Prüfbericht - Nr.: *Test Report No.:*	**16004375 001**	**Seite 1 von 17** *Page 1 of 17*
Auftraggeber: *Client:*	**Classic Tech Development Ltd.** **11-12/F., YUE XIU IND'L BLDG.** **87 HUNG TO ROAD,** **KWUN TONG, KOWLOON** **HONG KONG**	
Gegenstand der Prüfung: *Test item:*	**Wireless Speaker Receiver**	
Bezeichnung: *Identification:*	**SP1792**	**FCC ID:** *FCC ID* **REDSP1792-001R**
Wareneingangs-Nr.: *Receipt No.:*	**73014652**	**Eingangsdatum:** *Date of receipt:* **15.12.2004**
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 C63.4:2001** **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** **38 dB rejection described at FCC Part 15 Subpart B section 15.121**	
Prüfergebnis: *Test Result:*	**Der vorstehend beschriebene Prüfgegenstand wurde geprüft und entspricht oben genannter Prüfgrundlage.** The a. m. test item passed.	

Prüflaboratorium/ *Testing Laboratory: TÜV Rheinland (Guangdong) Ltd*

zusammengestellt/ *compiled by:*			**kontrolliert/** *reviewed by:*		
03.01.2005	Dave Xie		10.01.2005	Yuxin Huang	
Datum *Date*	**Name** *Name*	**Unterschrift** *Signature*	**Datum** *Date*	**Name** *Name*	**Unterschrift** *Signature*

Sonstiges/ *Other Aspects:*

Abkürzungen:			*Abbreviations:*		
ok / P	=	*entspricht Prüfgrundlage*	*ok / P*	=	*passed*
fail / F	=	*entspricht nicht Prüfgrundlage*	*fail / F*	=	*failed*
n.a. / N	=	*nicht anwendbar*	*n.a. / N*	=	*not applicable*

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*

5.3 38 DB REJECTION SIGNAL FROM CELLULAR FREQUENCY BAND
RESULT: *ok*

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	29.01.2005
Horn Antenna	Rohde & Schwarz	HF906	100014	29.01.2005
3m Semi-anechoic chamber	Albatross Projects	9X6X6	----	29.01.2005
EMI Test Receiver	Rohde & Schwarz	ESI26	838786/013	29.01.2005
Communications Test Set	Rohde & Schwarz	CMU200	1100.0008.02	29.01.2005
Communications Test Set	HP	HP8920A	3438A05187	29.01.2005

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 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

3 General Product Information

Brief description of the test sample:

The submitted sample is Wireless Speaker Receiver with two operating frequencies. An auto scan function can be found in the sample: in case there is not signal detected, the local oscillator is continuously switching for these two receiving frequencies.

The submitted sample has also the function of volume, which the user can select.

3.1 Product Function and Intended Use

For details, refer to user manual.

3.2 Ratings and System Details

Frequency range	:	912.0MHz, 913.0MHz
Number of channels	:	2 (auto tunable)
Type of antenna	:	Integral antenna
FCC ID:		REDSP1792-001R
Power supply	:	DC 15V (Powered by AC/DC adaptor) (12V NiCd battery 1)
Ports	:	None
Protection Class	:	III

Refer to document for further information

3.3 Independent Operation Modes

The basic operation modes are:

Receiving with volume, SRS 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 AC/DC Adaptor:

Model	: JOD-48U-35
Input	: AC 120V 60Hz 225mA
Output	: DC 15V 1A
Protection class	: II

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

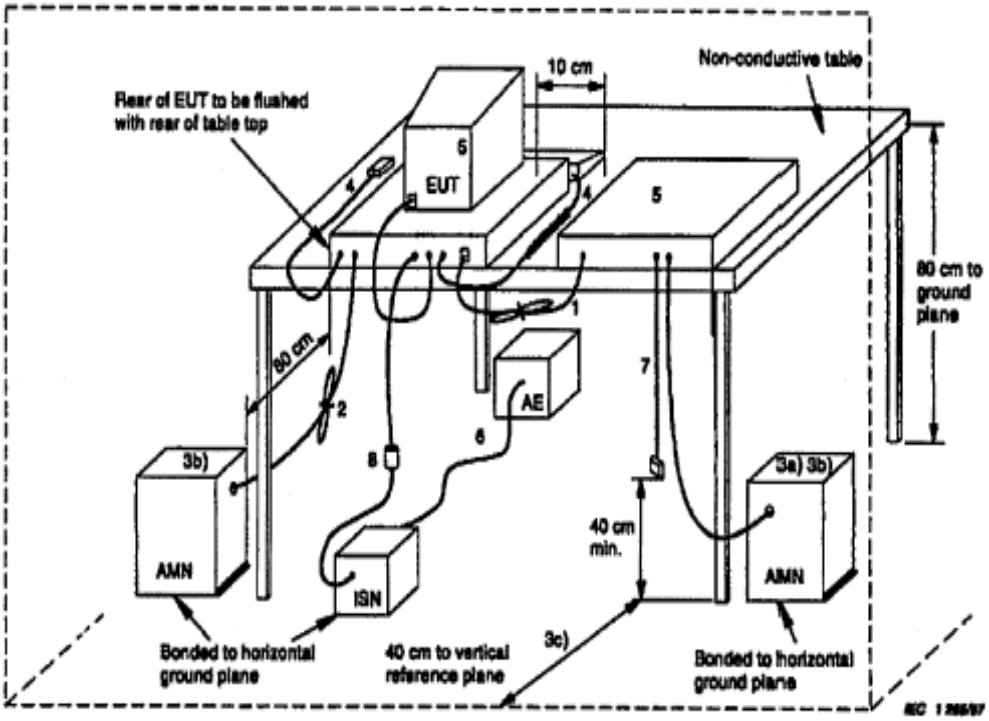
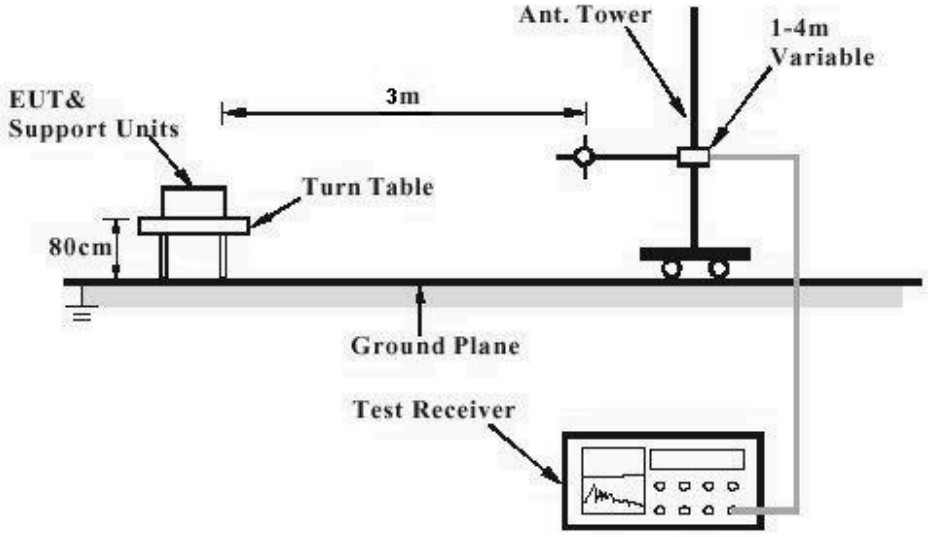


Diagram 2 of Measurement Equipment Configuration for Testing Radiated Emission



5 Test Results E M I S S I O N

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

RESULT: **ok**

Date of testing	:	10.12.2004
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	:	Receiving
Temperature	:	22°C
Humidity	:	40%

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.

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

Table 2: Disturbance Voltage on AC Mains

Frequency [MHz]	**Line**	**QP** [dBµV]	**AV** [dBµV]	**Quasi Peak Limit** [dBµV]	**Average Limit** [dBµV]
0.150	L	46.2	17.6	66	56
0.238	L	42.8	15.3	62.1	52.1
0.324	L	39.9	13.7	59.6	49.6
0.752	L	32.7	8.3	56	46
0.150	N	46.0	17.5	66	56
0.238	N	42.8	15.3	62.1	52.1
0.325	N	40.5	13.8	59.6	49.6
0.778	N	32.9	8.4	56	46

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

RESULT: **ok**

Date of testing	:	14.12.2004
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	:	22°C
Humidity	:	46%

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** [dBµV/m]	**AV** [dBµV/m]	**Polarity**	**Limit** [dBµV/m]
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5.3 38 dB rejection signal from Cellular Frequency band

RESULT: **ok**

Date of testing	:	14.12.2004
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

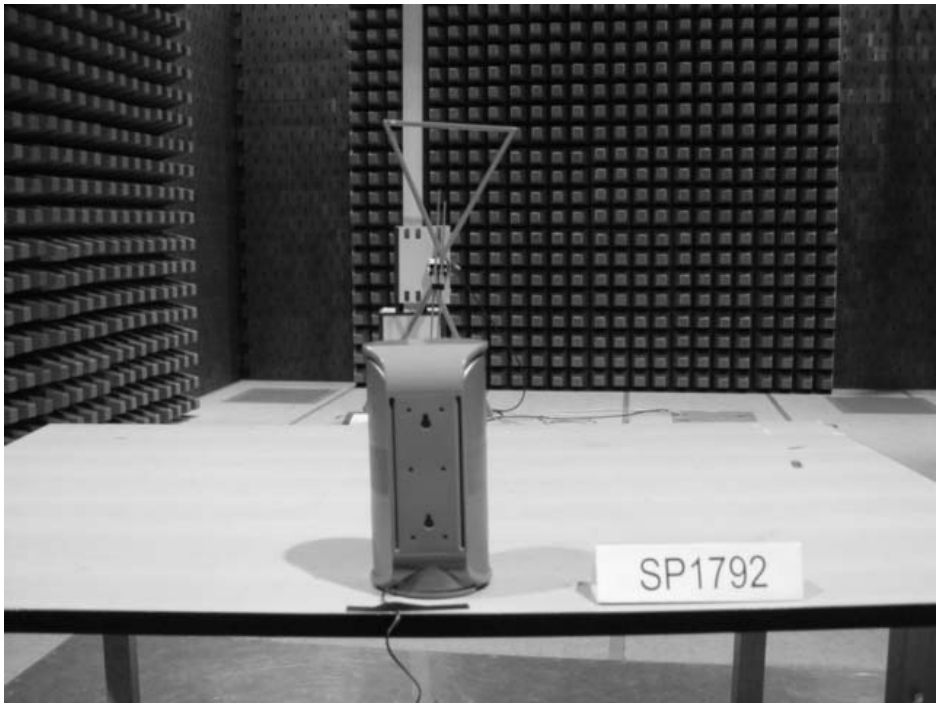
Table 4 : 38 dB Rejection

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

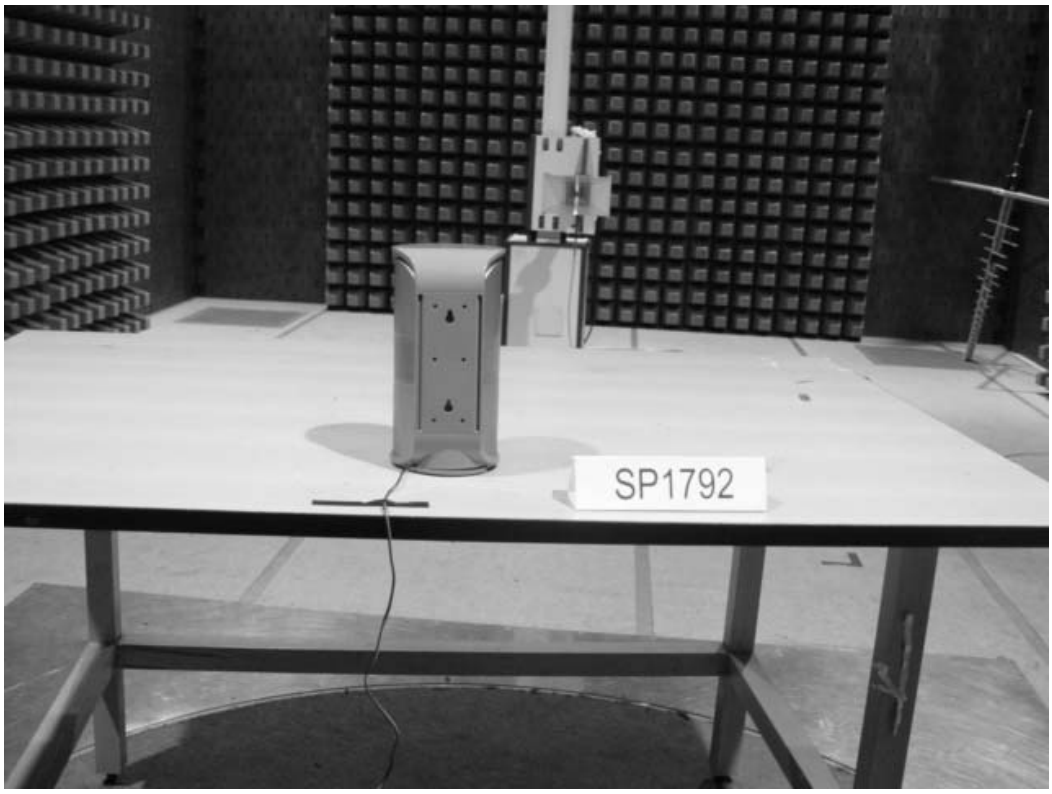
6 Photographs of the Test Set-Up

Photograph 1: Set up for Conducted Emission on AC Mains

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



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



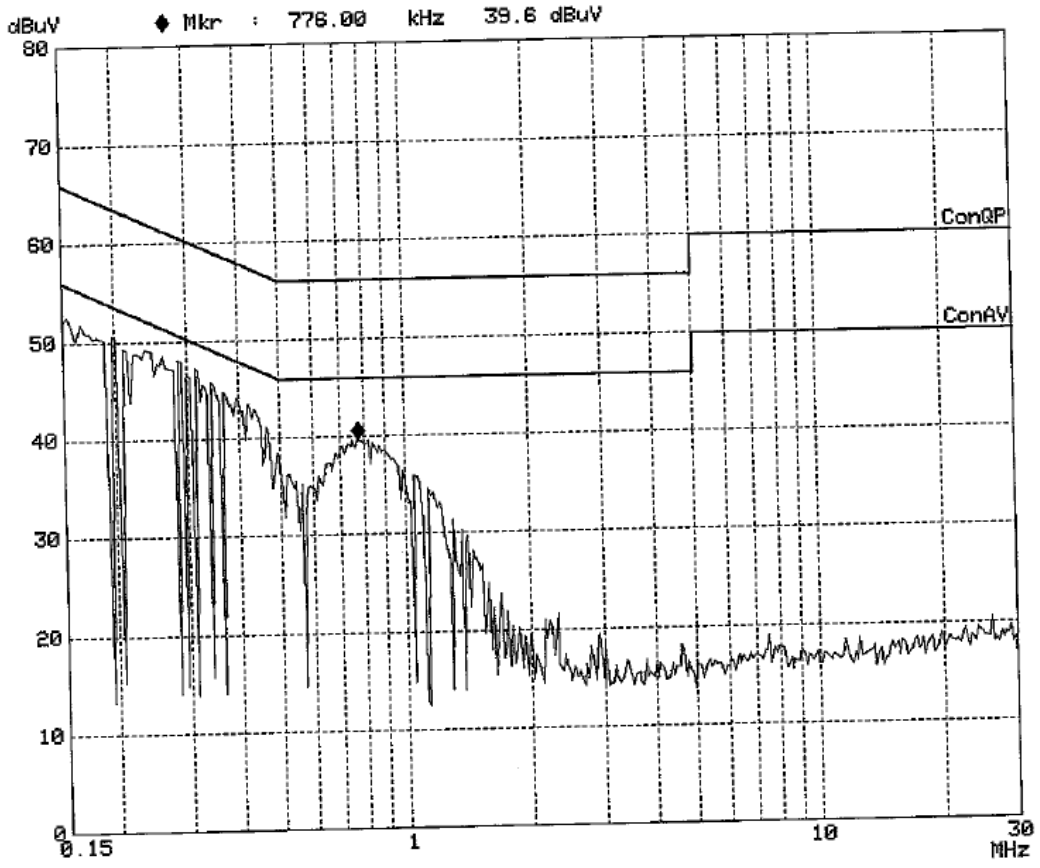
7 List of Tables

8 List of Photographs

Prüfbericht - Nr.: 16004375 001
Test Report No.:

Conducted Disturbance

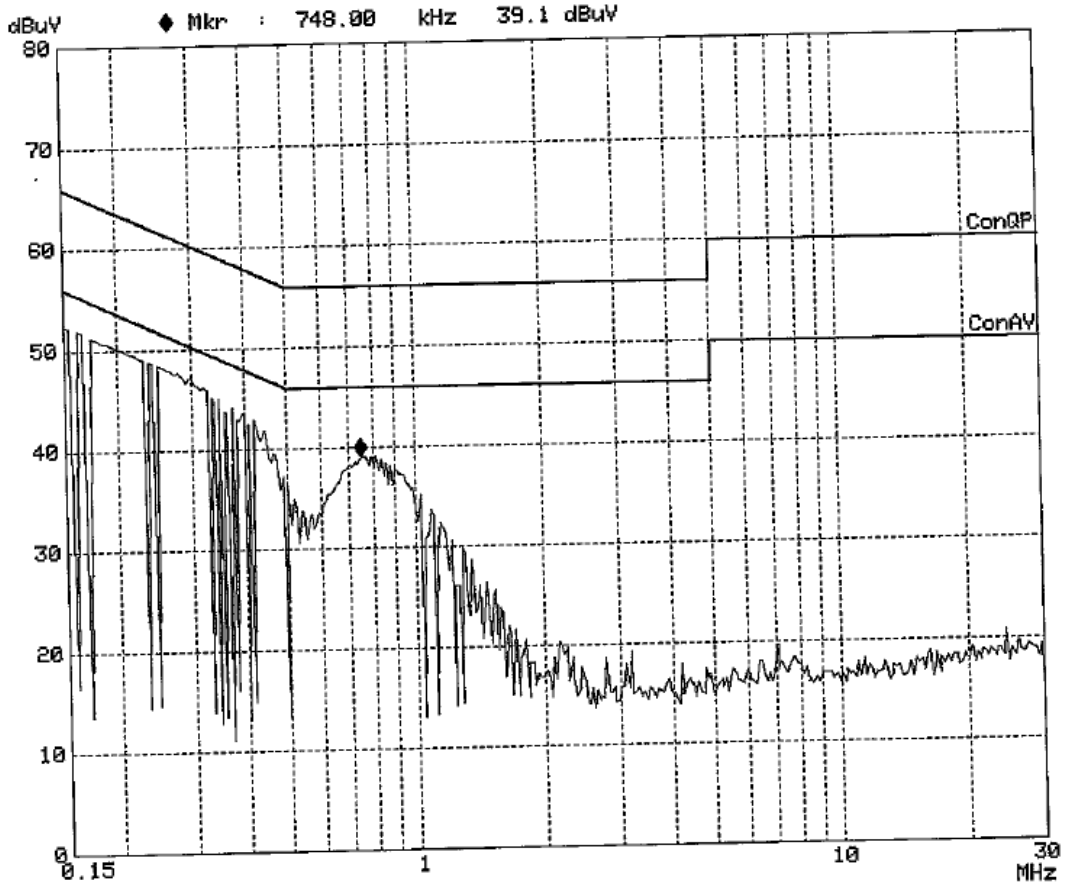
EUT:	M/N:SP1792
Op Cond:	RX
Test Spec:	N
Comment:	AC 120V/60Hz
Date:	10. Dec 04 10:22



Prüfbericht - Nr.: 16004375 001
Test Report No.:

Conducted Disturbance

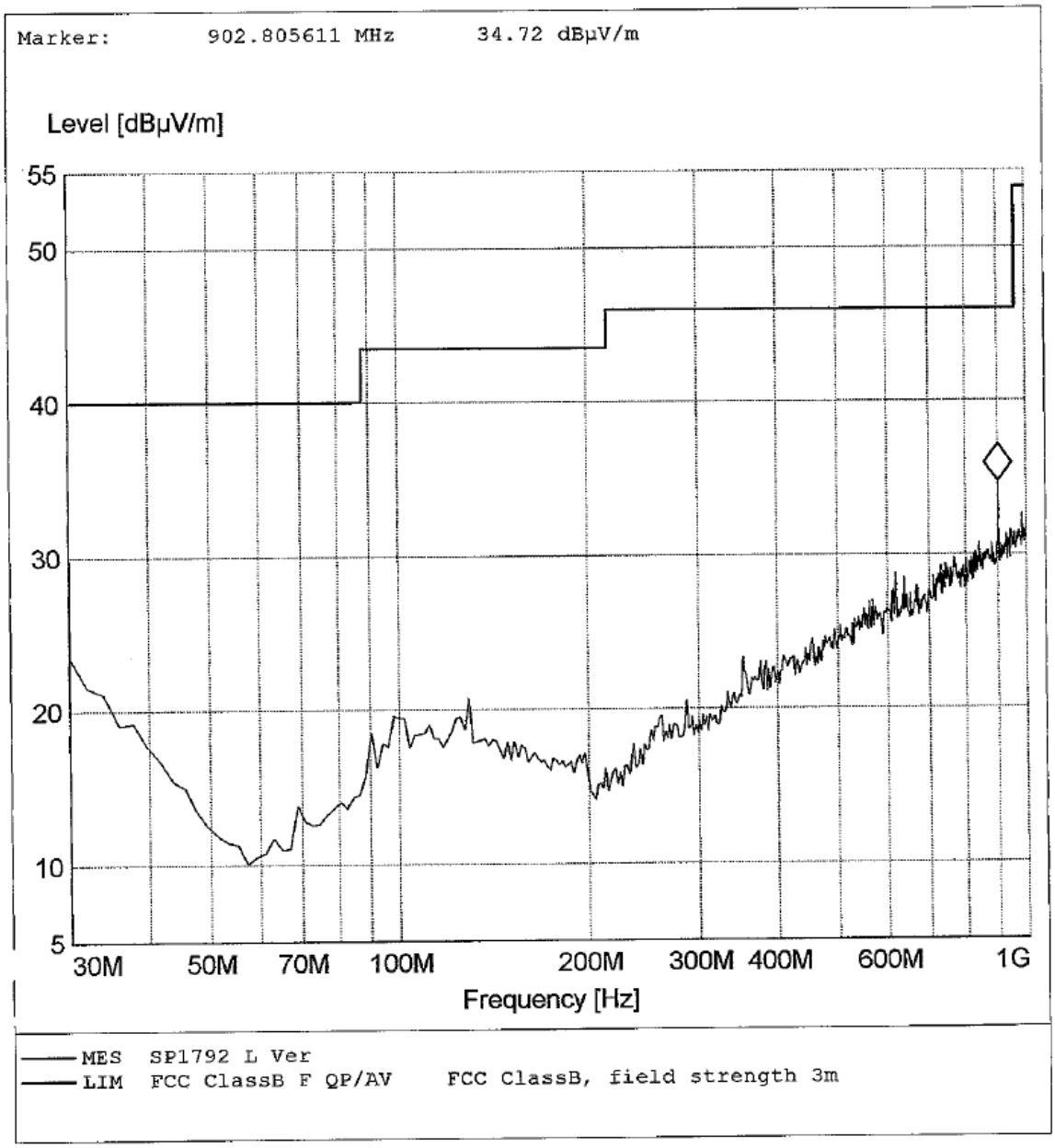
EUT:	M/N:SP1792
Op Cond:	RX
Test Spec:	L
Comment:	AC 120V/60Hz
Date:	10. Dec 04 10:27



Radiated Disturbance

FCC Part15

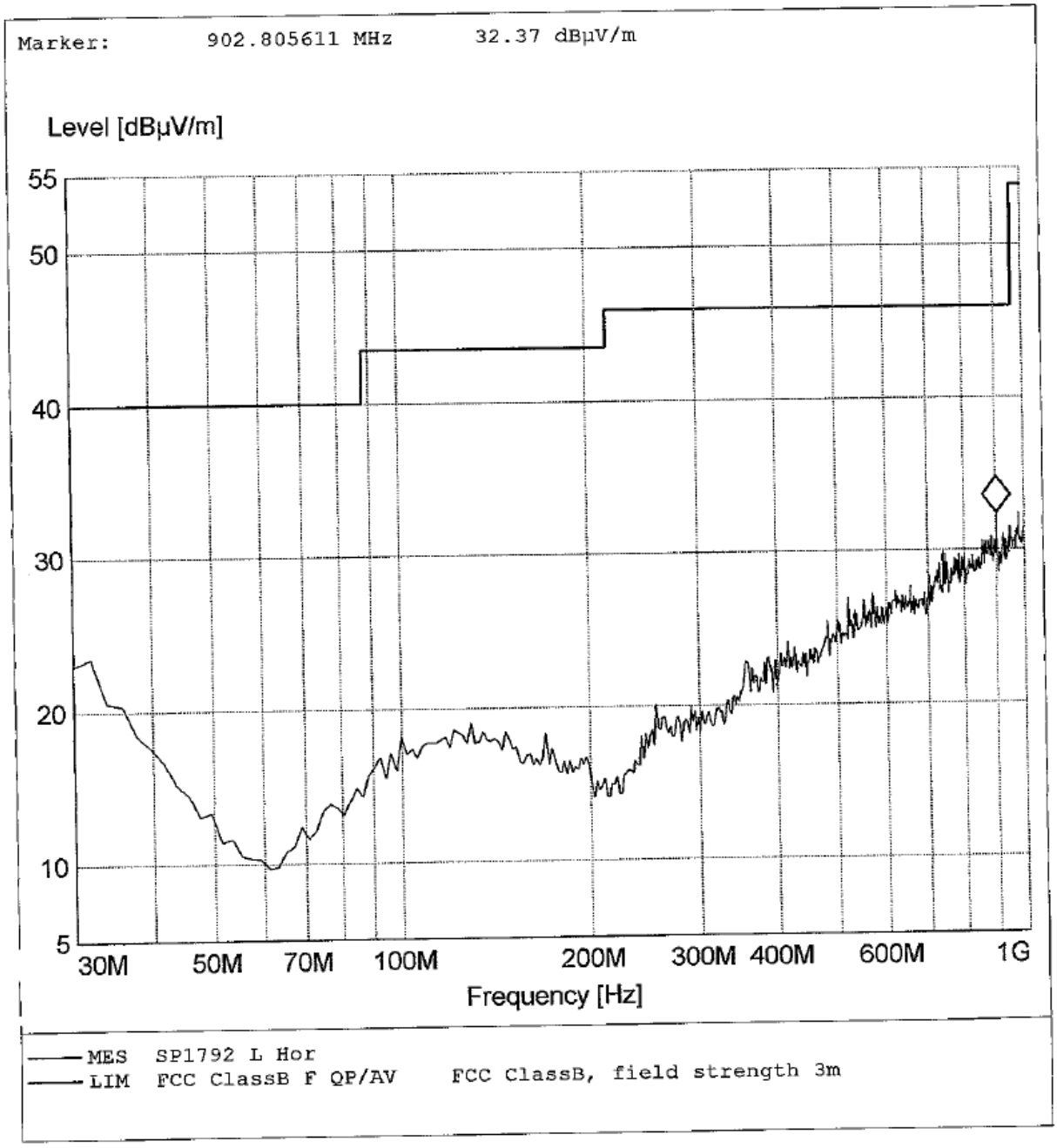
EUT: M/N:SP1792
Manufacturer:
Operating Condition: RX (Ch1)
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification: Vertical
Comment: AC 120V/60Hz



Radiated Disturbance

FCC Part15

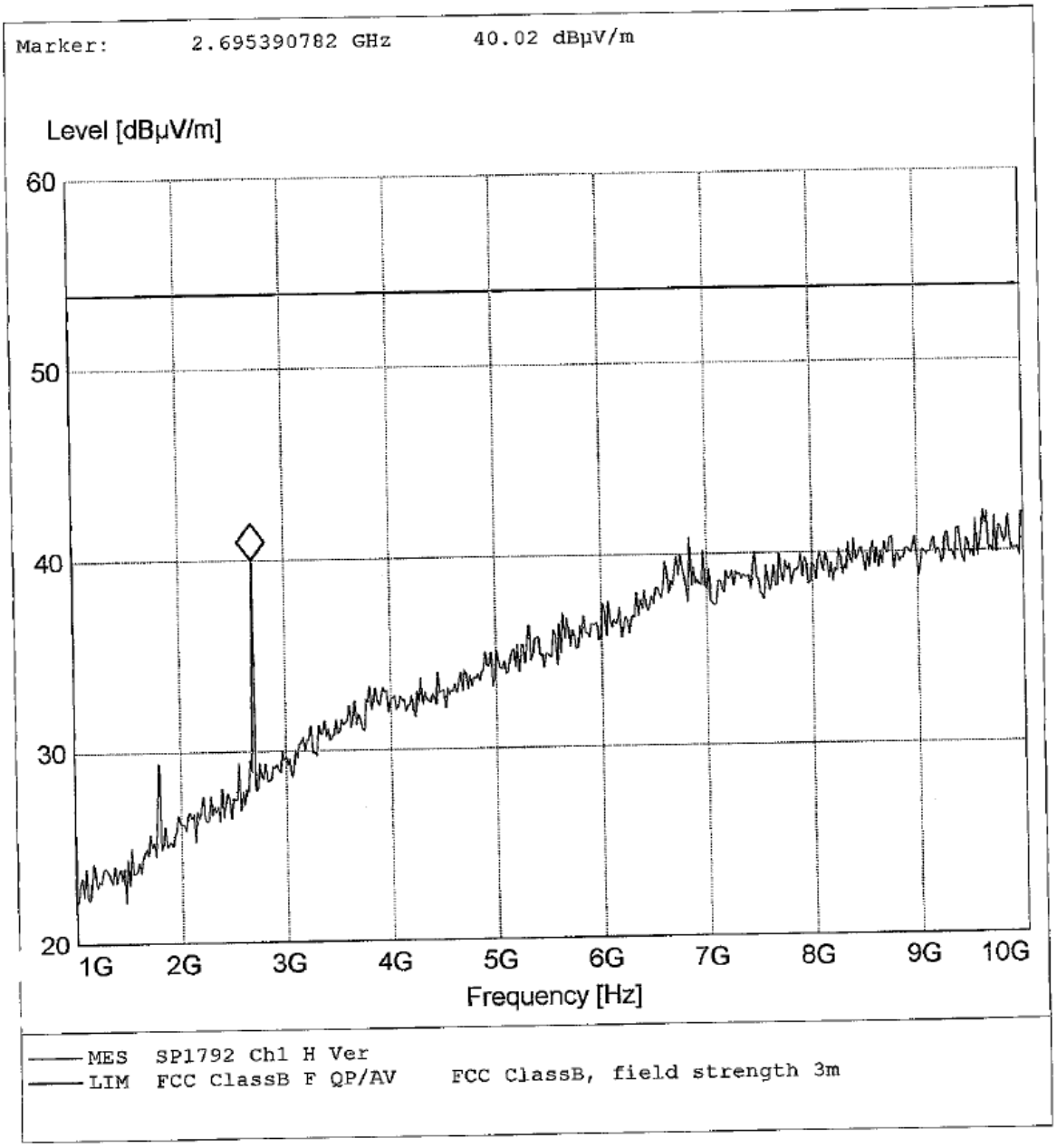
EUT: M/N:SP1792
Manufacturer:
Operating Condition: RX (Ch1)
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification: Horizontal
Comment: AC 120V/60Hz



Radiated Disturbance

Fcc part15

EUT: M/N:SP1792
Manufacturer:
Operating Condition: RX (Ch1)
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification: Vertical
Comment: AC 120V/60Hz



Radiated Disturbance

Fcc part15

EUT: M/N:SP1792
Manufacturer:
Operating Condition: RX (Ch1)
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification: Horizontal
Comment: AC 120V/60Hz