Prüfbericht - Nr.: *Test Report No.:*	**16002983 001**	**Seite 1 von 15** *Page 1 of 15*

Auftraggeber: *Client:*	**G.tech Technology Ltd.** **No.21, Jinding Industrial Park, West Jinfeng Road** **Tangjiawan, Zhuhai, Guangdong, 519085** **P. R. China**		
Gegenstand der Prüfung: *Test item:*	**Wireless mouse**		
Bezeichnung: *Identification:*	**P7202**	**FCC ID:** *FCC ID*	**OO9P7202**
Wareneingangs-Nr.: *Receipt No.:*	**73011887**	**Eingangsdatum:** *Date of receipt:*	**11.05.2004**
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 C section 15.207** **Radiated Emissions with limits described at FCC Part 15 Subpart C section 15.209 and 15.227**		
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**/ *checked by:*		
26.06.2004	Dave Xie	Dave Xie	08.07.2004	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 15.207(A)
RESULT: *n.a.*

5.2 RADIATED EMISSION FOR FCC PART 15 PER SECTION 15.209(A)
RESULT: *ok*

5.3 FUNDAMENTAL AND HARMONICS RADIATED EMISSION FOR FCC PART 15 PER SECTION 15.227
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
EMI Test Receiver	Rohde & Schwarz	ESI26	838786/013	29.01.2005
Signal Generator	Rohde & Schwarz	SMR20	100047	01.02.2005
Bilog Antenna	Chase	CBL6112B	2591	29.01.2005
3m Semi-anechoic chamber	Albatross Projects	9X6X6	----	29.01.2005
Loop Antenna	Schwarzbeck	FMZB1516	113	31.01.2005

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 P7202 is wireless mouse, which has five buttons: left button, right button, mid-button, fourth and fifth buttons.

3.1 Product Function and Intended Use

The submitted samples are wireless mouse, the transmitter, which declared channel frequency 26.995MHz and 27.145MHz.

For details, refer to technical document and the user manual.

3.2 Ratings and System Details

Frequency range	:	26.96-27.28MHz
Number of channels	:	2 channels
Type of antenna	:	Integral antenna
FCC ID:		OO9P7202
Power supply	:	DC 2.4V (“AAA” type 1.2V NiCd battery 2x)
Ports	:	None
Protection Class	:	III

Refer to the technical document for further information

3.3 Independent Operation Modes

The basic operation modes are:

Transmitting and standby

For further information refer to User Manual

3.4 Submitted Documents

Block Diagram
Circuit Diagram
Components List
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 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

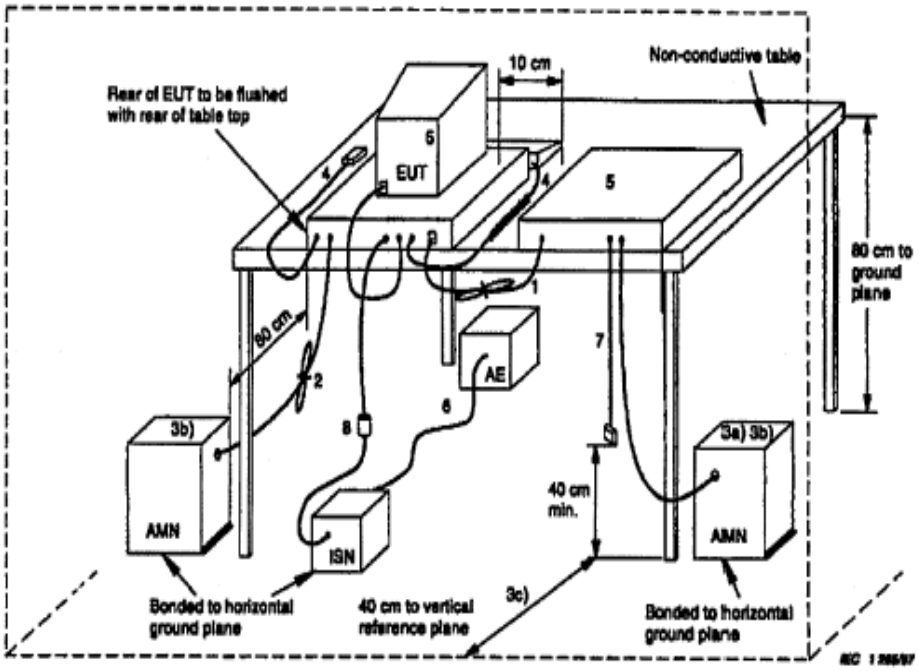
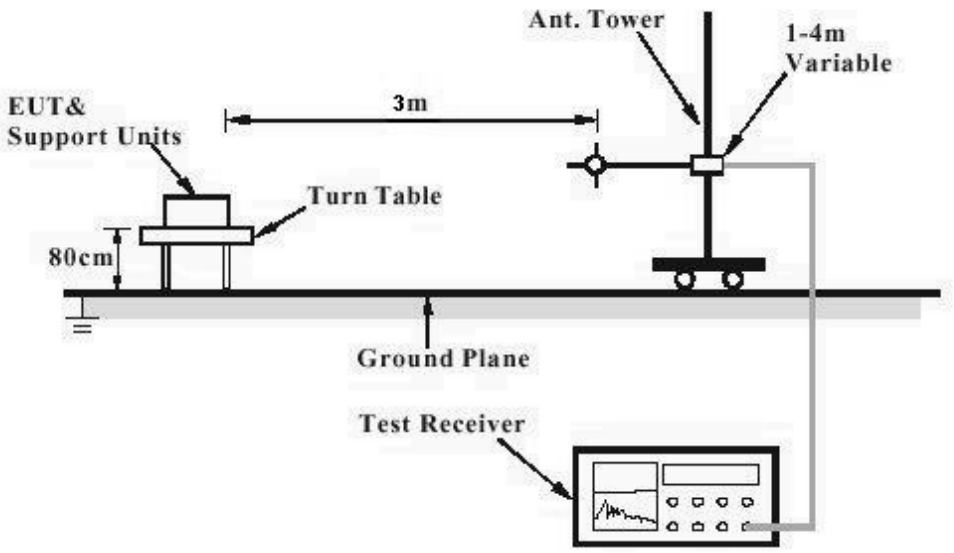


Diagram 2 of Measurement Equipment Configuration for Testing Radiated Emission



5 Test Results E M I S S I O N

5.1 Conducted Emission for FCC Part 15 Per Section 15.207(a)

RESULT: **n.a.**

Date of testing	:	---
Test specification	:	FCC Part 15 Per Section 15.207(a)
Deviations from Standard Test procedures	:	None
Test procedure		n.a.
Kind of test site	:	Shielded room

There is no connection available for mains.

5.2 Radiated Emission for FCC Part 15 Per Section 15.209(a)

RESULT: **ok**

Date of testing	:	09.06.2004
Test specification	:	FCC Part 15 Per Section 15.209(a)
Limits	:	FCC Part 15 Per Section 15.209(a)
Deviations from Standard Test procedures	:	None
Test procedure		Procedure specified in ANSI C63.4 were followed
Kind of test site	:	3m Semi-anechoic chamber
Operation mode	:	Transmitting at channel 1
Temperature	:	22°C
Humidity	:	65%

The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak 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 [kHz]	**QP** [dBµV/m]	**AV** [dBµV/m]	**Polarity**	**Limit** [dBµV/m]
61.653	n.a.	56.6	n.a.	71.8
100.531	58.9	n.a.	n.a.	67.6
120.812	n.a.	50.6	n.a.	66.0

5.3 Fundamental and Harmonics Radiated Emission for FCC Part 15 Per Section 15.227

RESULT: **ok**

Date of testing	:	09.06.2004
Test specification	:	FCC Part 15 Per Section 15.227
Limits	:	FCC Part 15 Per Section 15.227 and 15.209
Deviations from Standard Test procedures	:	None
Test procedure		Procedure specified in ANSI C63.4 were followed
Kind of test site	:	3m Semi-anechoic chamber
Operation mode	:	Transmitting at channel 1
Temperature	:	22°C
Humidity	:	65%

Table 3: Fundamental Radiated Emissions

Test conditions		Fundamental Frequency	
		Channel 1 (26.9969MHz)	
T_{nom}(22°C)	Unit	(dBµV/m)	(mV/m)
	Read value (Average/Peak):	39.9/39.9	0.0989/0.0989
Limit (Average/Peak):		80/100	10/100
Note: Measurement was performed with modulated signal with average detector and peak detector.			

Table 4: Harmonics Radiated Emission

Frequency [MHz]	**QP** [dBµV/m]	**AV** [dBµV/m]	**Polarity**	**Limit** [dBµV/m]
161.965	38.02	---	H	43.5
242.969	27.45	---	H	46.0
863.887	40.89	---	H	46.0
863.917	33.54	---	V	46.0

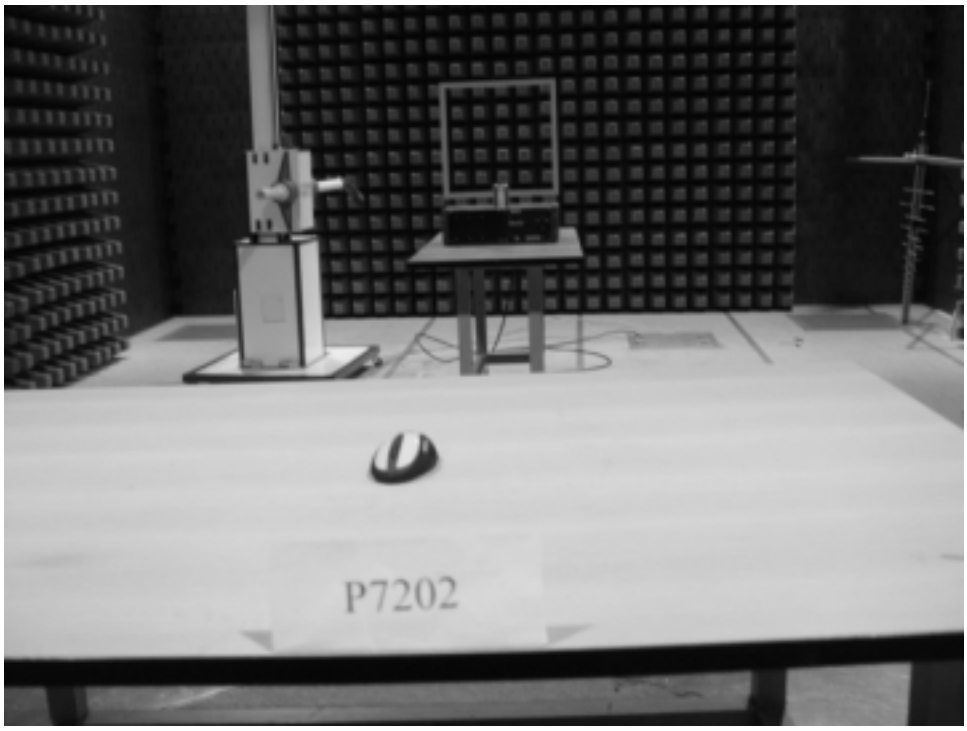
The final measurement for frequencies below 1000MHz is performed with Quasi Peak detector; the final measurement for frequencies above 1000MHz is performed with Average detector.

Disturbances other than those mentioned are small or not detectable.

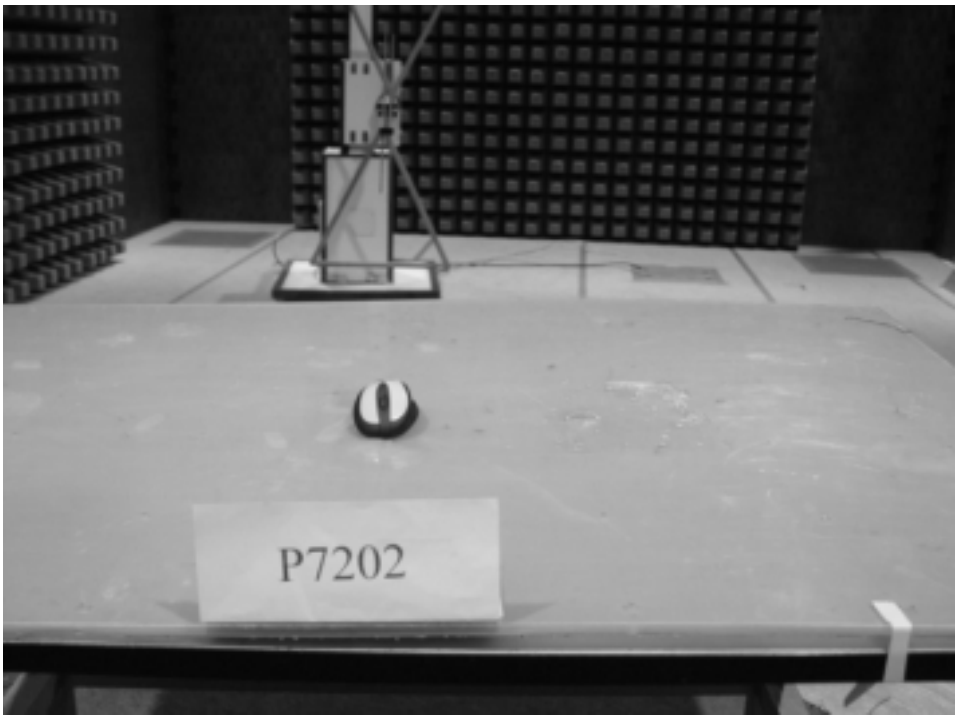
The spectral diagrams in appendix 1 display the measurement of un-weighted peak values.

6 Photographs of the Test Set-Up

Photograph 1: Set-up for Radiation Measurement Below 30MHz



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



7 List of Tables

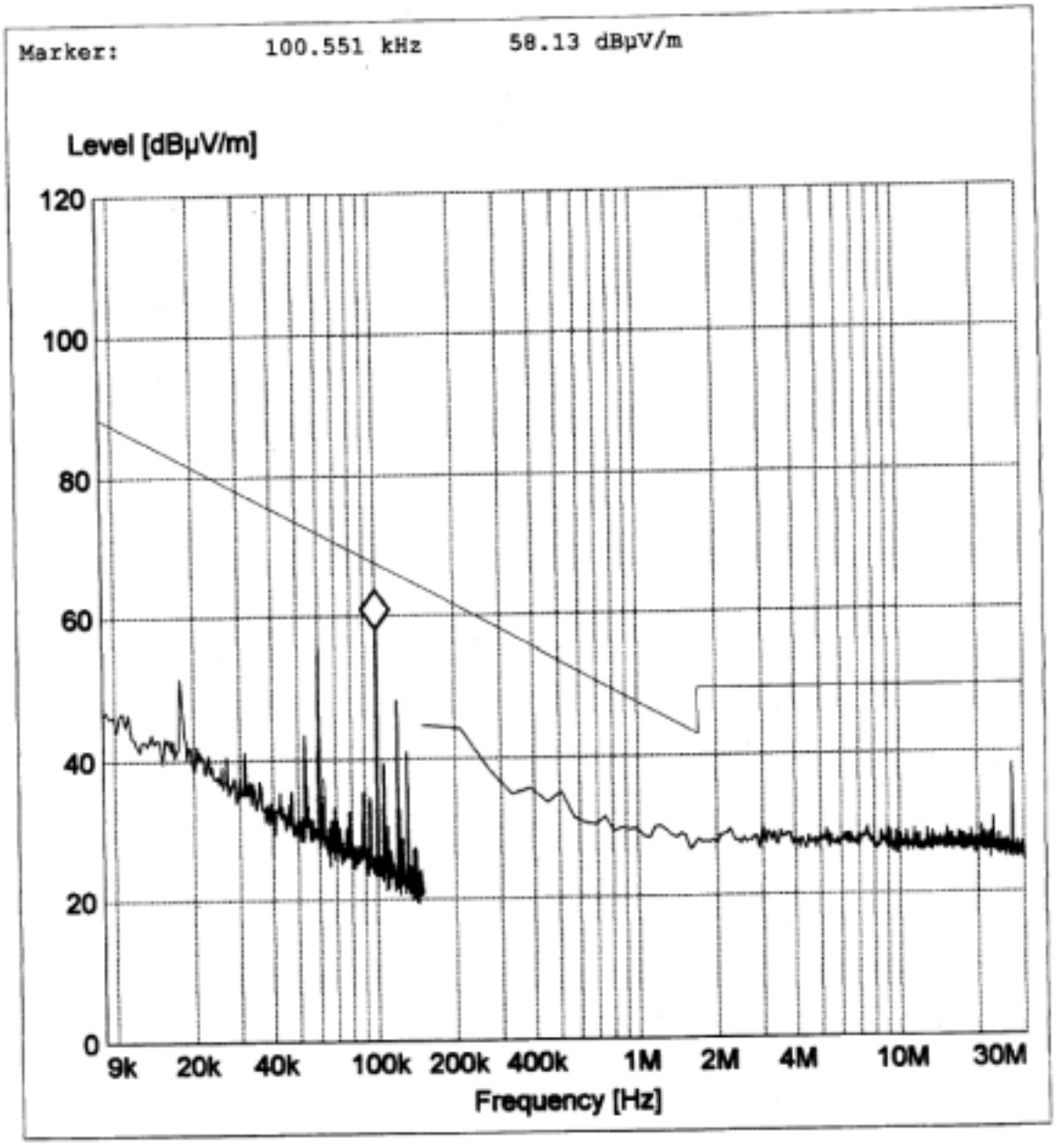
8 List of Photographs

Prüfbericht - Nr.: **16002983 001**
Test Report No.:

Radiated emissions

IC RSS-210

EUT: Wireless mouse M/N:P7202
Manufacturer:
Operating Condition: TX
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification:
Comment: DC 3.0V



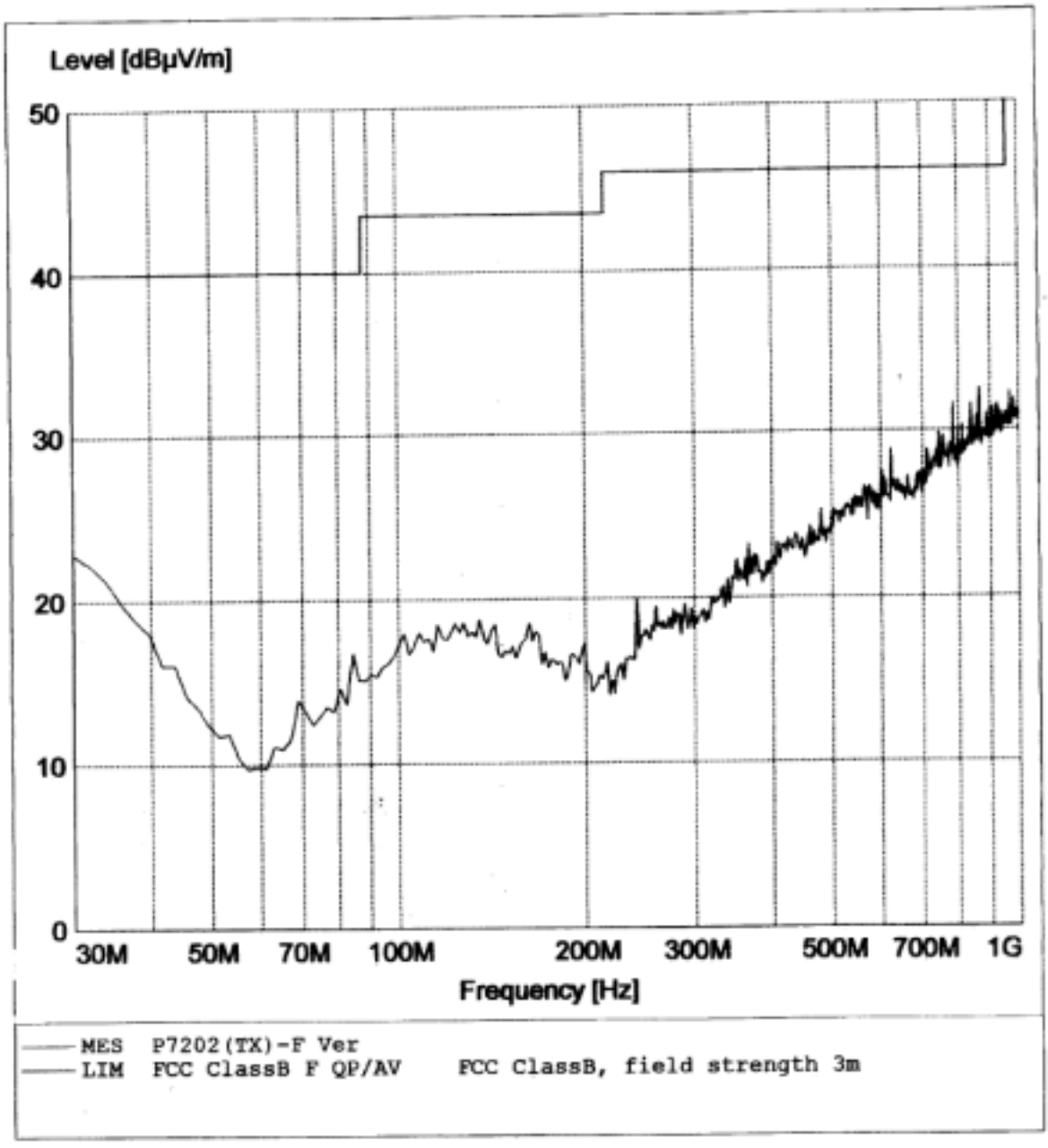
Page 1/1 6/22/04 3:49PM

Prüfbericht - Nr.: **16002983 001**
Test Report No.:

Radiated Disturbance

FCC Class B

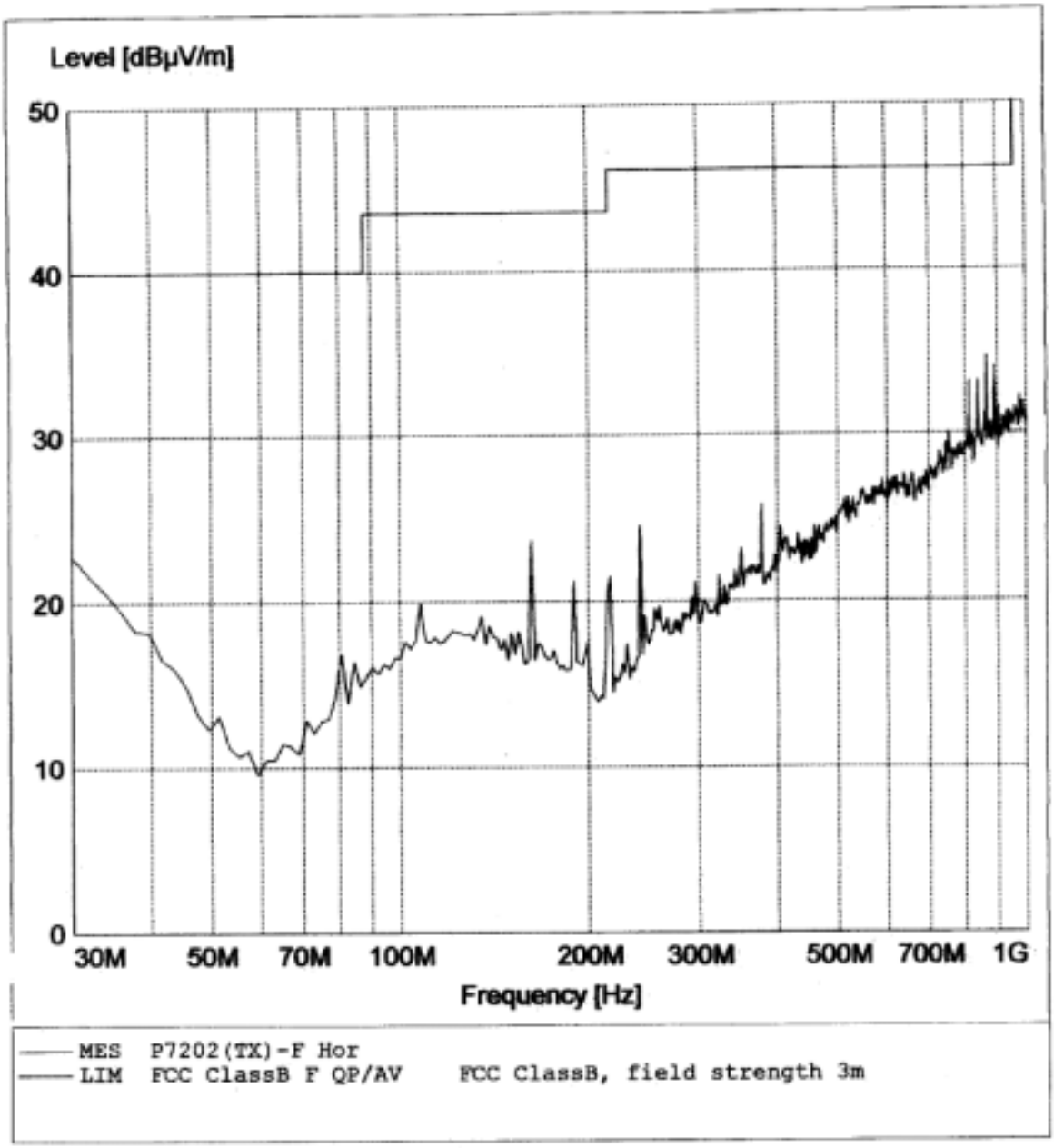
EUT:	Mouse M/N:P7202
Manufacturer:	
Operating Condition:	TX
Test Site:	SMQ EMC Lab.SAC
Operator:	
Test Specification:	Vertical
Comment:	AC 120V/60Hz



Radiated Disturbance

FCC Class B

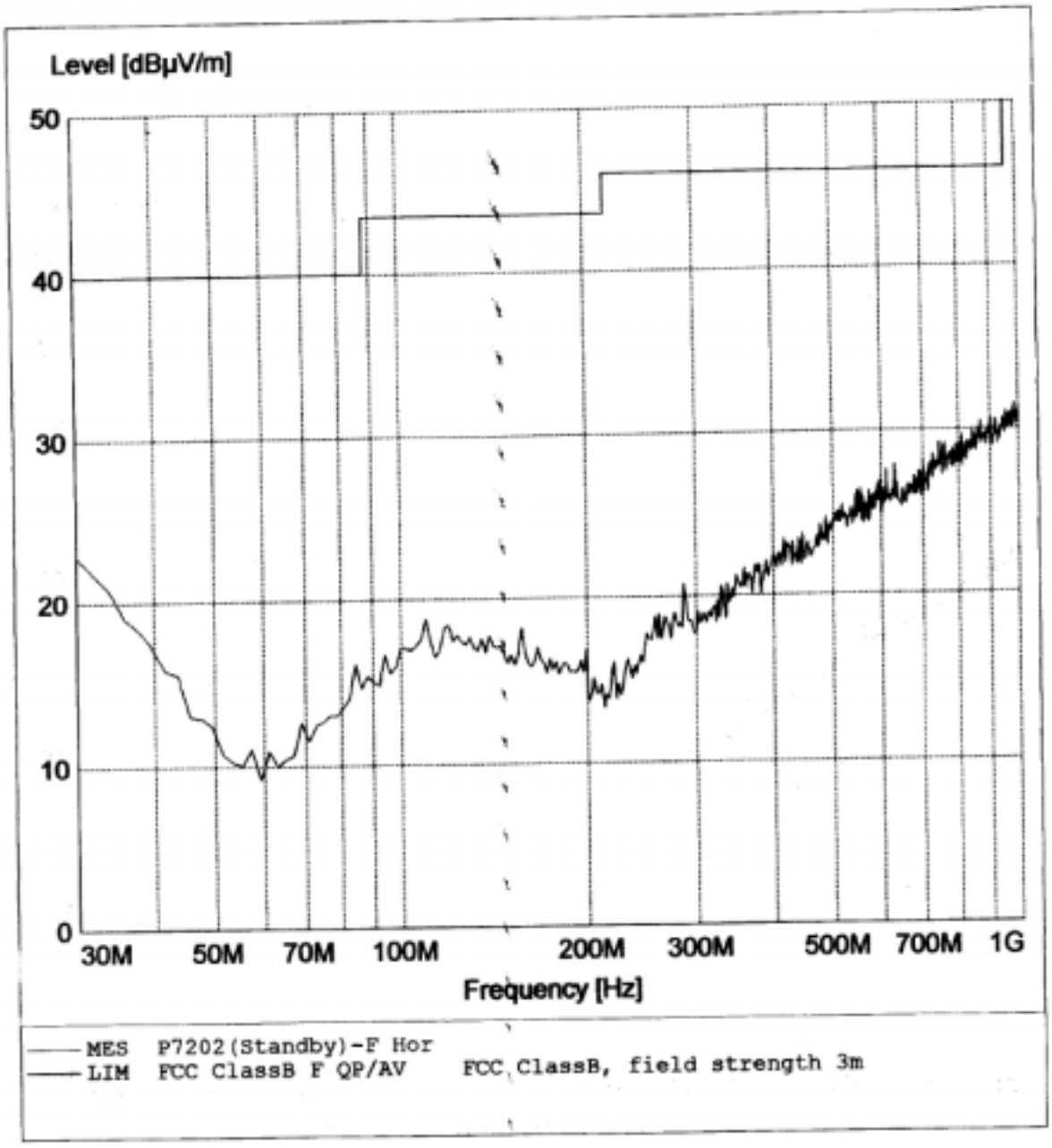
EUT: Mouse M/N:P7202
Manufacturer:
Operating Condition: TX
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification: Horizontal
Comment: AC 120V/60Hz



Radiated Disturbance

FCC Class B

EUT:	Mouse M/N:P7202
Manufacturer:	
Operating Condition:	Standby
Test Site:	SMQ EMC Lab.SAC
Operator:	
Test Specification:	Horizontal
Comment:	AC 120V/60Hz



Prüfbericht - Nr.: **16002983 001**
Test Report No.:

Radiated Disturbance

FCC Class B

EUT:	Mouse M/N:P7202
Manufacturer:	
Operating Condition:	Standby
Test Site:	SMQ EMC Lab.SAC
Operator:	
Test Specification:	Vertical
Comment:	AC 120V/60Hz