

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                  |                                                                                                                                     |                                                                                                  |                                                                                                                                                      |                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Prüfbericht - Nr.:</b> 16007560 001                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                  | <b>Seite 1 von 15</b>                                                                                                               |                                                                                                  |                                                                                                                                                      |                                                                                                         |
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| <b>Auftraggeber:</b><br><i>Client:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                  | G.tech Technology Ltd.<br>No.21, Jinding Industrial Park, West Jinfeng Road<br>Tangjiawan, Zhuhai, Guangdong, 519085<br>P. R. China |                                                                                                  |                                                                                                                                                      |                                                                                                         |
| <b>Gegenstand der Prüfung:</b> Wireless Keyboard<br><i>Test item:</i>                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                  |                                                                                                                                     |                                                                                                  |                                                                                                                                                      |                                                                                                         |
| <b>Bezeichnung:</b><br><i>Identification:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                           | K2002                                                                                                                                                                                                            | <b>FCC ID:</b><br><i>FCC ID</i>                                                                                                     | OO9K2002                                                                                         |                                                                                                                                                      |                                                                                                         |
| <b>Wareneingangs-Nr.:</b><br><i>Receipt No.:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                        | 173022397                                                                                                                                                                                                        | <b>Eingangsdatum:</b><br><i>Date of receipt:</i>                                                                                    | 12.06.2006                                                                                       |                                                                                                                                                      |                                                                                                         |
| <b>Prüfört:</b><br><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 |                                                                                                                                                      |                                                                                                         |
| <b>Prüfgrundlage:</b><br><i>Test specification:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                     | ANSI C63.4: 2001<br>Conduct Emissions with limits described at FCC Part 15 subpart C section 15.207<br>Radiated Emissions with limits described at FCC Part 15 Subpart C section 15.209 and 15.227               |                                                                                                                                     |                                                                                                  |                                                                                                                                                      |                                                                                                         |
| <b>Prüfergebnis:</b><br><i>Test Result:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                             | Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).<br><i>The test item passed the test specification(s).</i>                                                                                         |                                                                                                                                     |                                                                                                  |                                                                                                                                                      |                                                                                                         |
| <b>Prüflaboratorium:</b><br><i>Testing Laboratory:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                  | TÜV Rheinland (Guangdong) Ltd.                                                                                                                                                                                   |                                                                                                                                     |                                                                                                  |                                                                                                                                                      |                                                                                                         |
| <b>geprüft / tested by:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                  | <b>kontrolliert/ reviewed by:</b>                                                                                                   |                                                                                                  |                                                                                                                                                      |                                                                                                         |
| 01. Sep. 2006                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Ricky Liu<br>/Project Engineer                                                                                                                                                                                   | 03. Sep. 2006                                                                                                                       | Dave Xie<br>/Project Manager                                                                     |                                                                                                                                                      |                                                                                                         |
| <i>Datum</i><br>Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <i>Name/Stellung</i><br>Name/Position                                                                                                                                                                            | <i>Unterschrift</i><br>Signature                                                                                                    | <i>Unterschrift</i><br>Signature                                                                 |                                                                                                                                                      |                                                                                                         |
| <b>Sonstiges/ Other Aspects:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                  |                                                                                                                                     |                                                                                                  |                                                                                                                                                      |                                                                                                         |
| <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <b>Abkürzungen:</b><br/> P(ass) = entspricht Prüfgrundlage<br/> F(ail) = entspricht nicht Prüfgrundlage<br/> N/A = nicht anwendbar<br/> N/T = nicht getestet </td> <td style="width: 50%; vertical-align: top;"> <b>Abbreviations:</b><br/> P(ass) = passed<br/> F(ail) = failed<br/> N/A = not applicable<br/> N/T = not tested </td> </tr> </table>                                        |                                                                                                                                                                                                                  |                                                                                                                                     |                                                                                                  | <b>Abkürzungen:</b><br>P(ass) = entspricht Prüfgrundlage<br>F(ail) = entspricht nicht Prüfgrundlage<br>N/A = nicht anwendbar<br>N/T = nicht getestet | <b>Abbreviations:</b><br>P(ass) = passed<br>F(ail) = failed<br>N/A = not applicable<br>N/T = not tested |
| <b>Abkürzungen:</b><br>P(ass) = entspricht Prüfgrundlage<br>F(ail) = entspricht nicht Prüfgrundlage<br>N/A = nicht anwendbar<br>N/T = nicht getestet                                                                                                                                                                                                                                                                                                                                    | <b>Abbreviations:</b><br>P(ass) = passed<br>F(ail) = failed<br>N/A = not applicable<br>N/T = not tested                                                                                                          |                                                                                                                                     |                                                                                                  |                                                                                                                                                      |                                                                                                         |
| <p>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.</p> <p><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></p> |                                                                                                                                                                                                                  |                                                                                                                                     |                                                                                                  |                                                                                                                                                      |                                                                                                         |

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## 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*

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## **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

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## 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.

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## **2.5 Measurement Uncertainty**

The estimated combined standard uncertainty for conducted emissions measurements is  $\pm 3$  dB.  
The estimated combined standard uncertainty for radiated emissions measurements is  $\pm 3$  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 K2002 is wireless keyboard, which is equipped multimedia keys and show you that the battery is low power by LED indicator.

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### 3.1 Product Function and Intended Use

The submitted sample is a wireless keyboard, the transmitter, which declared channel frequency 27.045MHz and 27.195MHz.

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:            |   | OO9K2002                              |
| Power supply       | : | DC 3V<br>("AAA" type 1.5V 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

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### **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**

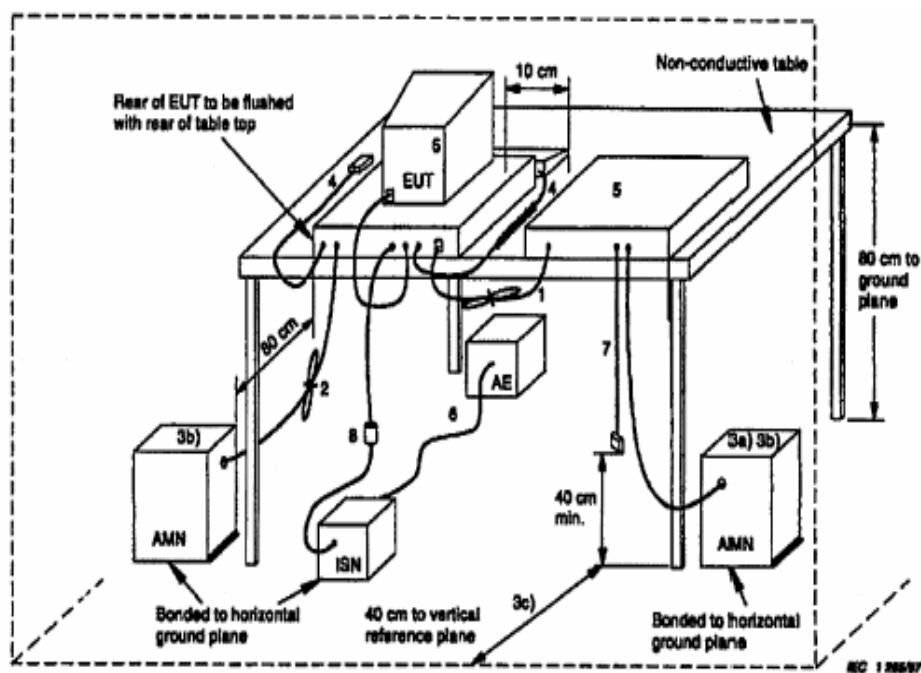
None

### **4.4 Countermeasures to achieve EMC Compliance**

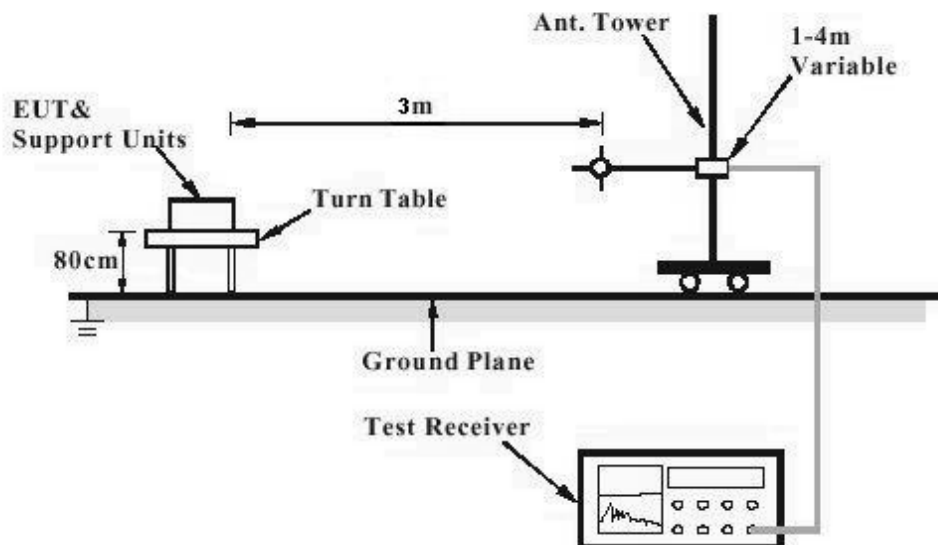
The test sample, which has been tested, contained the noise suppression parts as described in the technical document. No additional measures were employed to achieve compliance.

## 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**



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## 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.

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

**RESULT:**

**Pass**

Date of testing : 20.07.2006  
 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 : 25°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<br>[kHz] | QP<br>[dB $\mu$ V/m] | AV<br>[dB $\mu$ V/m] | Polarity | Limit<br>[dB $\mu$ V/m] |
|--------------------|----------------------|----------------------|----------|-------------------------|
| ---*               |                      |                      |          |                         |

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

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

**RESULT:**

**Pass**

Date of testing : 20.07.2006  
 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 : 23°C  
 Humidity : 61%

**Table 3: Fundamental Radiated Emissions**

| Test conditions                                                                                                                                                                                                          |                               | Fundamental Frequency    |           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------|-----------|
|                                                                                                                                                                                                                          |                               | Channel 1<br>(27.045MHz) |           |
| T <sub>nom</sub> (22°C)                                                                                                                                                                                                  | Unit                          | (dBμV/m)                 | (mV/m)    |
|                                                                                                                                                                                                                          | Read value<br>(Average/Peak): | ---/51.3                 | ---/0.367 |
| 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<br>[MHz] | QP<br>[dBμV/m] | AV<br>[dBμV/m] | Polarity | Limit<br>[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.

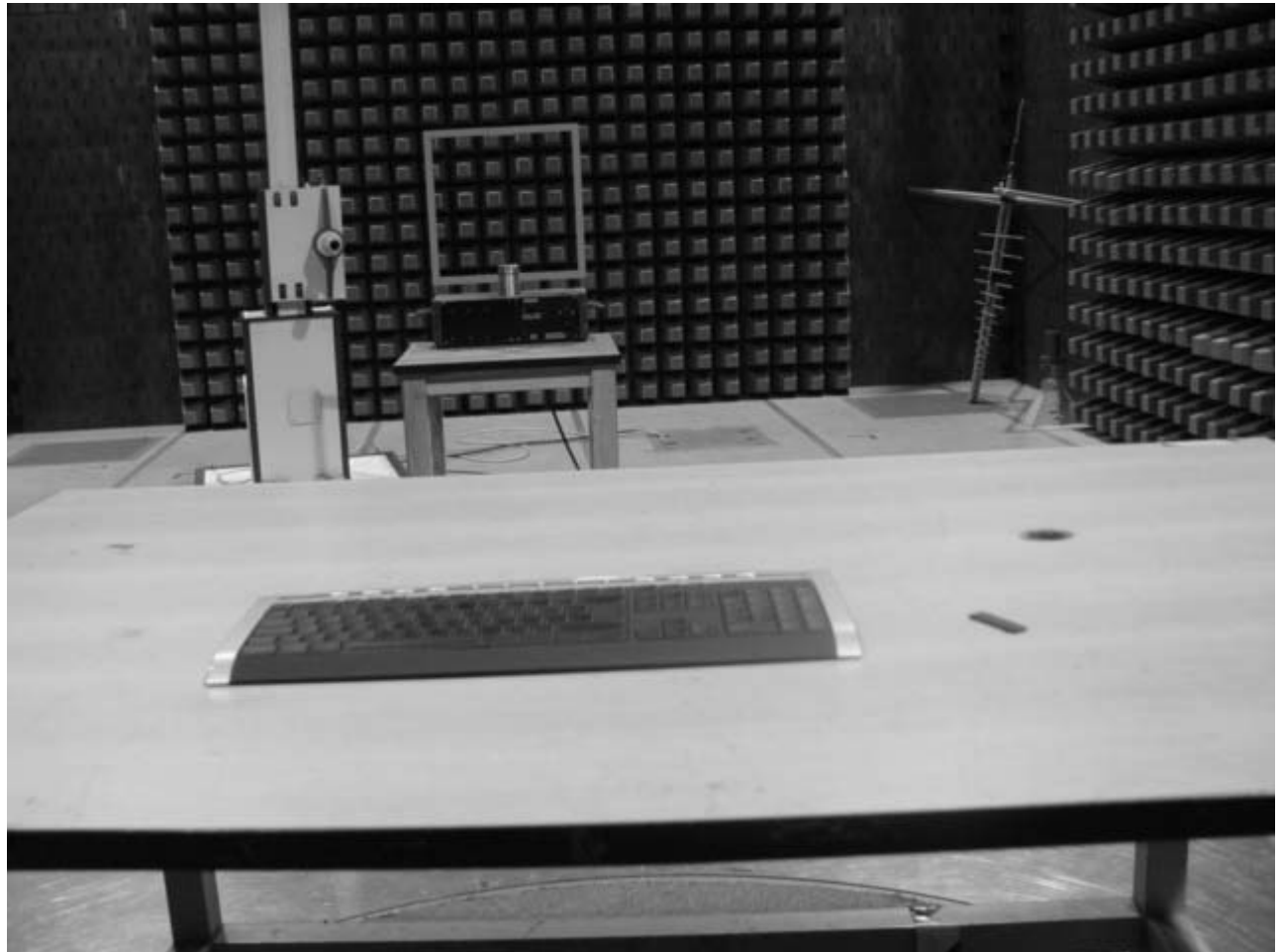
The spectral diagrams in appendix 1 display the measurement of un-weighted peak values.

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## 6 Photographs of the Test Set-Up

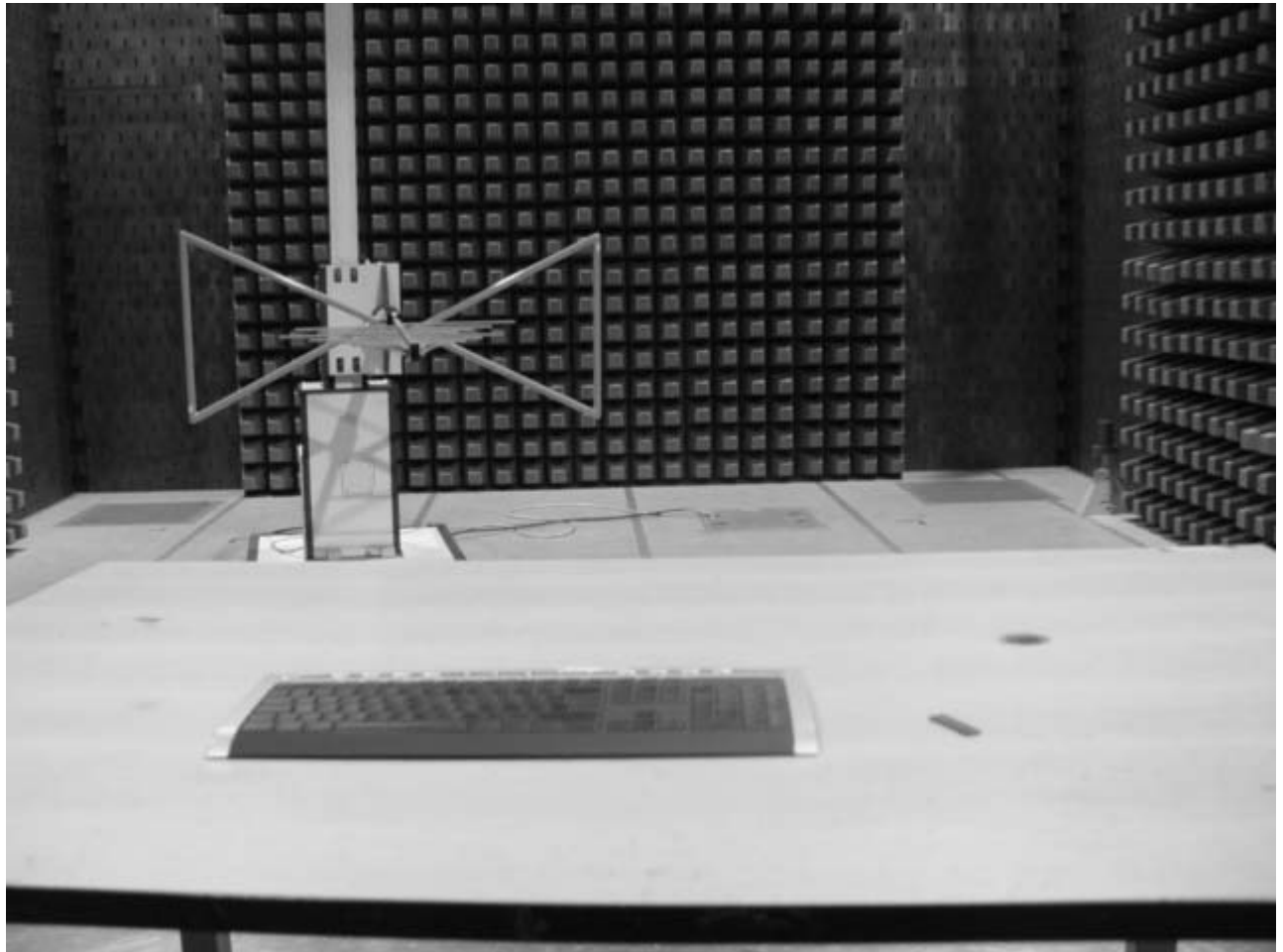
**Photograph 1: Set-up for Radiation Measurement Below 30MHz**



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



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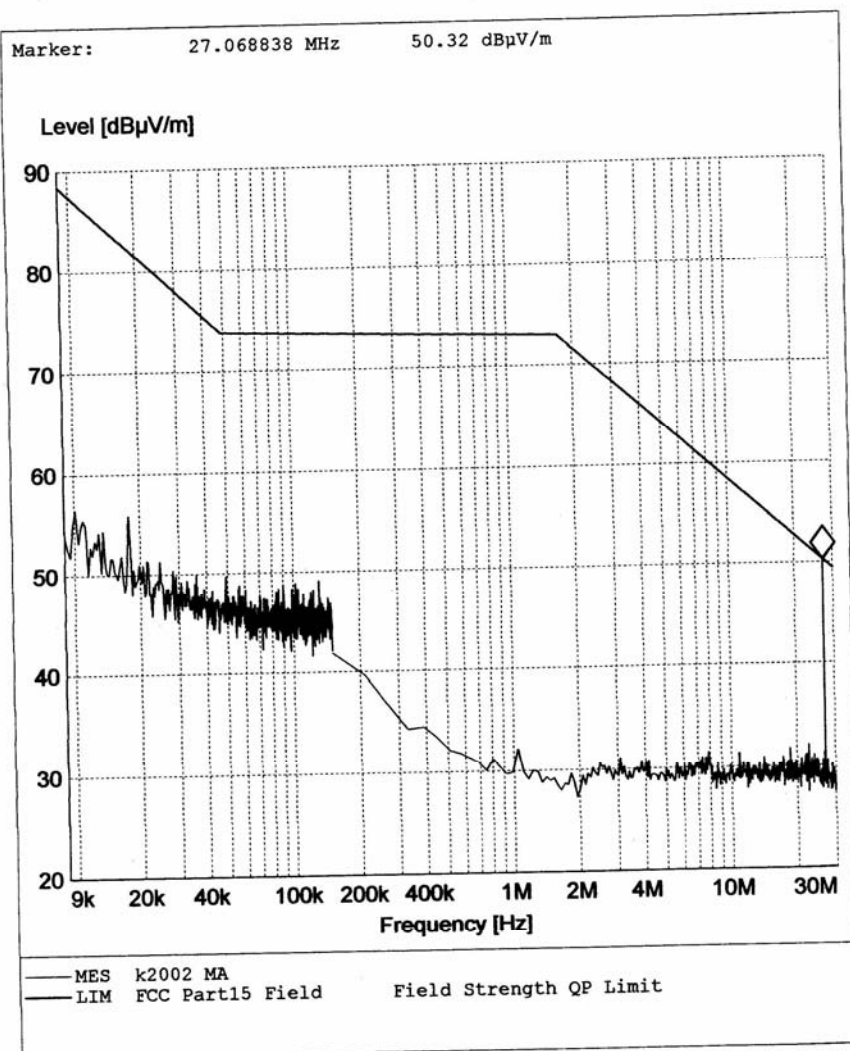
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**Radiated Emissions**

EUT:: M/N:K2002  
Manufacturer:  
Operating Condition: TX  
Test Site: SMQ EMC Lab.SAC (3M)  
Operator:  
Test Specification:  
Comment: DC 3V



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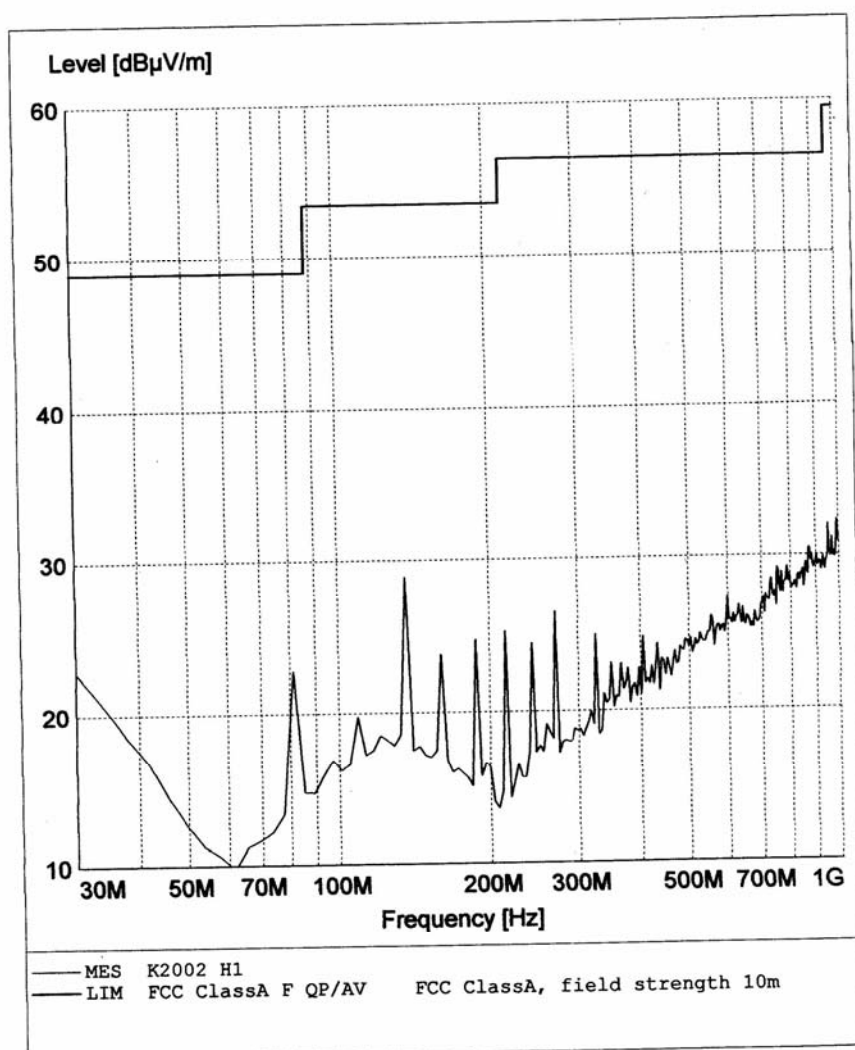
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**Radiated Disturbance**

EUT: M/N:K2002  
 Manufacturer:  
 Operating Condition: TX  
 Test Site: SMQ EMC Lab.SAC  
 Status:  
 Test Specification: Horizontal  
 Comment: DC 3.0V



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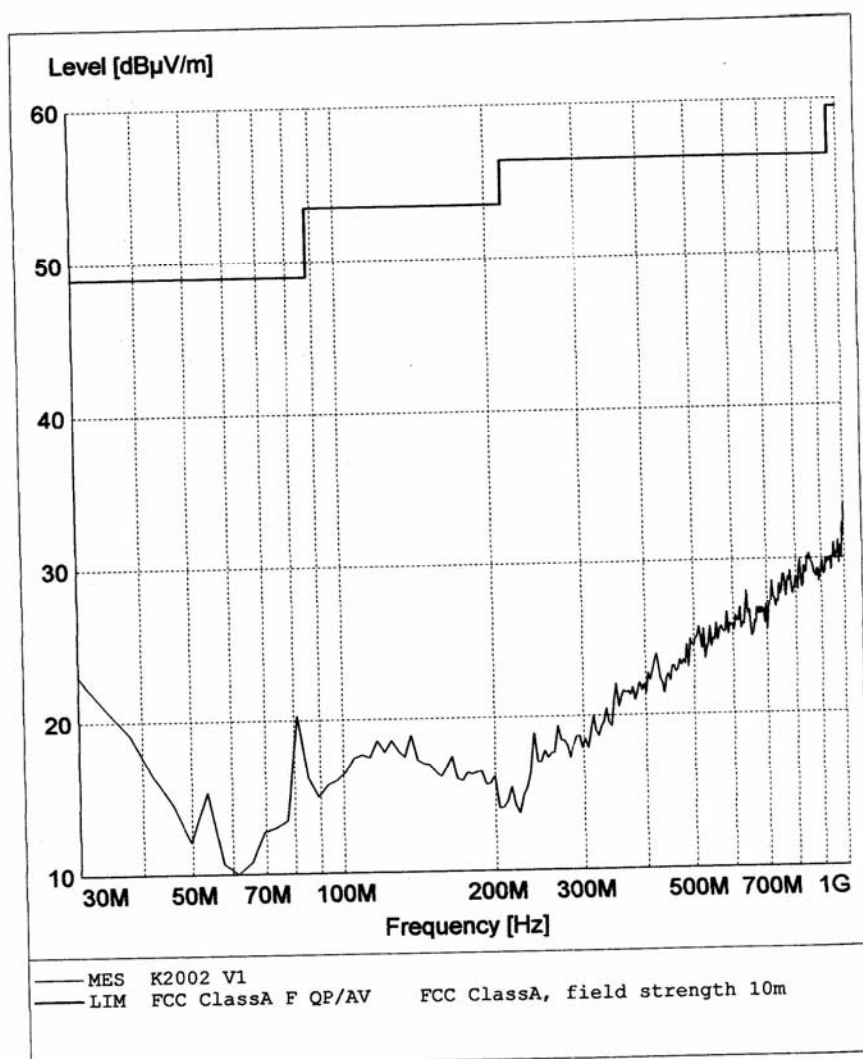
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**Radiated Disturbance**

EUT: M/N:K2002  
Manufacturer:  
Operating Condition: TX  
Test Site: SMQ EMC Lab.SAC  
Status:  
Test Specification: Vertical  
Comment: DC 3.0V

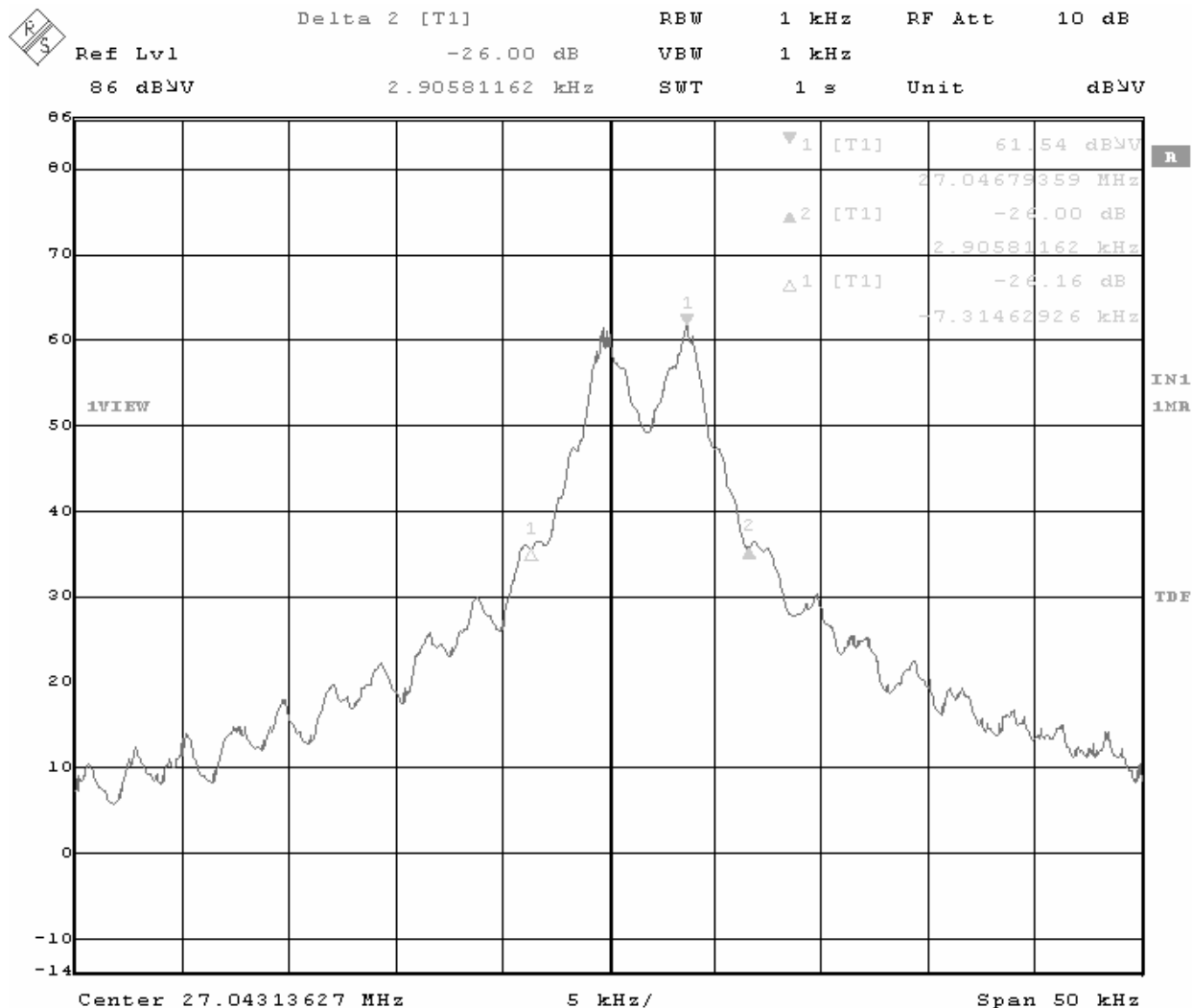


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Date: 26.JUL.2006 14:37:24