

Prüfbericht - Nr.: 16008041 001			Seite 1 von 15 <i>Page 1 of 15</i>		
<i>Test Report no.:</i>					
Auftraggeber: <i>Client:</i>		G.tech Technology Ltd. No.21, Jinding Industrial Park, West Jinfeng Road Tangjiawan, Zhuhai, Guangdong, 519085 P. R. China			
Gegenstand der Prüfung: <i>Test item:</i>		Wireless Keyboard			
Bezeichnung: <i>Identification:</i>	KPR04	FCC ID: <i>FCC ID</i>	OO9KPR04		
Wareneingangs-Nr.: <i>Receipt no.:</i>	173023689	Eingangsdatum: <i>Date of receipt:</i>	12.07.2006		
Prüfört: <i>Testing location:</i>	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: <i>Test specification:</i>	ANSI C63.4: 2003 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: <i>Test result:</i>	Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test item passed the test specification(s).</i>				
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Guangdong) Ltd.				
geprüft / tested by:		kontrolliert / reviewed by:			
<i>11. Sep. 2006</i>	Ricky Liu /Project engineer	<i>Ricky Liu</i>	<i>14. Sep. 2006</i>	Dave Xie /Project engineer	<i>Dave Xie</i>
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>
Sonstiges / Other aspects:					
Abkürzungen: P(ass) = entspricht Prüfgrundlage F(ail) = entspricht nicht Prüfgrundlage N/A = nicht anwendbar N/T = nicht getestet Abbreviations: P(ass) = passed F(ail) = failed N/A = not applicable N/T = not tested					
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. <i>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.</i>					

Prüfbericht - Nr.: 16008041 001

Test Report no.:

Seite 2 von 15

Page 2 of 15

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: Pass

5.3 FUNDAMENTAL AND HARMONICS RADIATED EMISSION FOR FCC PART 15 PER SECTION 15.227

RESULT: Pass

Prüfbericht - Nr.: 16008041 001

Test Report no.:

Seite 3 von 15

Page 3 of 15

Contents

1	GENERAL REMARKS.....	4
1.1	COMPLEMENTARY MATERIALS	4
2	TEST SITES.....	4
2.1	TEST FACILITIES	4
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS	5
2.3	TRACE ABILITY	5
2.4	CALIBRATION	5
2.5	MEASUREMENT UNCERTAINTY.....	6
2.6	LOCATION OF ORIGINAL DATA.....	6
2.7	STATUS OF FACILITY USED FOR TESTING.....	6
3	GENERAL PRODUCT INFORMATION.....	6
3.1	PRODUCT FUNCTION AND INTENDED USE	7
3.2	RATINGS AND SYSTEM DETAILS	7
3.3	INDEPENDENT OPERATION MODES	7
3.4	SUBMITTED DOCUMENTS	8
4	TEST SET-UP AND OPERATION MODE	8
4.1	PRINCIPLE OF CONFIGURATION SELECTION.....	8
4.2	TEST OPERATION AND TEST SOFTWARE	8
4.3	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT.....	8
4.4	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE	8
4.5	TEST SET-UP.....	9
5	TEST RESULTS EMISSION	10
5.1	CONDUCTED EMISSION FOR FCC PART 15 PER SECTION 15.207(A)	10
5.2	RADIATED EMISSION FOR FCC PART 15 PER SECTION 15.209(A).....	11
5.3	FUNDAMENTAL AND HARMONICS RADIATED EMISSION FOR FCC PART 15 PER SECTION 15.227	12
6	PHOTOGRAPHS OF THE TEST SET-UP.....	6
7	LIST OF TABLES.....	6
8	LIST OF PHOTOGRAPHS.....	6

Prüfbericht - Nr.: 16008041 001

Test Report no.:

Seite 4 von 15

Page 4 of 15

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

Prüfbericht - Nr.: 16008041 001

Test Report no.:

Seite 5 von 15

Page 5 of 15

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	29.01.2007
Signal Generator	Rohde & Schwarz	SMR20	100047	29.01.2007
Bilog Antenna	Chase	CBL6112B	2591	29.01.2007
3m Semi-anechoic chamber	Albatross Projects	9X6X6	----	29.01.2007
Loop Antenna	Schwarzbeck	FMZB1516	113	29.01.2007

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.

Prüfbericht - Nr.: 16008041 001

Test Report no.:

Seite 6 von 15

Page 6 of 15

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 KPR04 is a wireless keypad, which is equipped with multimedia keys and a small LCD displayer.

Prüfbericht - Nr.: 16008041 001

Test Report no.:

Seite 7 von 15

Page 7 of 15

3.1 Product Function and Intended Use

The submitted sample is a wireless keyboard, the transmitter, which declared channel frequency 27.045MHz.

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	:	1 channels
Type of antenna	:	Integral antenna
FCC ID:		OO9KPR04
Power supply	:	DC 1.5V ("AAA" type 1.5V battery)
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

Prüfbericht - Nr.: 16008041 001

Test Report no.:

Seite 8 von 15

Page 8 of 15

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

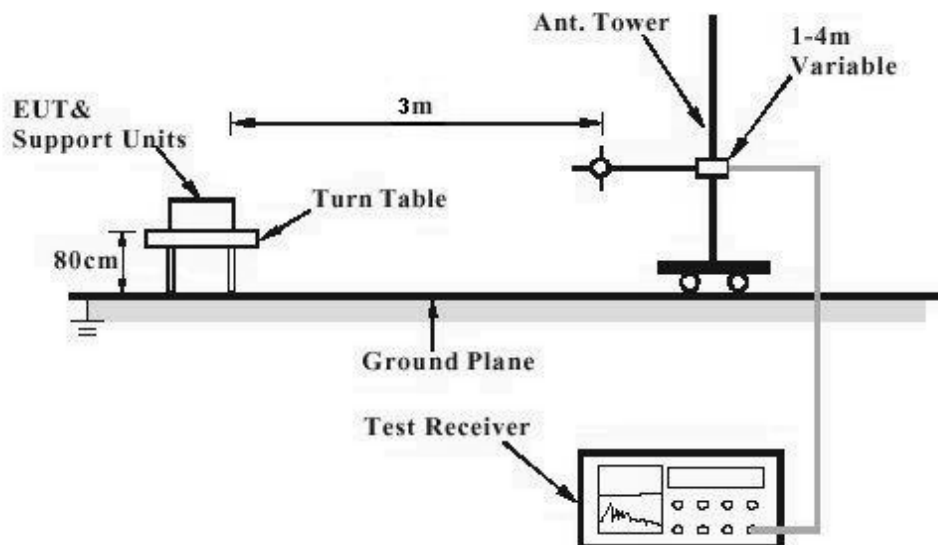
Refer to Test set-up in chapter 5.

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.



Prüfbericht - Nr.: 16008041 001

Test Report no.:

Seite 10 von 15

Page 10 of 15

5 Test Results EMISSION

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.

Prüfbericht - Nr.: 16008041 001

Test Report no.:

Seite 11 von 15

Page 11 of 15

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

RESULT:

Pass

Date of testing : 15.08.2006
 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
 Temperature : 24°C
 Humidity : 61%

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 [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.

Prüfbericht - Nr.: 16008041 001

Test Report no.:

Seite 12 von 15

Page 12 of 15

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

RESULT:

Pass

Date of testing : 15.08.2006
 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 and Channel 2
 Temperature : 24°C
 Humidity : 61%

Table 3: Fundamental Radiated Emissions

Test conditions		Fundamental Frequency	
		Channel 1 (27.045MHz)	
T _{nom} (22°C)	Unit	(dBμV/m)	(mV/m)
	Read value (Average/Peak):	---/43.8	---/0.155
Limit (Average/Peak):		80/100	10/100
Note: Measurement was performed with modulated signal with peak detector. Because the test result with peak detector is far below the limit of average detector, the measurement with average detector is not performed.			

Table 4: Harmonics Radiated Emission

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

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

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.

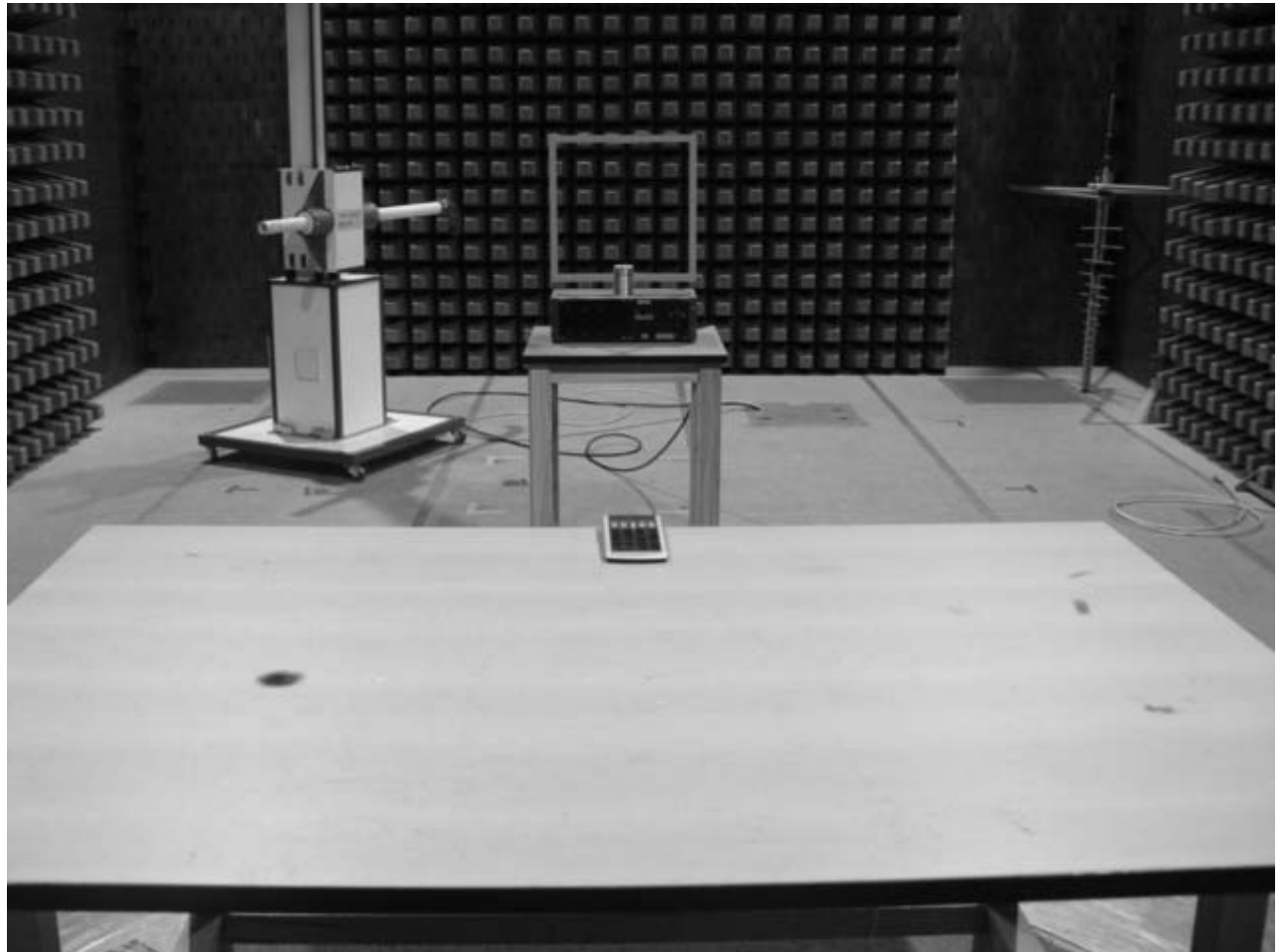
The spectral diagrams in appendix 1 display the measurement of un-weighted peak values.

Prüfbericht - Nr.: 16008041 001
Test Report no.:

Seite 13 von 15
Page 13 of 15

6 Photographs of the Test Set-Up

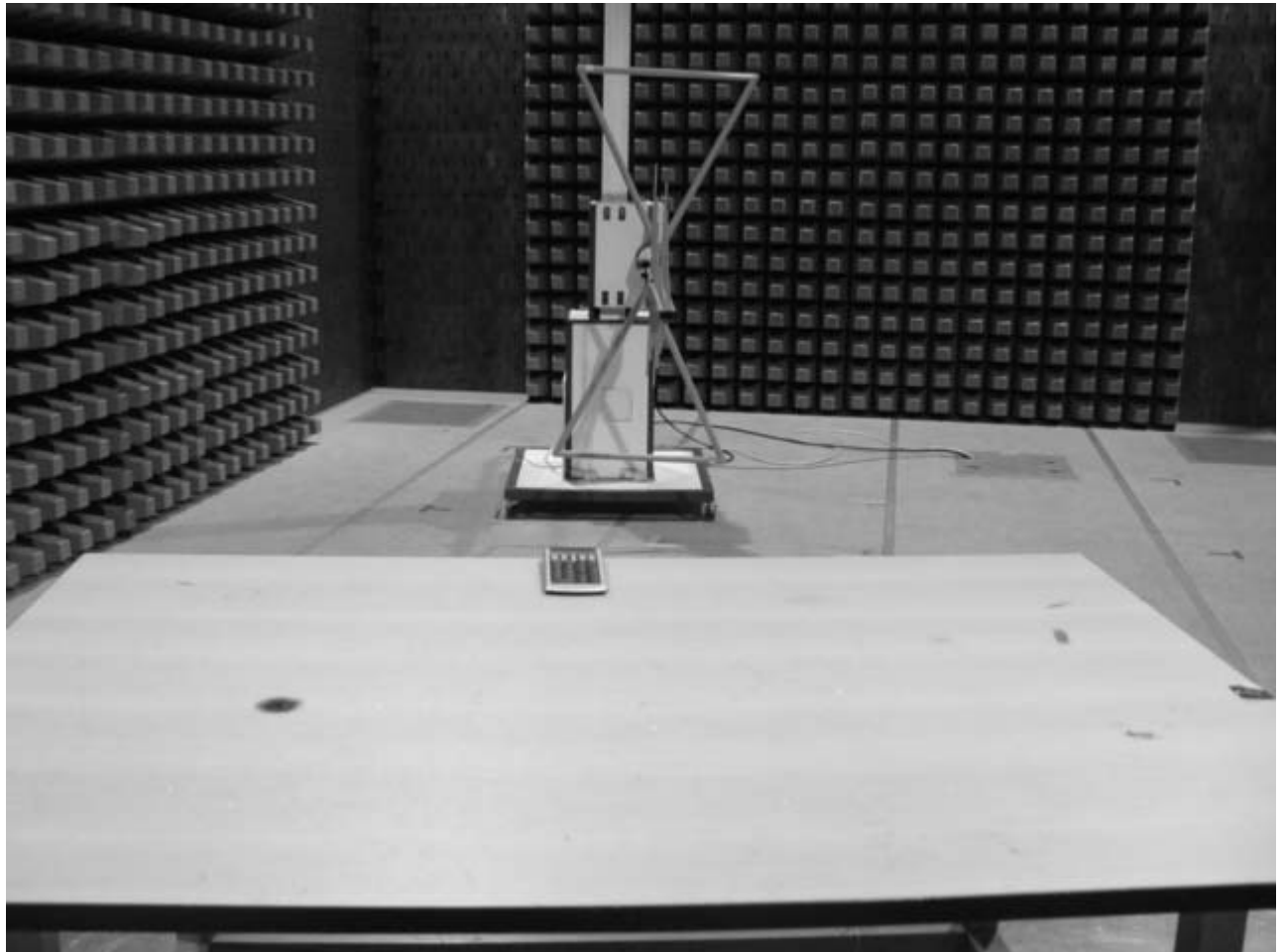
Photograph 1: Set-up for Radiation Measurement Below 30MHz



Prüfbericht - Nr.: 16008041 001
Test Report no.:

Seite 14 von 15
Page 14 of 15

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



7 List of Tables

Table 1: List of Test and Measurement Equipment.....5
Table 2: Radiated Emission6
Table 3: Fundamental Radiated Emissions.....6
Table 4: Harmonics Radiated Emission6

8 List of Photographs

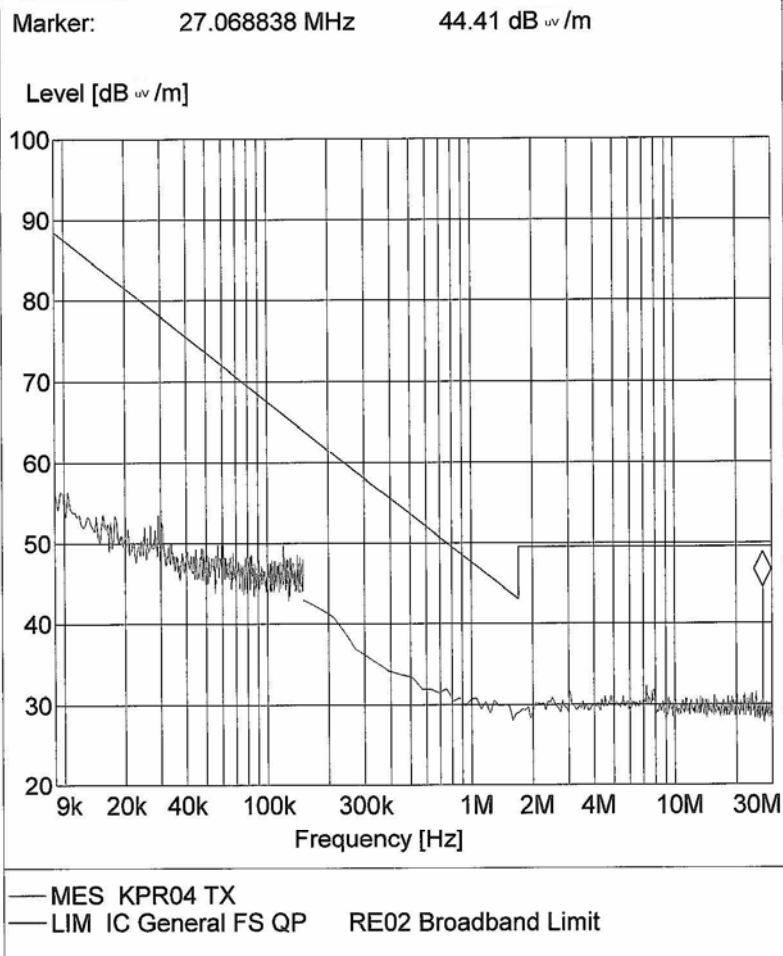
Photograph 1: Set-up for Radiation Measurement Below 30MHz.....6
Photograph 2: Set-up for Radiation Measurement below 1GHz.....6

Prüfbericht - Nr.: 16008041 001
Test Report no.:

Seite 1 von 5
Page 1 of 5

Radiated Emissions

EUT:: M/N:KPR04
Manufacturer:
Operating Condition: TX
Test Site: SMQ EMC Lab.SAC (3M)
Operator:
Test Specification:
Comment: DC 1.5V

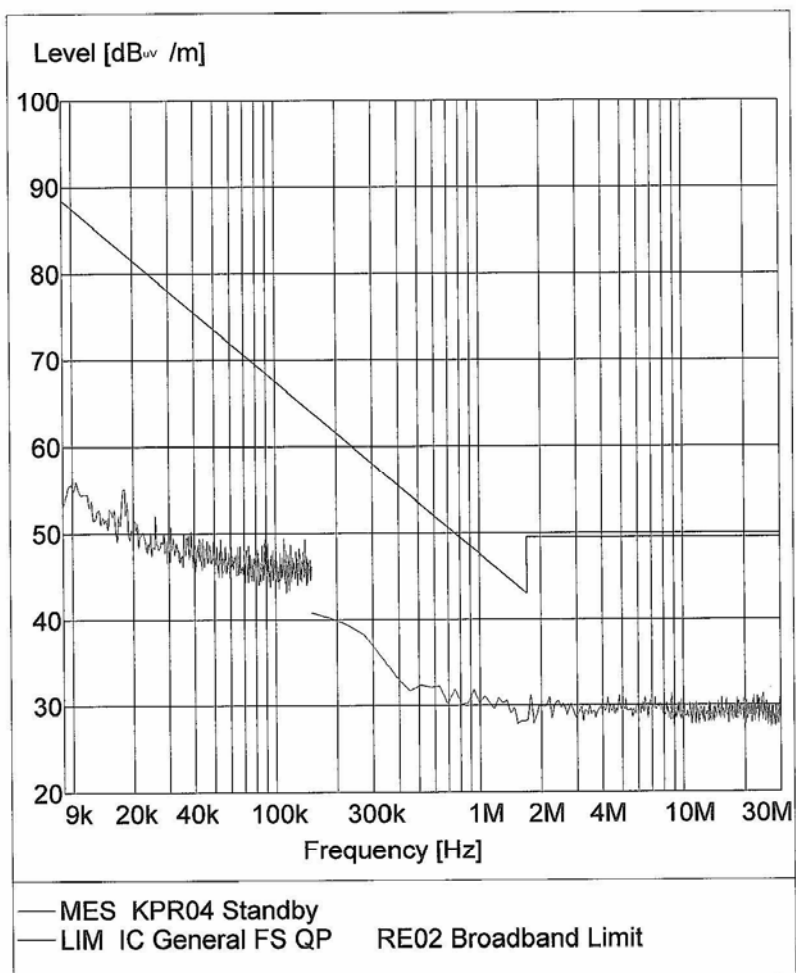


Prüfbericht - Nr.: 16008041 001
Test Report no.:

Seite 2 von 5
Page 2 of 5

Radiated Emissions

EUT:: M/N:KPR04
Manufacturer:
Operating Condition: Standby
Test Site: SMQ EMC Lab.SAC (3M)
Operator:
Test Specification:
Comment: DC 1.5V



Prüfbericht - Nr.: 16008041 001

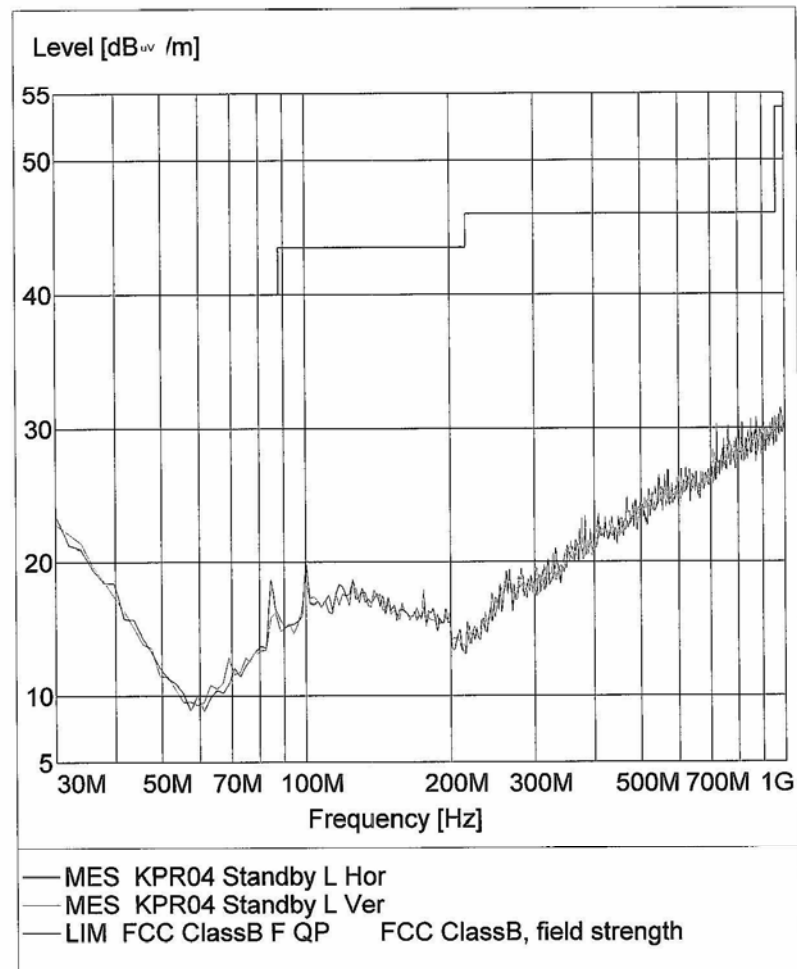
Test Report no.:

Seite 3 von 5

Page 3 of 5

Radiated Disturbance

EUT: M/N:KPR04
 Manufacturer:
 Operating Condition: Standby
 Test Site: SMQ EMC Lab.SAC
 Operator:
 Test Specification: Vertical & Horizontal
 Comment: DC 1.5V



Prüfbericht - Nr.: 16008041 001

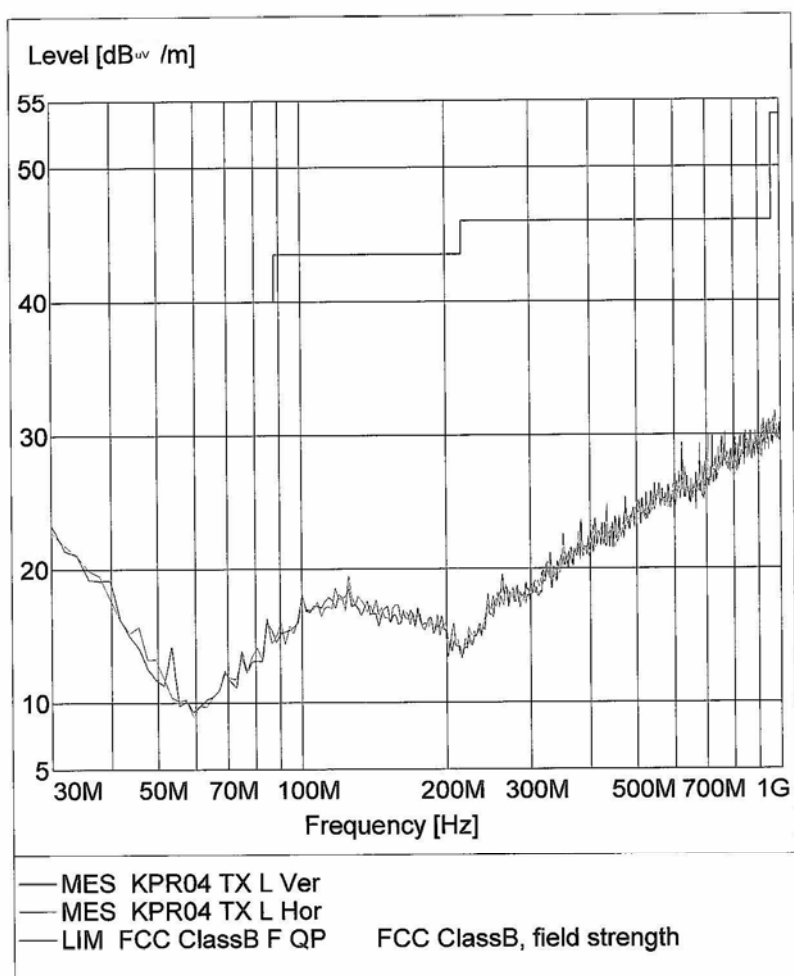
Test Report no.:

Seite 4 von 5

Page 4 of 5

Radiated Disturbance

EUT: M/N:KPR04
 Manufacturer:
 Operating Condition: TX
 Test Site: SMQ EMC Lab.SAC
 Operator::
 Test Specification: Vertical & Horizontal
 Comment: DC 1.5V

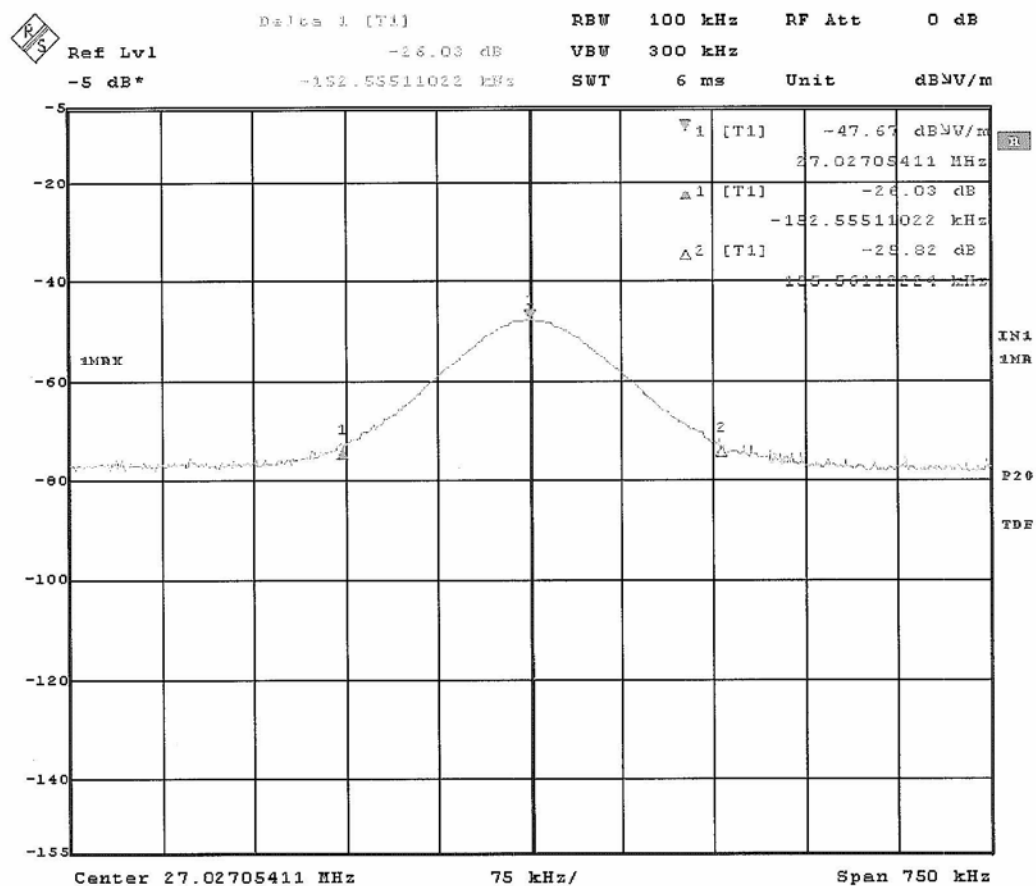


Prüfbericht - Nr.: 16008041 001

Test Report no.:

Seite 5 von 5

Page 5 of 5



Date: 15.AUG.2006 16:49:37