification	:	FCC Part 15 Per Section 15.121(b)
Limit	:	FCC Part 15 Per Section 15.121(b)
Operation mode:		Receiving
Test procedure		Procedure specified in ANSI C63.4 were followed
Kind of test site	:	Shielded room
Test signal	:	RF signal FM at 1kHz audio, 19kHz pilot with 75kHz deviation
Reference level	:	-40dBm

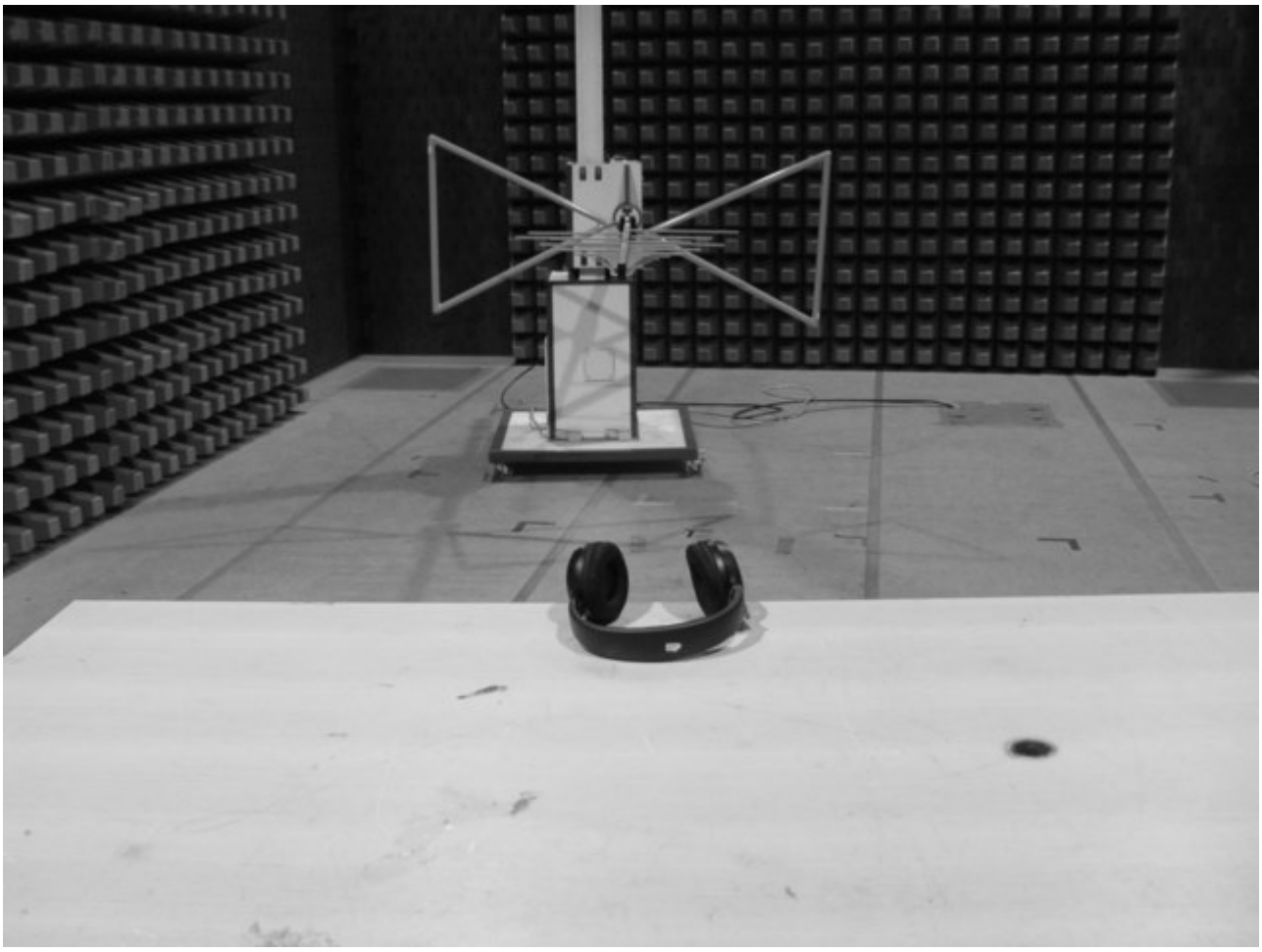
Test procedure: set the wanted signal to establish a reference sensitivity (12dB SINAD) and then increased the signal level by 3dB, the level of wanted signal was –40dBm, then the unwanted mobile signal was injected into the submitted sample receiver and increased in level until the SINAD was reduced to 12dB, the level of unwanted mobile signal was greater than 17dBm, and then repeated above test steps for other cellular frequencies. Test result are listed as following table:

Table 3: 38 dB Rejection

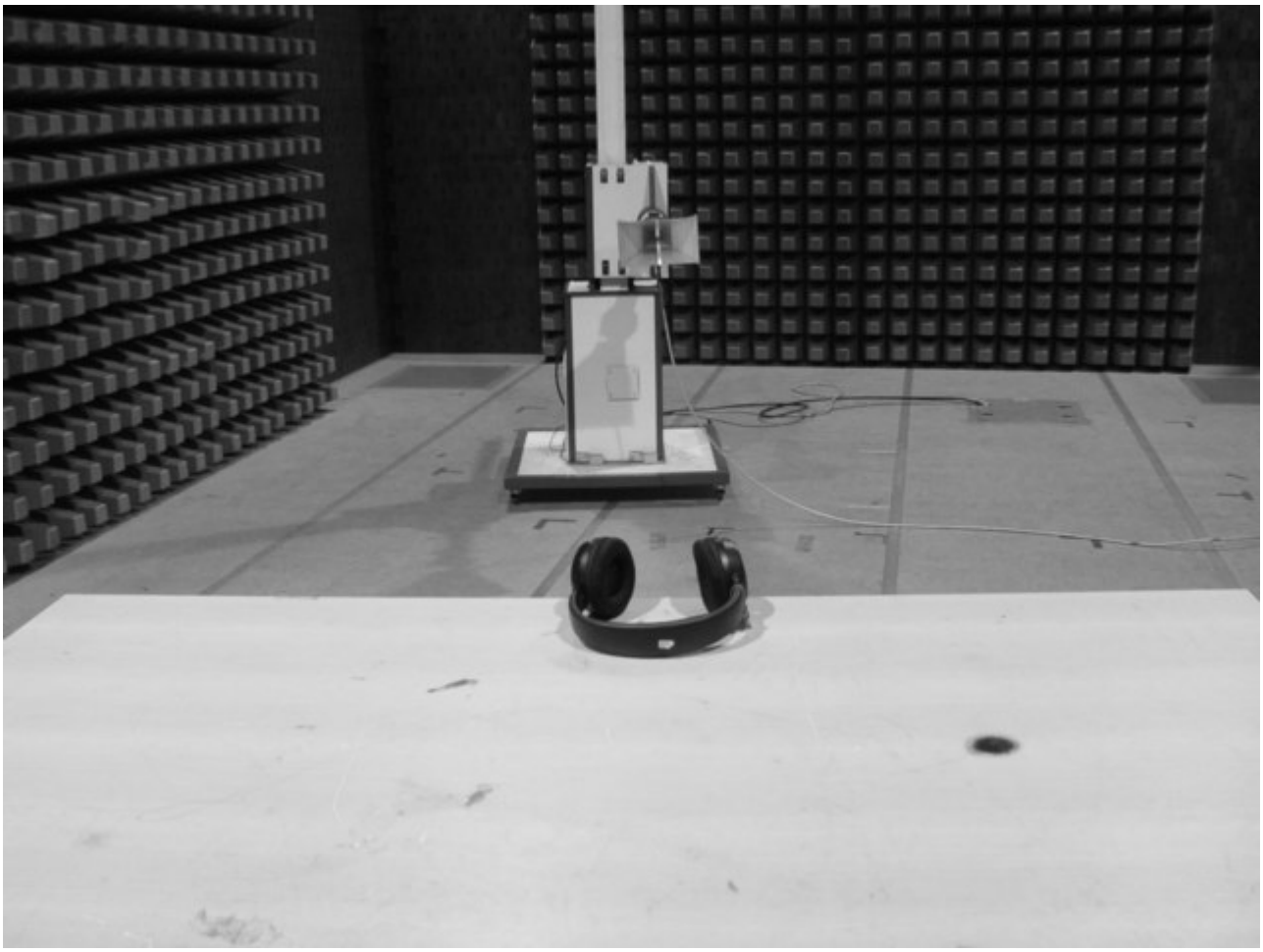
Injection frequency(Cellular) in MHz	Level 12dB SINAD at injected frequency in dBm	Rejection in dB	Limit in dB
824.04	>17	>40	38
836.00	>17	>40	38
848.97	>17	>40	38
869.04	>17	>40	38
881.00	>17	>40	38
893.97	>17	>40	38

6 Photographs of the Test Set-Up

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



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



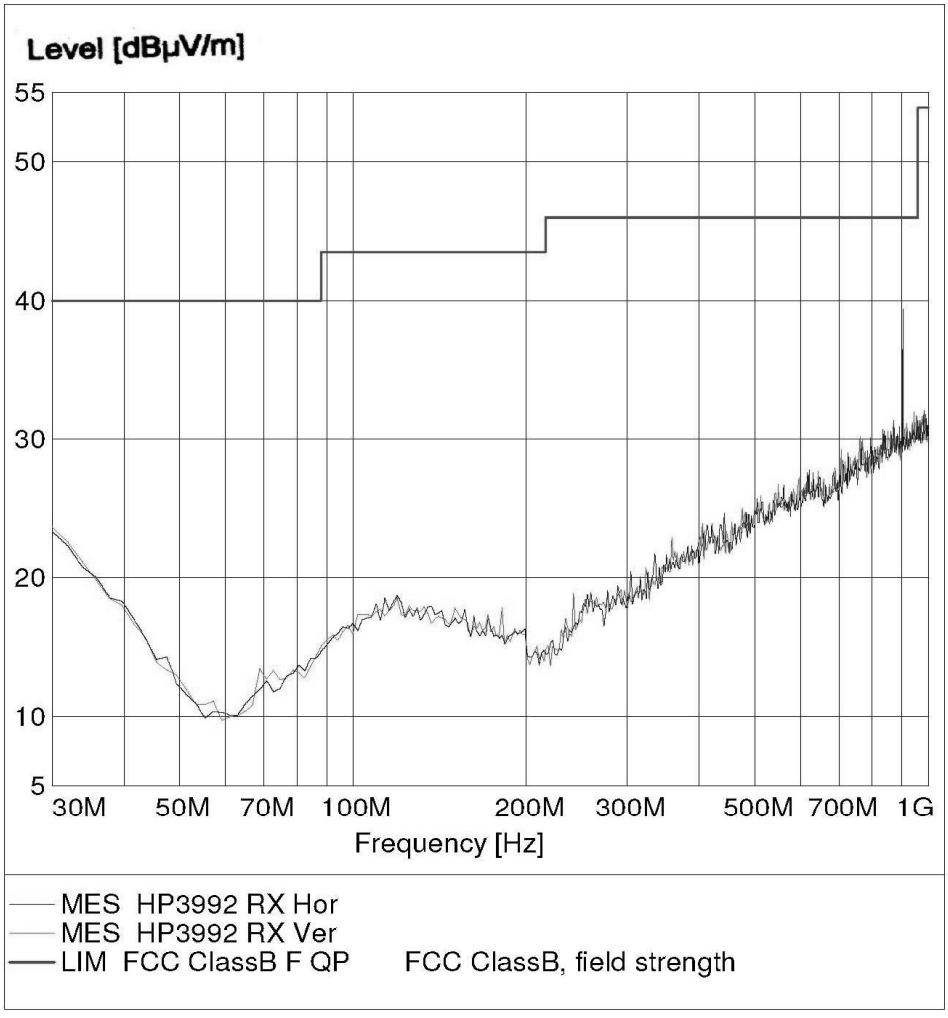
7 List of Tables

8 List of Photographs

Prüfbericht - Nr.: **16009965 001**
Test Report No.:

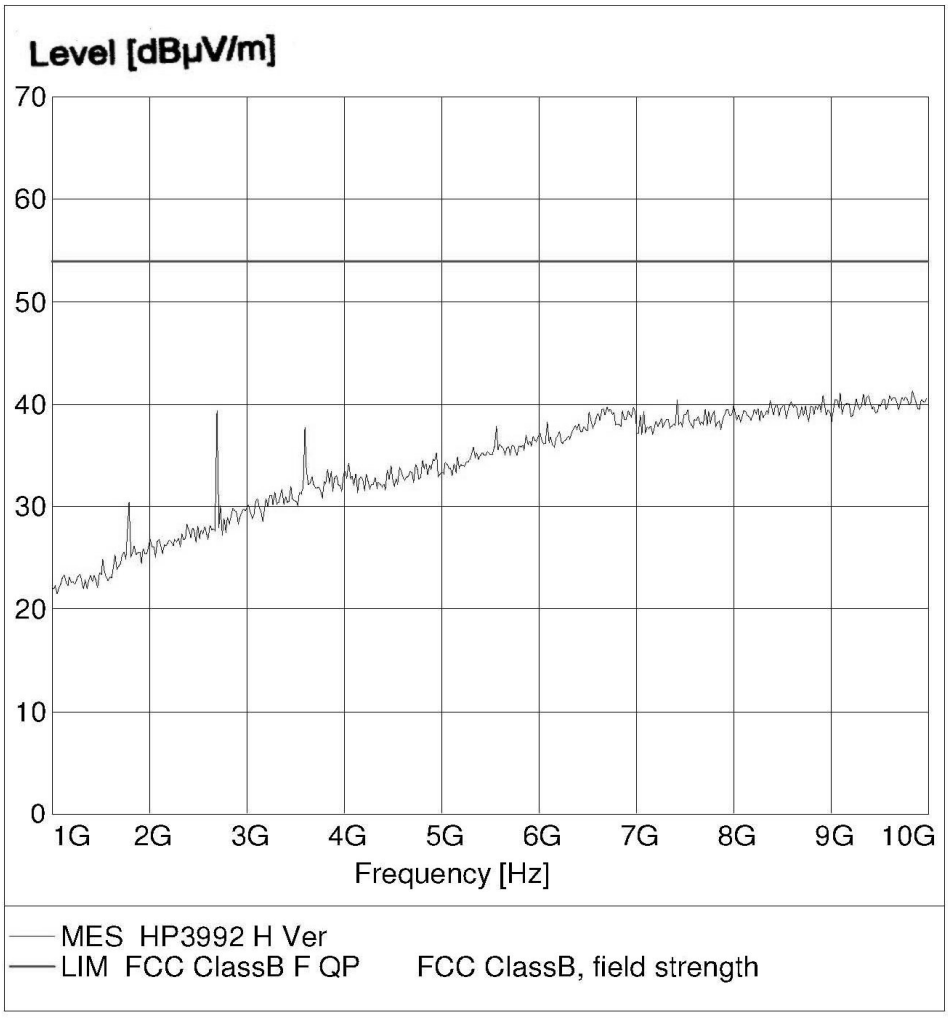
Radiated Disturbance

EUT: M/N:HP3992
Manufacturer:
Operating Condition: RX
Test Site: SMQ EMC Lab.SAC
Test Specification: Vertical & Horizontal
Comment :



Radiated Disturbance

EUT: M/N:HP3992
Manufacturer:
Operating Condition: RX
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification: Vertical
Comment:



Radiated Disturbance

EUT: M/N:HP3992
Manufacturer:
Operating Condition: RX
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification: Horizontal
Comment: