Prüfbericht - Nr.: *Test Report No.:*	**16004610 001**	**Seite 1 von 16** *Page 1 of 16*
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:*	**P6901**	**FCC ID:** *FCC ID* **OO9P6901**
Wareneingangs-Nr.: *Receipt No.:*	**173015111**	**Eingangsdatum:** *Date of receipt:* **18.01.2005**
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 the test specification.*	
Prüflaboratorium: *Testing Laboratory:*	**TÜV Rheinland (Guangdong) Ltd.**	

zusammengestellt/ *compiled by*: **kontrolliert/** *checked by:*

Datum / *Date*	Name / *Name*	Unterschrift / *Signature*	Datum / *Date*	Name / *Name*	Unterschrift / *Signature*
02.02.2005	Dave Xie		03.02.2005	Yuxin Huang	

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: *ok*

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 P6901 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 sample is wireless mouse, the transmitter, which declared channel frequency 27.145MHz.

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

3.2 Ratings and System Details

		Transmission
Frequency range	:	26.995-27.195MHz
Number of channels	:	1
Channel spacing	:	10kHz
Type of antenna	:	Integral antenna
FCC ID:		OO9P6901
Power supply	:	2.4V DC (“AA” batteries 2x, Ni-MH)
Ports	:	Charge port
Protection Class	:	III

Refer to the technical document for further information

3.3 Independent Operation Modes

The basic operation modes are:

Transmitting, standby and charging

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

While EUT is charging through receiver R6901FS and AC/DC adaptor, it can be connected to AC main, the specification of adaptor is as below:

Model	: SY-07300
Input	: AC 120V/ 60Hz / 100mA
Output	: DC 7.5V / 300mA
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 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

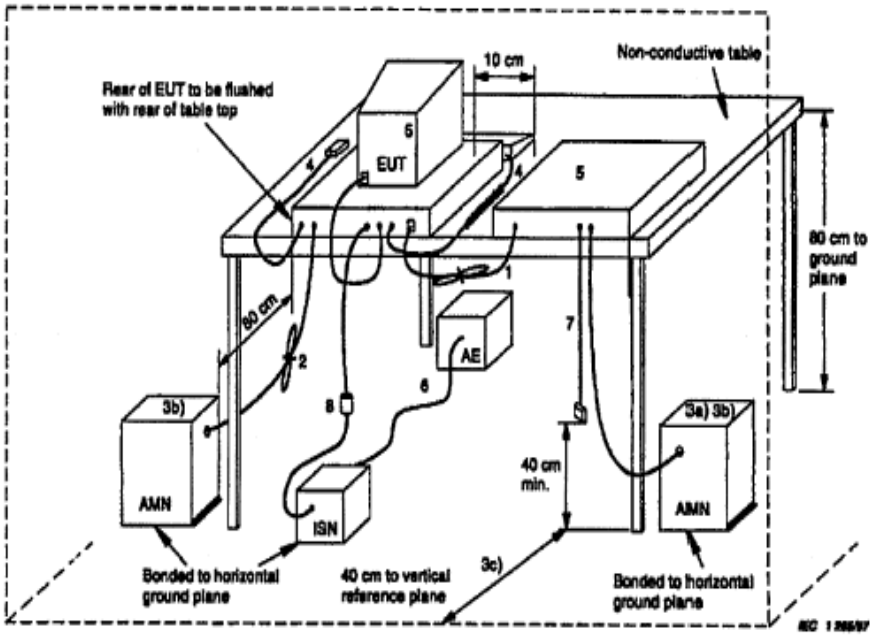
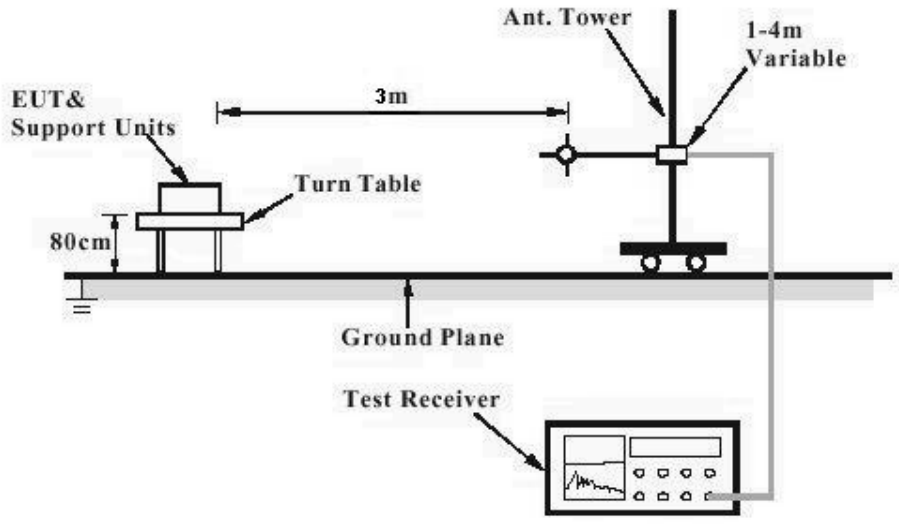


Diagram 2 of Measurement Equipment Configuration for Testing Radiated Emission



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: **ok**

Date of testing	:	24.01.2005
Test specification	:	FCC Part 15 Per Section 15.207(a)
Limits	:	FCC Part 15 Per Section 15.207(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 (EUT was connected to AC power lines via related receiver with AC/DC adaptor)
Temperature	:	22°C
Humidity	:	65%

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]
---*					

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

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

RESULT: **ok**

Date of testing	:	18.01.2005
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 3: Radiated Emission

Frequency [kHz]	**QP** [dBµV/m]	**AV** [dBµV/m]	**Polarity**	**Limit** [dBµV/m]

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

RESULT: **ok**

Date of testing	:	18.01.2005
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	:	20°C
Humidity	:	42%

Table 4: Fundamental Radiated Emissions

Test conditions		Fundamental Frequency	
		Channel 1 (27.147MHz)	
T_{nom}(22°C)	Unit	(dBµV/m)	(mV/m)
	Read value (Average/Peak):	46.7/46.7	0.216/0.216
Limit (Average/Peak):		80/100	10/100
Note: Measurement was performed with modulated signal with average detector and peak detector.			

Table 5: Harmonics Radiated Emission

Frequency [MHz]	**QP** [dBµV/m]	**AV** [dBµV/m]	**Polarity**	**Limit** [dBµV/m]

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.

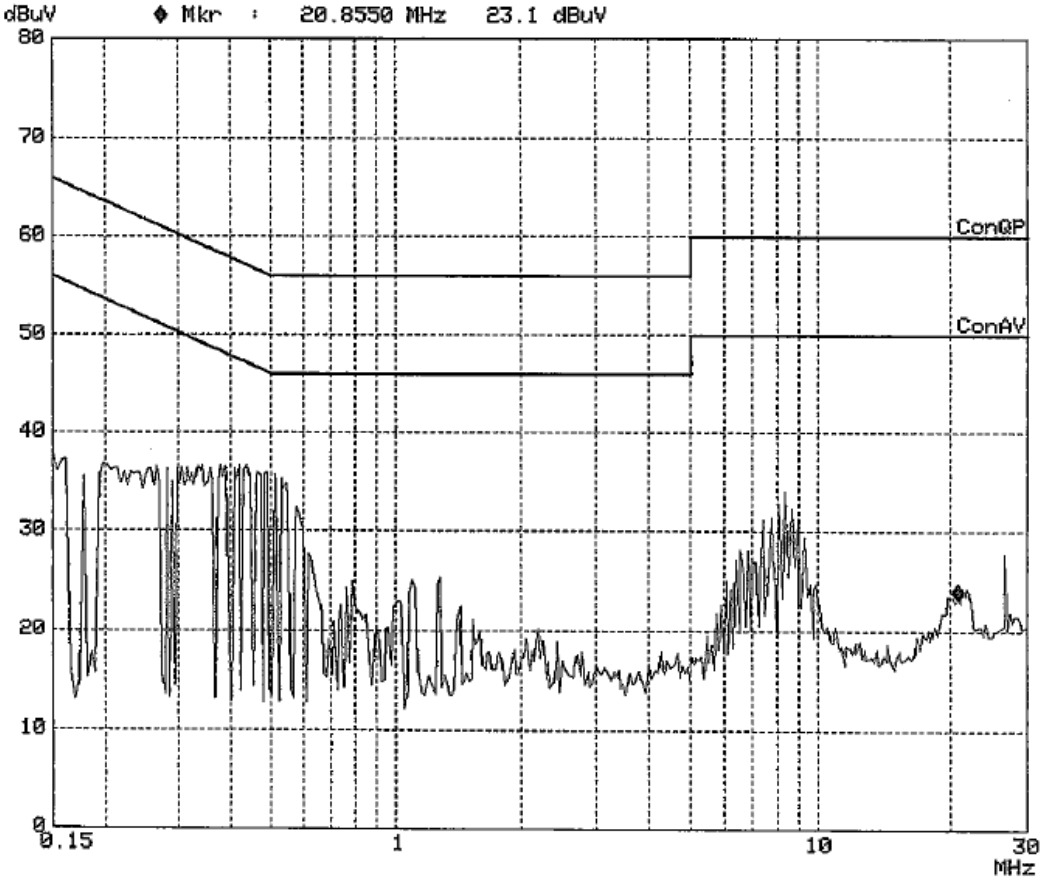
The spectral diagrams in appendix 1 display the measurement of un-weighted peak values.

7 List of Tables

8 List of Photographs

Prüfbericht - Nr.: 16004610 001
Test Report No.:

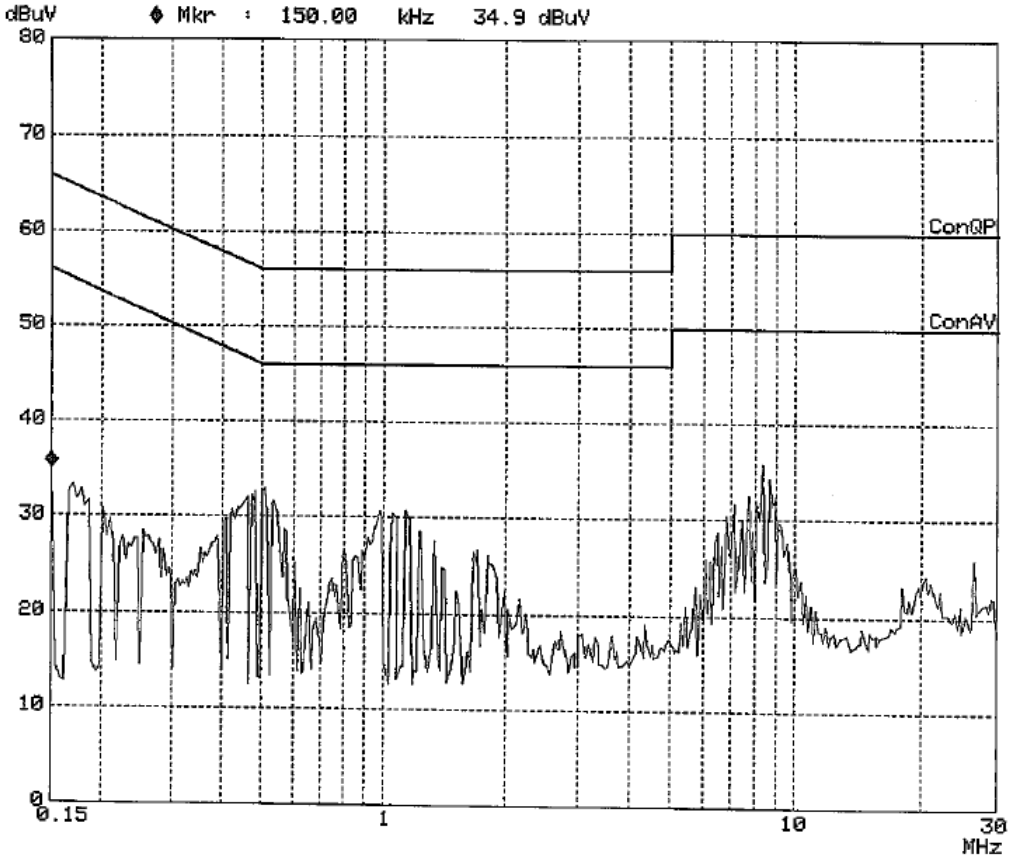
Conducted Disturbance
EUT: P690I (charging via receiver with AC/DC Adaptor)
Op Cond: Charge
Test Spec: L
Comment: AC 230V/50Hz
Date: 24. Jan 05 10:57



Prüfbericht - Nr.: 16004610 001
Test Report No.:

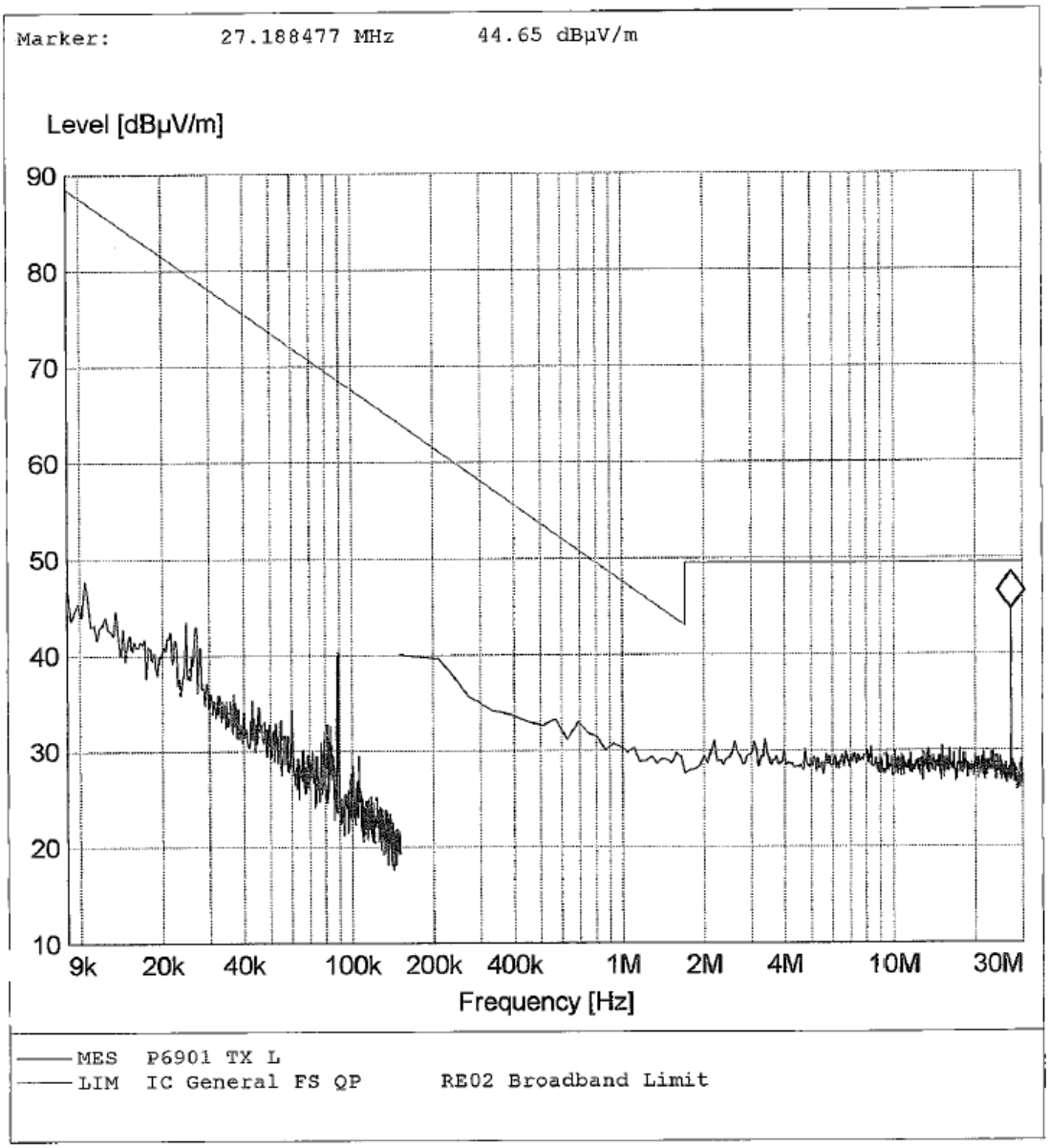
Conducted Disturbance

EUT: P690I
Op Cond: Charge (charging via receiver with AC/DC adapter)
Test Spec: N
Comment: AC 230V/50Hz
Date: 24. Jan 05 11:03



Radiated Disturbance

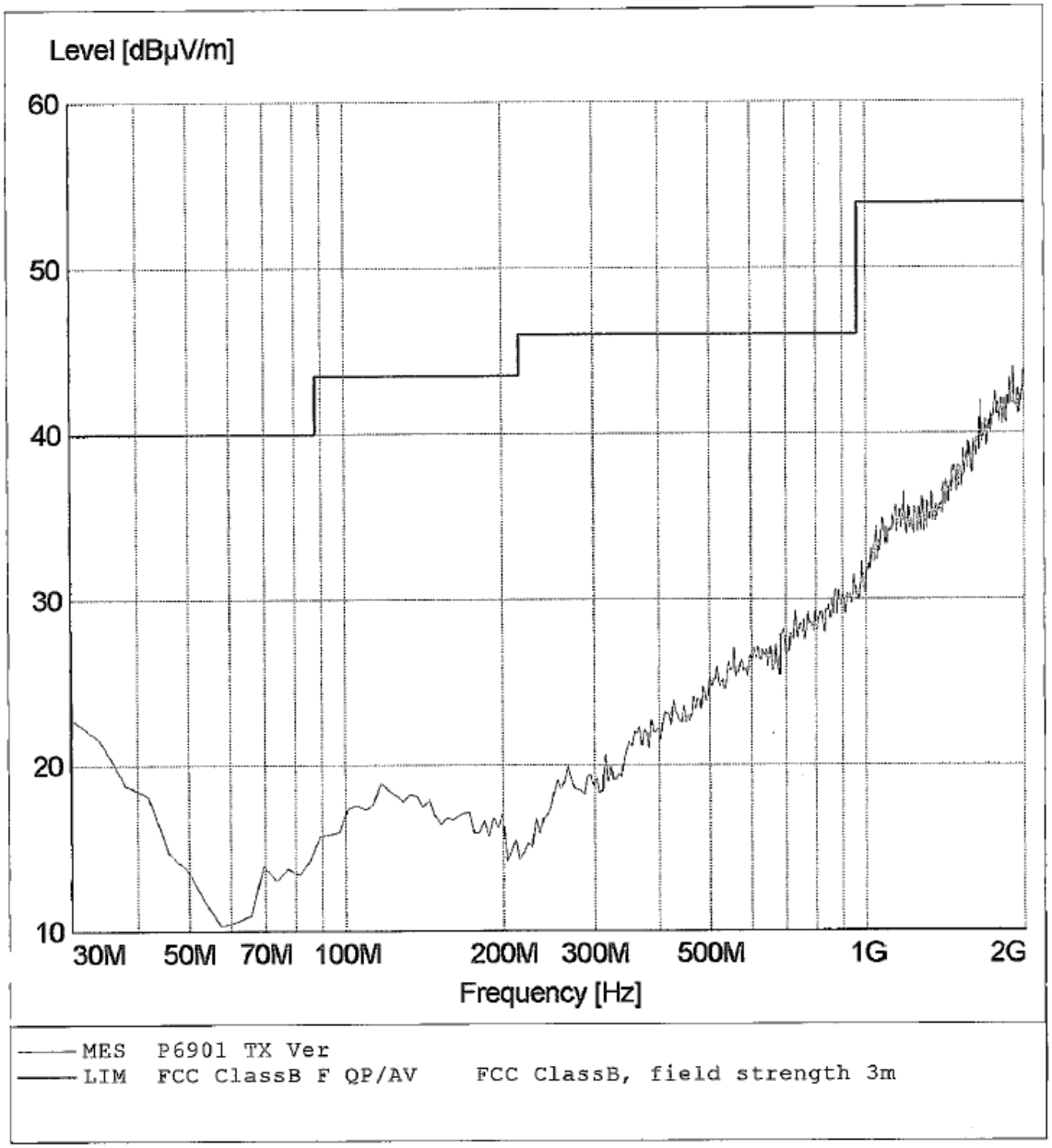
EUT: M/N:P6901
Manufacturer:
Operating Condition: TX
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification:
Comment: Battery 1.5*2



Radiated Disturbance

FCC Part 15B

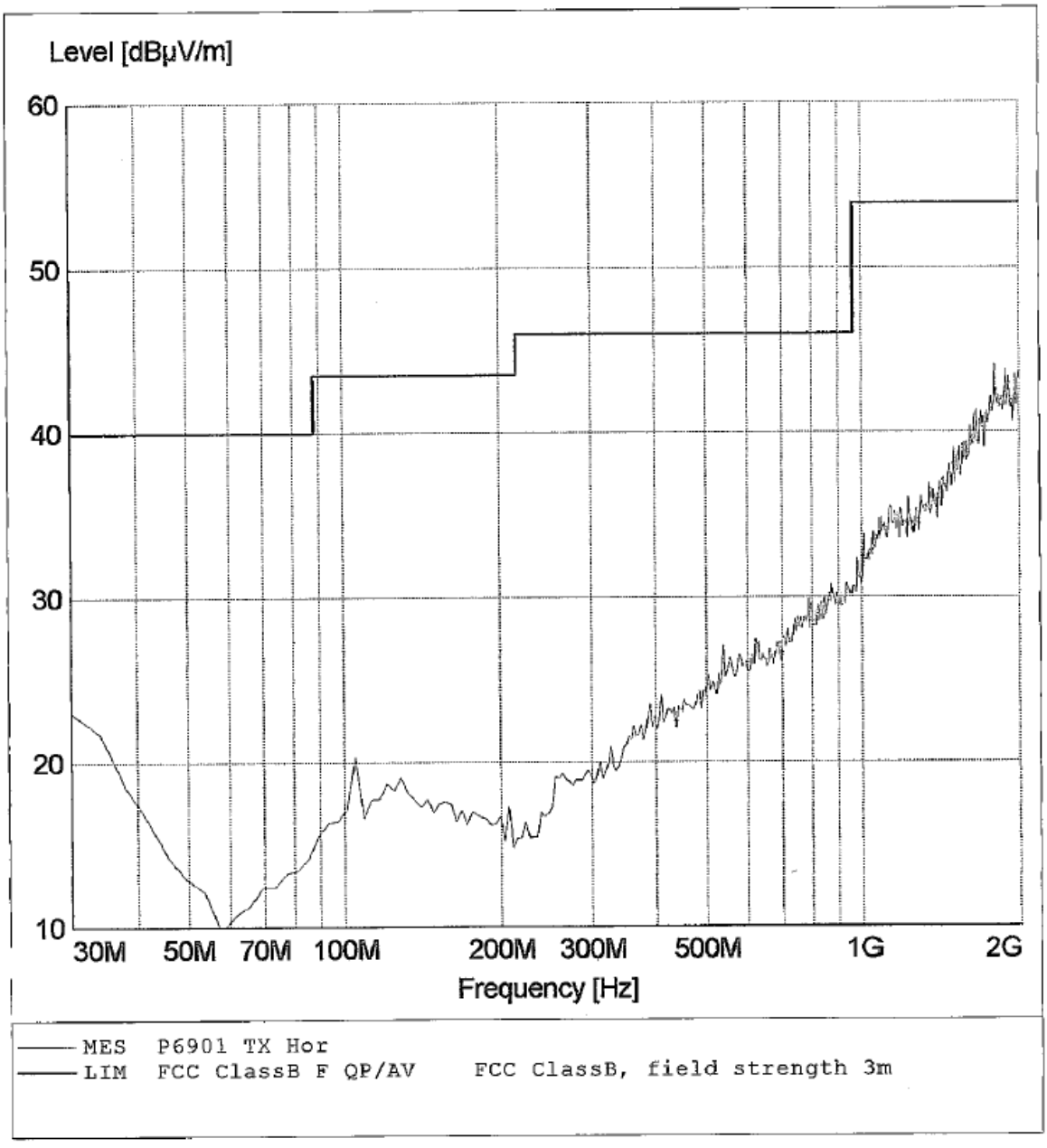
EUT: M/N:P6901
Manufacturer:
Operating Condition: TX
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification: Vertical
Comment: Battery 1.5*2



Radiated Disturbance

FCC Part 15B

EUT: M/N:P6901
Manufacturer:
Operating Condition: TX
Test Site: SMQ EMC Lab.SAC
Operator:
Test Specification: Horizontal
Comment: Battery 1.5*2



-26dB Bandwidth: