

JQA File No. : 400-60607  
Issue Date : January 15, 2007  
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## **EMI TEST REPORT**

JQA File No. : 400-60607  
Model No. : RP7340H  
Type of Equipment : Radio Controlled Toy  
(Superregenerative Type)  
Regulations Applied : CFR 47 FCC Rules and Regulations Part 15  
FCC ID : CVTRP7340H  
Applicant : NIKKO CO., LTD.  
Address : 1-7-14, Mizumoto, Katsushika-ku,  
Tokyo 125-0032, Japan  
Manufacturer : NIKKO TEC INTERNATIONAL LTD  
Address : Rm. 601-603, Houston Center, 63, Mody Road,  
Tsimshatsui East, Kowloon, Hong Kong  
Received date of EUT : December 14, 2006  
**Test Result** : **Passed**

Test results in this report are obtained in use of equipment that is traceable to National Institute of Advanced Industrial Science and Technology (AIST) of Japan and National Institute of Information and Communications Technology (NICT) of Japan.

The test results only respond to the tested sample. This report should not be reproduced except in full, without the written approval of JQA EMC Engineering Dept. Testing Div.

**This report must not be used by the client to claim product endorsement by NVLAP or NIST any agency of the U.S. Government.**

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NVLAP Lab Code : 200189-0

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## 1 DOCUMENTATION

### 1.1 TEST REGULATION

FCC Rules and Regulations Part 15 Subpart A and B Superregenerative Receiver

#### Test procedure :

AC power line conducted emission, radiated emission and antenna conducted power tests were performed according to the procedures in ANSI C63.4-2003.

### 1.2 GENERAL INFORMATION

#### 1.2.1 Test facility :

1) Test Facility located at EMC Engineering Dept. Testing Div. :

- No. A and B Anechoic Chambers( 3 meters Site ).
- Shielded Enclosure.

2) EMC Engineering Dept. Testing Div. is accredited under the National Voluntary Laboratory accreditation Program for satisfactory compliance established in title 15, Part 285 Code of Federal Regulations.

NVLAP Lab Code : 200189-0 (Effective through : June 30, 2007)

#### 1.2.2 Description of the Equipment Under Test (EUT) :

|                                      |                               |
|--------------------------------------|-------------------------------|
| 1) Type of Equipment                 | : Radio Controlled Toy        |
| 2) Product Type                      | : Production                  |
| 3) Category                          | : Superregenerative Receiver  |
| 4) EUT Authorization                 | : Certification               |
| 5) FCC ID                            | : CVTRP7340H                  |
| 6) Trade Name                        | : NIKKO                       |
| 7) Model No.                         | : RP7340H                     |
| 8) Tuning Frequency Range            | : 49.830 MHz - 49.890 MHz     |
| 9) Highest Frequency Used in the EUT | : -                           |
| 10) Serial No.                       | : None                        |
| 11) Date of Manufacture              | : None                        |
| 12) Power Rating                     | : 6.0VDC(Size AA Battery x 4) |
| 13) EUT Grounding                    | : None                        |

#### 1.2.3 Definitions for symbols used in this test report :

- x - indicates that the listed condition, standard or equipment is applicable for this report.
- indicates that the listed condition, standard or equipment is not applicable for this report.

### 1.3 TEST CONDITION

#### 1.3.1 The measurement of the AC Power Line Conducted Emission

       - was performed in the following test site.  
x - was not applicable.

##### Test location :

Safety & EMC Center EMC Engineering Dept. Testing Div.  
21-25, Kinuta 1-chome, Setagaya-ku, Tokyo 157-8573, Japan

       - Shielded Enclosure  
       - Anechoic Chamber No. A (portable Type)

##### Used test instruments :

| Type                | Number of test instruments<br>(Refer to Appendix) |
|---------------------|---|
| Test Receiver       | N/A   |
| Spectrum Analyzer   | N/A   |
| Cable               | N/A   |
| AMN(for EUT)        | N/A   |
| AMN(for Peripheral) | N/A   |
| Termination         | N/A   |

**1.3.2 The measurement of the Radiated Emission(30 MHz - 1000 MHz)**

x - was performed in the following test site.  
   - was not applicable.

**Test location :**

Safety & EMC Center EMC Engineering Dept. Testing Div.  
21-25, Kinuta 1-chome, Setagaya-ku, Tokyo 157-8573, Japan

x - Anechoic Chamber No. A (3 meters)  
   - Anechoic Chamber No. B (3 meters)

**Validation of Site Attenuation :**

1) Last Confirmed Date :March, 2006  
2) Interval :1 year

**Used test instruments :**

| Type             | Number of test instruments<br>(Refer to Appendix) |
|------------------|---|
| Test Receiver    | 11  |
| Antenna          | 167, 168  |
| Cable            | 38  |
| RF Amplifier     | N/A   |
| Signal Generator | 60  |

**1.3.3 The measurement of the Radiated Emission(Above 1000 MHz)**

       - was performed in the following test site.  
x - was not applicable.

**Test location :**

Safety & EMC Center EMC Engineering Dept. Testing Div.  
21-25, Kinuta 1-chome, Setagaya-ku, Tokyo 157-8573, Japan

       - Anechoic Chamber No. A (3 meters)  
       - Anechoic Chamber No. B (3 meters)

**Validation of Site Attenuation :**

- 1) Last Confirmed Date :March, 2006
- 2) Interval :1 year

**Used test instruments :**

| Type              | Number of test instruments<br>(Refer to Appendix) |
|-------------------|---|
| Test Receiver     | N/A   |
| Spectrum Analyzer | N/A   |
| Cable             | N/A   |
| Antenna           | N/A   |
| RF Amplifier      | N/A   |

**1.3.4 The measurement of the Antenna Conducted Power**

       - was performed in the following test site.  
x - was not applicable.

**Test location :**

Safety & EMC Center EMC Engineering Dept. Testing Div.  
21-25, Kinuta 1-chome, Setagaya-ku, Tokyo 157-8573, Japan

       - Shielded Enclosure  
       - Anechoic Chamber No. A (portable Type)

**Used test instruments :**

| Type              | Number of test instruments<br>(Refer to Appendix) |
|-------------------|---|
| Test Receiver     | N/A   |
| Spectrum Analyzer | N/A   |
| Cable             | N/A   |
| RF Amplifier      | N/A   |

## 1.4 EUT MODIFICATION / Deviation from Standard

### 1.4.1 EUT MODIFICATION

x - No modifications were conducted by JQA to achieve compliance to Class B levels.  
   - To achieve compliance to Class B levels, the following changes were made by JQA during the compliance test.

**The modifications will be implemented in all production models of this equipment.**

Applicant :

Date :

Typed Name :

Position :

Signatory : \_\_\_\_\_

### 1.4.2 Deviation from Standard:

x - No deviations from the standard described in clause 1.1.  
   - The following deviations were employed from the standard described in clause 1.1:

**1.5 TEST RESULTS / UNCERTAINTY****AC Power Line Conducted Emission**  - Applicable  - NOT ApplicableThe requirements are  - PASSED  - NOT PASSEDMin. Limit Margin dB at MHz  
Max. Limit Exceeding dB at MHzUncertainty of Measurement Results +/- 2.9 dB (level of confidence:95%)**Remarks :****Radiated Emission [§15.109(a)]**  - Applicable  - NOT ApplicableThe requirements are  - PASSED  - NOT PASSEDMin. Limit Margin 20.4 dB at 88.92 MHz  
Max. Limit Exceeding dB at MHz

Uncertainty of Measurement Results

30 - 300 MHz +/- 4.6 dB (level of confidence:95%)  
300 - 1000 MHz +/- 4.5 dB (level of confidence:95%)**Remarks:****Antenna Conducted Power [§15.111]**  - Applicable  - NOT ApplicableThe requirements are  - PASSED  - NOT PASSEDMin. Limit Margin dB at MHz  
Max. Limit Exceeding dB at MHzUncertainty of Measurement Results +/- 2.1 dB (level of confidence:95%)**Remarks:**

## 1.6 SUMMARY

### General Remarks :

The EUT was tested according to the requirements of FCC Rules and Regulations Part 15 Subpart A and B under the test configuration, as shown in clause 1.7 to 1.10. The conclusion for the test items which are required by the applied regulation is indicated under the test result.

### Test Result :

The "as received" sample;

- x - fulfill the test requirements of the regulation mentioned on clause 1.1.
- fulfill the test requirements of the regulation mentioned on clause 1.1, but with certain qualifications.
- doesn't fulfill the test regulation mentioned on clause 1.1.

Begin of testing : January 9, 2007

End of testing : January 9, 2007

- JAPAN QUALITY ASSURANCE ORGANIZATION -  
Approved by:



Masaaki Takahashi  
Senior Manager  
JQA EMC Engineering Dept.

Signatories:  
Issued by:



Shigeru Osawa  
Assistant Manager  
Testing Division  
JQA EMC Engineering Dept.

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## 1.7 TEST CONFIGURATION / OPERATION OF EUT

### 1.7.1 Test Configuration

**The equipment under test (EUT) consists of :**

| Symbol | Item                 | Manufacturer                | Model No. | FCC ID     | Serial No. |
|--------|----------------------|-----------------------------|-----------|------------|------------|
| A      | Radio Controlled Toy | NIKKO TEC INTERNATIONAL LTD | RP7340H   | CVTRP7340H | None       |

### 1.7.2 Operating condition

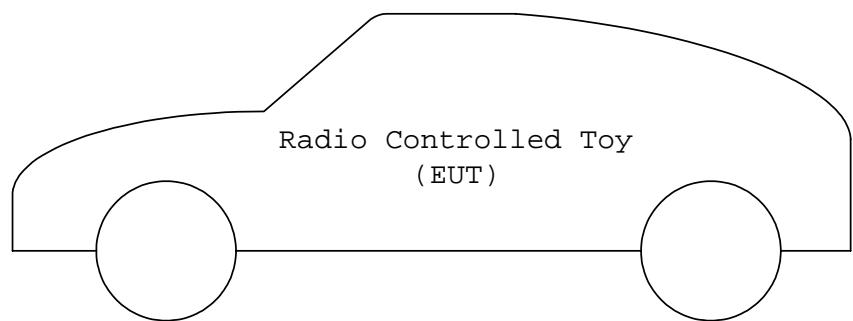
Power supply Voltage : 6.0VDC (Fresh battery used)

The tests have been carried out under the receiving condition.

### 1.7.3 Generating and Operating frequency of EUT

N/A

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**1.8 EUT ARRANGEMENT (DRAWINGS)**

**1.9 PRELIMINARY TEST AND TEST-SETUP (DRAWINGS)****1.9.1 AC Power Line Conducted Emission ( 150 kHz - 30 MHz) :**

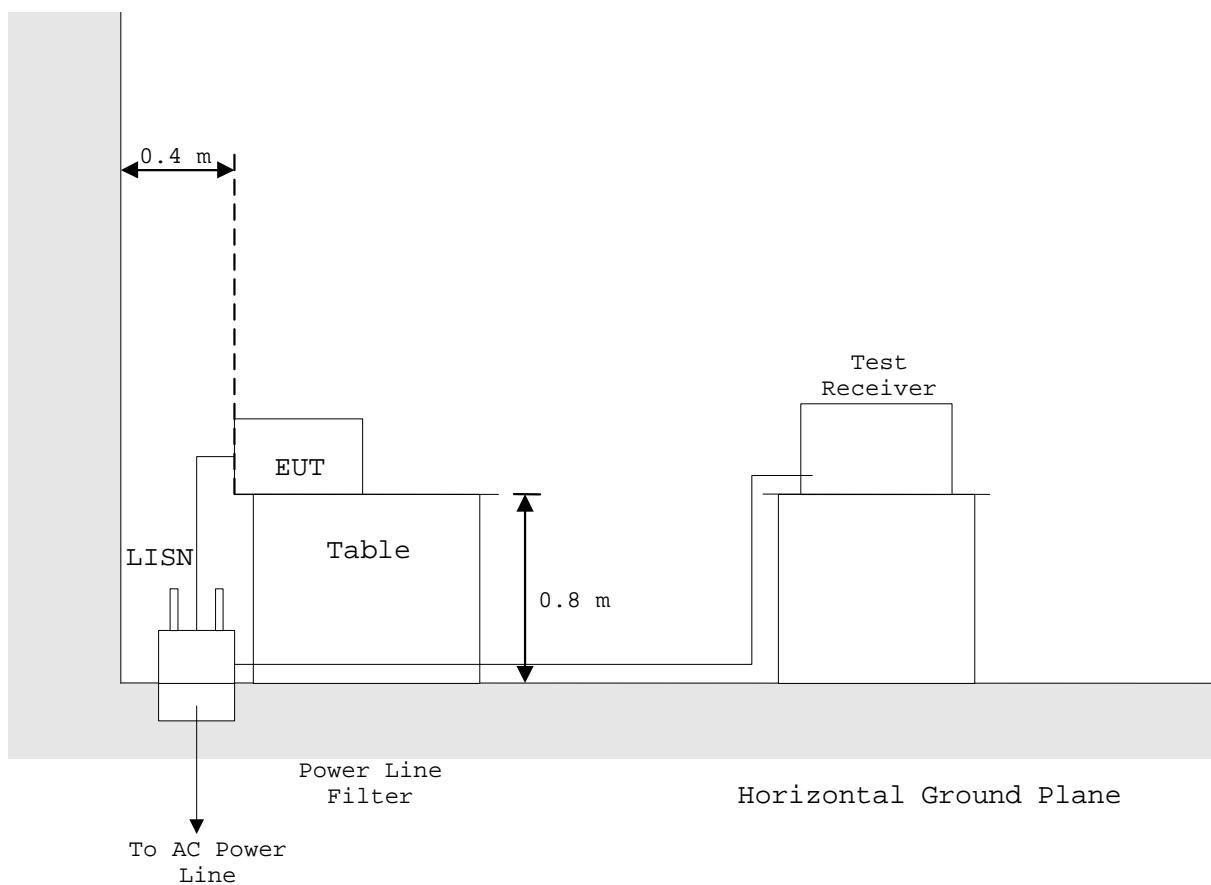
According to description of ANSI C63.4-2003 sec.7.2.3, the AC power line preliminary conducted emissions measurements were carried out.

The preliminary conducted measurements were performed using the spectrum analyzer to observe the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for final AC power line conducted emissions measurements.

**Shielded Enclosure****- Side View -**

Vertical  
Ground  
Plane



### 1.9.2 Radiated Emission ( 30 MHz - 1000 MHz) :

According to description of ANSI C63.4-2003 sec.8.3.1.1, the preliminary radiated emissions measurements were carried out. The preliminary radiated measurements were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for the final radiated emissions measurements.

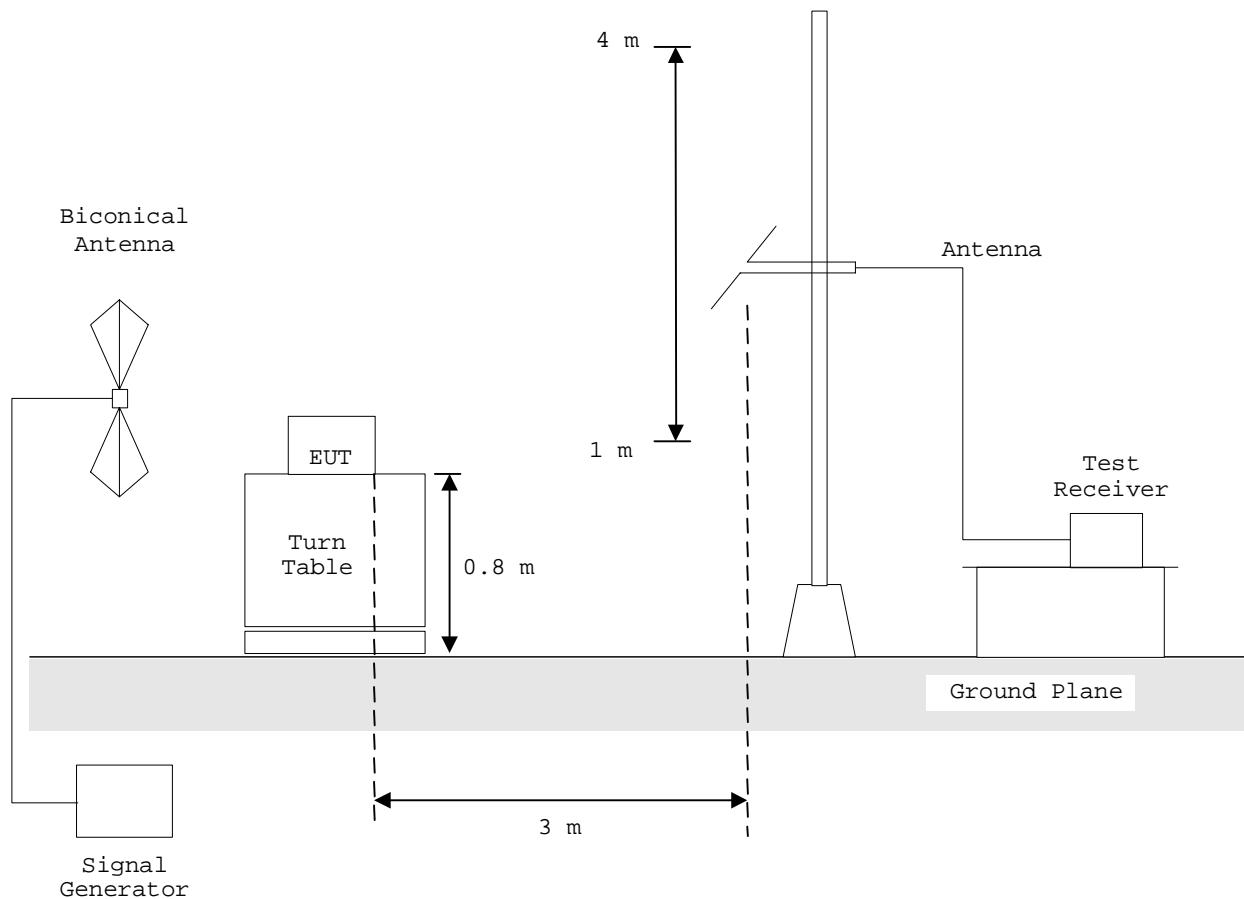
The EUT is a superregenerative receiver. The radiated measurements were carried out according to ANSI C63.4-2003 sec.12.1.1.1. Refer to the "cohere" plot below.

Signal Generator Frequency : 49.86 MHz

Signal Generator Output Level : -40 dBm

#### Anechoic Chamber

- Side View -



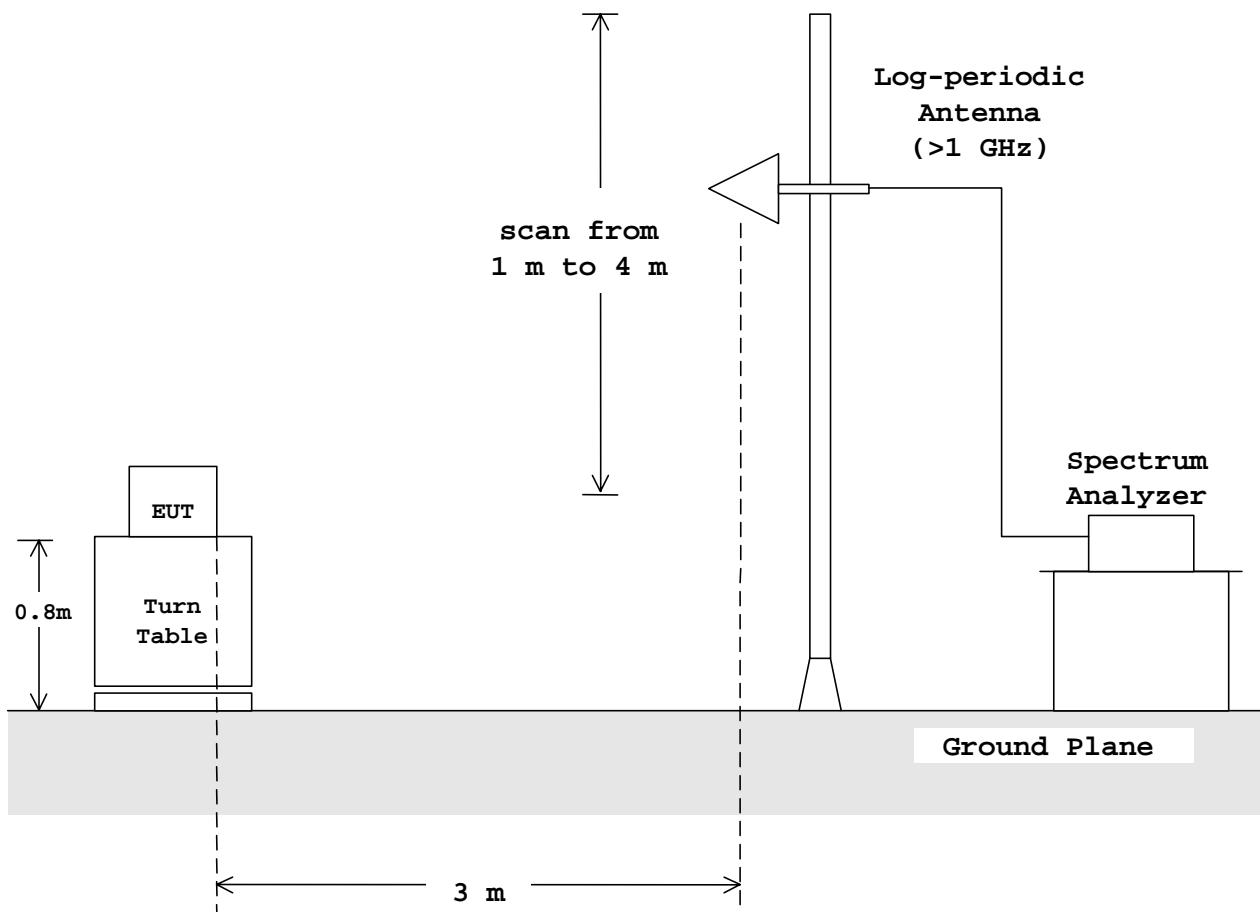
### 1.9.3 Radiated Emission (Above 1 GHz) :

According to description of ANSI C63.4-2003 sec.8.3.1.1, the preliminary radiated emissions measurements were carried out. The preliminary radiated measurements were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for the final radiated emissions measurements.

#### Anechoic Chamber

- Side View -



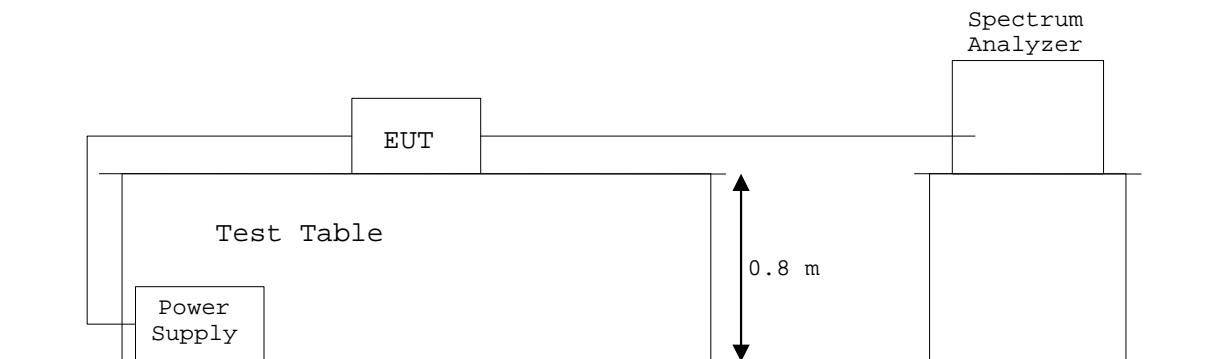
#### 1.9.4 Antenna Conducted Power :

According to description of ANSI C63.4-2003 sec.12.1.5, the antenna conducted power measurements were carried out.

Antenna-conducted power measurements shall be performed with the EUT antenna terminals connected directly to either a spectrum analyzer or another measuring instrument, if the antenna impedance matches the impedance of the measuring instrument. Otherwise, use a balun or impedance-matching network to connect the measuring instrument to antenna terminals of the EUT. Losses in decibels in any balun or impedance-matching network used shall be added to the measured value in dB $\mu$ V.

#### Shielded Enclosure

- Side View -



**1.10 TEST ARRANGEMENT (PHOTOGRAPHS)****PHOTOGRAPHS OF EUT CONFIGURATION FOR RADIATED EMISSIONS MEASUREMENT**

Photograph present configuration with maximum emission



**PHOTOGRAPHS OF EUT CONFIGURATION FOR RADIATED EMISSIONS MEASUREMENT**

Photograph present configuration with maximum emission



## 2 TEST DATA

### 2.1 AC Power Line Conducted Emissions

Note : This test was not applicable.

### 2.2 Radiated Emissions Measurement

Tuning Frequency : 49.86 MHz  
 Distance of Measurement : 3.0 meters

Date : January 9, 2006  
 Temp. : 24 °C Humi. : 37 %

| Frequency (MHz) | P-A Factor (dB) | Correction Factor (dB) | Polarization | Meter Reading (dBuV) |    |      | Limits (dBuV/m) |      | Emission Levels (dBuV/m) |      | Margins (dB) |      |
|-----------------|-----------------|------------------------|--------------|----------------------|----|------|-----------------|------|--------------------------|------|--------------|------|
|                 |                 |                        |              | QP                   | AV | Peak | QP/AV           | Peak | QP/AV                    | Peak | QP/AV        | Peak |
| 54.13           | 0.0             | 13.6                   | H            | 0.4                  | -  | -    | 40.0            | -    | 14.0                     | -    | 26.0         | -    |
| 71.37           | 0.0             | 10.3                   | H            | < 0.0                | -  | -    | 40.0            | -    | < 10.3                   | -    | > 29.7       | -    |
| 88.92           | 0.0             | 11.8                   | H            | 11.3                 | -  | -    | 43.5            | -    | 23.1                     | -    | 20.4         | -    |
| 175.78          | 0.0             | 20.5                   | H            | 0.2                  | -  | -    | 43.5            | -    | 20.7                     | -    | 22.8         | -    |
| 219.61          | 0.0             | 21.7                   | H            | 3.5                  | -  | -    | 46.0            | -    | 25.2                     | -    | 20.8         | -    |
| 351.83          | 0.0             | 19.8                   | H            | 5.7                  | -  | -    | 46.0            | -    | 25.5                     | -    | 20.5         | -    |

Notes :

- 1) The spectrum was checked from 30 MHz to 1000 MHz.
- 2) The cable loss, amp. gain and antenna factor are included in the correction factor.
- 3) The symbol of "<" means "or less".
- 4) The symbol of ">" means "or greater".
- 5) A sample calculation(QP/AV) was made at 54.13 (MHz).

$$PA + Cf + Mr = 0 + 13.6 + 0.4 = 14 \text{ (dBuV/m)}$$

PA = Peak to Average Factor(P-A Factor)

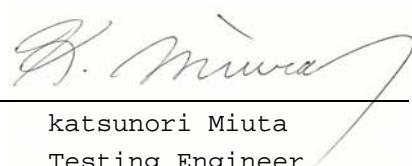
Cf = Correction Factor

Mr = Meter Reading

- 6) Measuring Instrument Setting :

| <u>Detector function</u> | <u>Resolution</u> | <u>Bandwidth</u> | <u>Video Bandwidth</u> |
|--------------------------|-------------------|------------------|------------------------|
| Quasi-peak (QP)          | 120 kHz           | -                |                        |

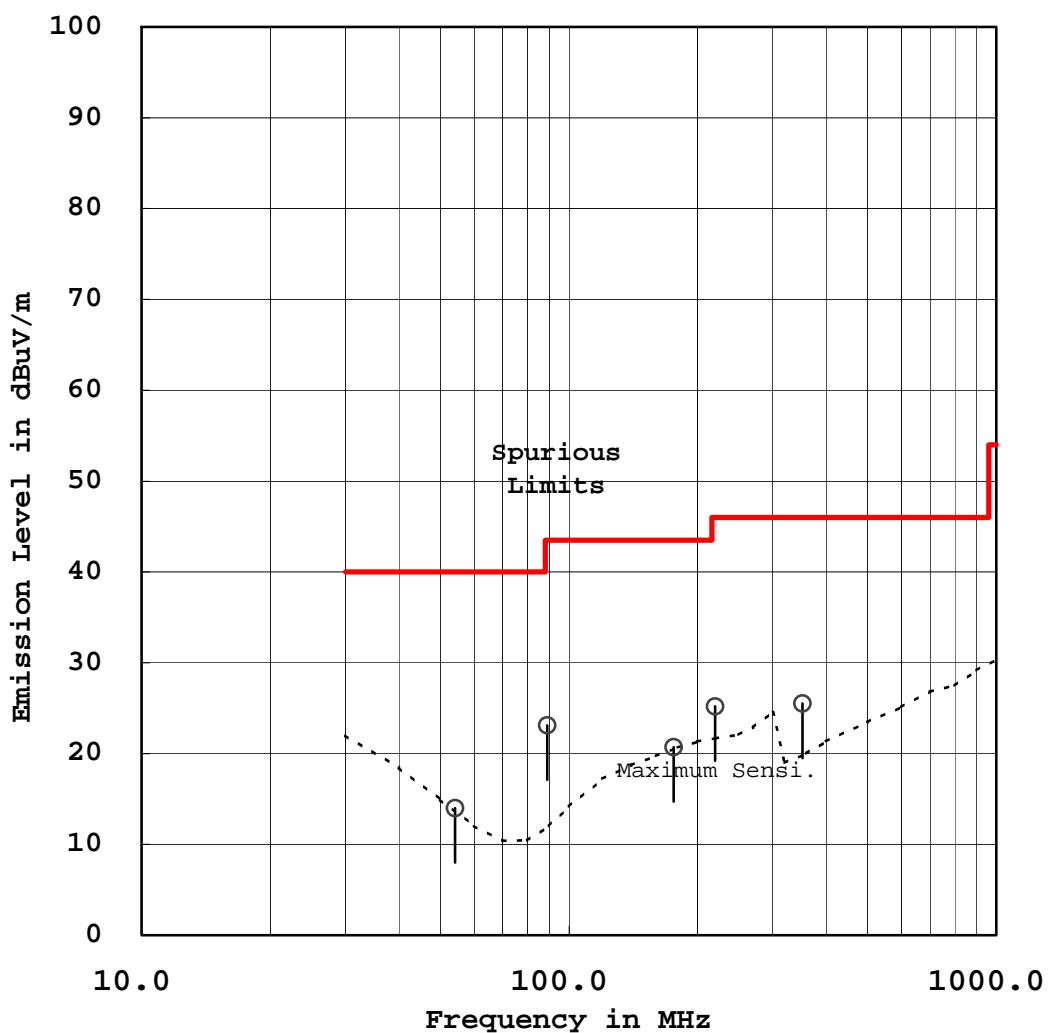
Tested by :

  
 katsunori Miuta  
 Testing Engineer

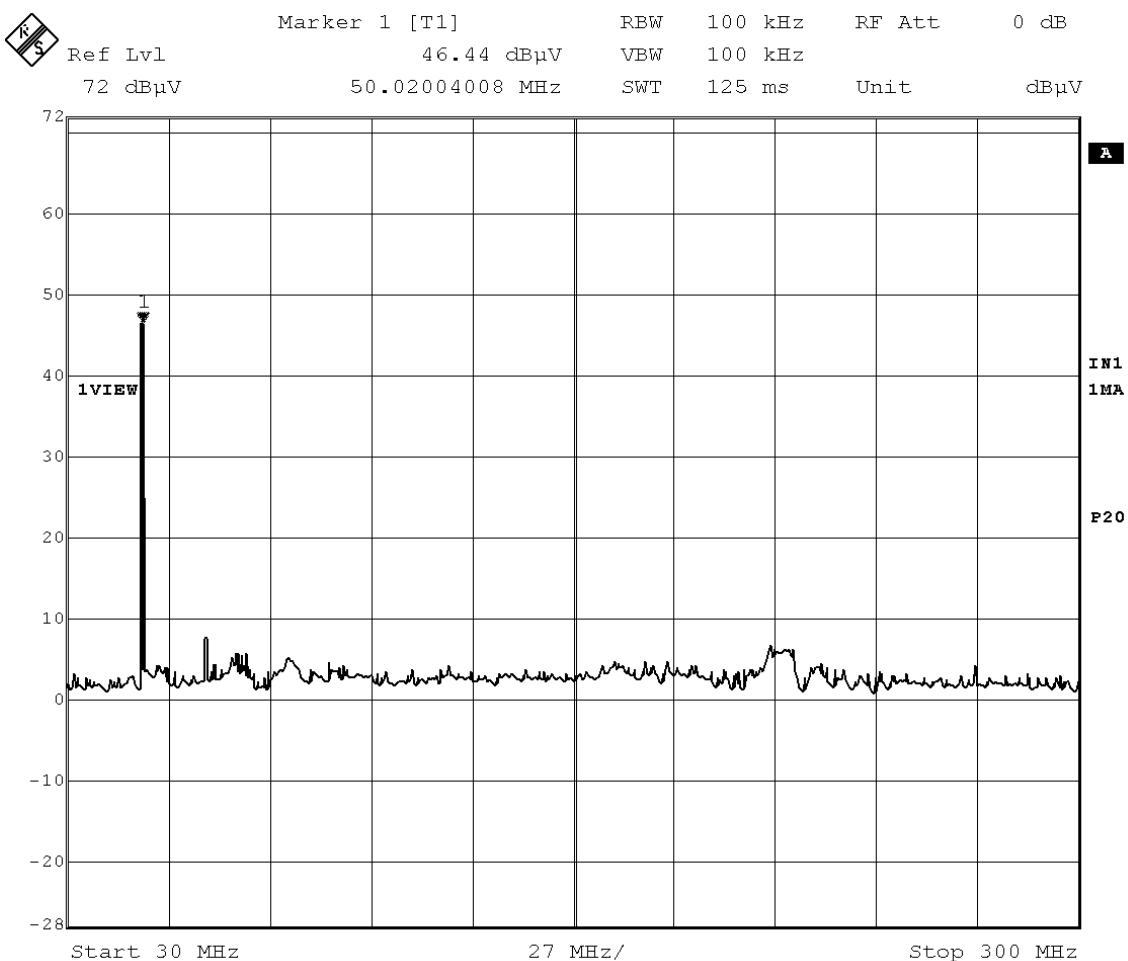
**RADIATED EMISSION MEASUREMENT**

Model No. : RP7340H

Standard : CFR 47 FCC Rules Part 15      O QP/AV  
Tuning Frequency(MHz) : 49.86



### Coherent Emission Plot



### 2.3 Antenna Conducted Power Measurement

Note : This test was not applicable

## **Appendix**

### **Test Instruments List**

27-Dec-2006

| No                             | Type               | Model | Manufacturer | Serial | ID           | Last Cal. | Interval |
|--------------------------------|--------------------|-------|--------------|--------|--------------|-----------|----------|
| <b><u>Test Facilities:</u></b> |                    |       |              |        |              |           |          |
| 1                              | Anechoic Chamber A | -     | TDK          | -      | 800-01-502E0 | Mar 2006  | 1 Year   |
| 2                              | Anechoic Chamber B | -     | TDK          | -      | 800-01-503E0 | Mar 2006  | 1 Year   |
| 3                              | Shield Room A      | -     | TDK          | -      | 800-01-501E0 | -         | -        |
| 4                              | Shield Room B      | -     | Ray Proof    | -      | 800-01-010E0 | -         | -        |
| 5                              | Shield Room C      | -     | TDK          | -      | 800-01-504E0 | -         | -        |
| 6                              | Shield Room D      | -     | Emerson      | -      | 800-01-022E0 | -         | -        |
| 7                              | Shield Room E      | -     | TDK          | -      | 800-01-505E0 | -         | -        |

**Measuring Instruments:**

|     |                      |              |                 |                       |              |          |        |
|-----|----------------------|--------------|-----------------|-----------------------|--------------|----------|--------|
| 10  | Test Receiver        | ESHS10       | Rohde & Schwarz | 835871/004            | 119-01-505E0 | Apr 2006 | 1 Year |
| 11  | Test Receiver        | ESVS10       | Rohde & Schwarz | 826148/002            | 119-03-504E0 | Apr 2006 | 1 Year |
| 12  | Test Receiver        | ESVS10       | Rohde & Schwarz | 832699/001            | 119-03-506E0 | Apr 2006 | 1 Year |
| 13  | Test Receiver        | ESI26        | Rohde & Schwarz | 100043                | 119-04-511E0 | Aug 2006 | 1 Year |
| 14  | Spectrum Analyzer    | R3182        | Advantest       | 120600581             | 122-02-521E0 | Mar 2006 | 1 Year |
| 17  | Spectrum Analyzer    | 8566B        | Hewlett Packard | 2747A05855            | 122-02-517E0 | Apr 2006 | 1 Year |
| 18  | RF Pre-selector      | 85685A       | Hewlett Packard | 2901A00933            | 122-02-519E0 | Apr 2006 | 1 Year |
| 19  | Spectrum Analyzer    | R3132        | Advantest       | 120500072             | 122-02-520E0 | Sep 2006 | 1 Year |
| 20  | Spectrum Analyzer    | R3132        | Advantest       | 150400998             | 122-02-523E0 | Jul 2006 | 1 Year |
| 65  | Power Meter          | 436A         | Hewlett Packard | 1725A01930            | 100-02-501E0 | Apr 2006 | 1 Year |
| 66  | Power Sensor         | 8482A        | Hewlett Packard | 1551A01013            | 100-02-501E0 | Apr 2006 | 1 Year |
| 67  | Power Sensor         | 8485A        | Hewlett Packard | 2942A08969            | 100-04-021E0 | Apr 2006 | 1 Year |
| 68  | FM Linear Detector   | MS61A        | Anritsu         | M77486                | 123-02-008E0 | Oct 2006 | 1 Year |
| 69  | Level Meter          | ML422C       | Anritsu         | M87571                | 114-02-501E0 | Jun 2006 | 1 Year |
| 70  | Measuring Amplifier  | 2636         | B & K           | 1614851               | 082-01-502E0 | May 2006 | 1 Year |
| 75  | Frequency Counter    | 53131A       | Hewlett Packard | 3546A11807            | 102-02-075E0 | May 2006 | 1 Year |
| 83  | FFT Analyzer         | R9211C       | Advantest       | 02020253              | 122-02-506E0 | Jun 2006 | 1 Year |
| 84  | Noise Meter          | MN-446       | Meguro          | 53030478              | 082-01-144E0 | Apr 2006 | 1 Year |
| 86  | Peak Power Analyzer  | 8990A/84815A | Hewlett Packard | 3220A00486/3227A00118 | 100-02-016E0 | Apr 2006 | 1 Year |
| 163 | Digital Oscilloscope | 54502A       | Hewlett Packard | 2934A05573            | 121-02-502E0 | May 2006 | 1 Year |
| 165 | Multimeter           | VOAC7413     | Iwatsu Electric | 0267973               | 114-02-502E0 | Apr 2006 | 1 Year |
| 172 | Test Receiver        | ESCI         | Rohde & Schwarz | 100408                | 119-04-512E0 | Sep 2006 | 1 Year |

**Antennas:**

|     |                      |            |                  |             |              |          |        |
|-----|----------------------|------------|------------------|-------------|--------------|----------|--------|
| 21  | Loop Antenna         | HFH2-Z2    | Rohde & Schwarz  | 881058/62   | 119-05-033E0 | Jun 2006 | 1 Year |
| 22  | Dipole Antenna       | KBA-511    | Kyoritsu         | 0-170-1     | 119-05-506E0 | Oct 2006 | 1 Year |
| 23  | Dipole Antenna       | KBA-511A   | Kyoritsu         | 0-201-13    | 119-05-504E0 | Oct 2006 | 1 Year |
| 24  | Dipole Antenna       | KBA-611    | Kyoritsu         | 0-147-14    | 119-05-507E0 | Oct 2006 | 1 Year |
| 25  | Dipole Antenna       | KBA-611    | Kyoritsu         | 0-170-1     | 119-05-505E0 | Oct 2006 | 1 Year |
| 27  | Biconical Antenna    | BBA9106    | Schwarzbeck      | -           | 119-05-078E0 | Nov 2006 | 1 Year |
| 28  | Log-periodic Antenna | UHALP9107  | Schwarzbeck      | -           | 119-05-079E0 | Nov 2006 | 1 Year |
| 30  | Log-periodic Antenna | HL025      | Rohde & Schwarz  | 340182/015  | 119-05-100E0 | Jun 2006 | 1 Year |
| 31  | Horn Antenna         | 3115       | EMC Test Systems | 6442        | 119-05-514E0 | Jan 2006 | 2 Year |
| 32  | Horn Antenna         | 3116       | EMC Test Systems | 2547        | 119-05-515E0 | May 2005 | 2 Year |
| 167 | Biconical Antenna    | BBA9106    | Schwarzbeck      | VHA91032325 | 119-05-520E0 | May 2006 | 1 Year |
| 168 | Log-periodic Antenna | UHALP9108A | Schwarzbeck      | 0666        | 119-05-521E0 | May 2006 | 1 Year |
| 169 | Biconical Antenna    | BBA9106    | Schwarzbeck      | VHA91032399 | 119-05-522E0 | May 2006 | 1 Year |
| 170 | Log-periodic Antenna | UHALP9108A | Schwarzbeck      | 0724        | 119-05-523E0 | May 2006 | 1 Year |

| 27-Dec-2006               |                      |                    |                          |            |              |                    |
|---------------------------|----------------------|--------------------|--------------------------|------------|--------------|--------------------|
| No                        | Type                 | Model              | Manufacturer             | Serial     | ID           | Last Cal. Interval |
| <b><u>Cables:</u></b>     |                      |                    |                          |            |              |                    |
| 38                        | RF Cable             | 5D-2W              | Fujikura                 | -          | 155-21-001E0 | Feb 2006 1 Year    |
| 39                        | RF Cable             | 5D-2W              | Fujikura                 | -          | 155-21-002E0 | Feb 2006 1 Year    |
| 40                        | RF Cable             | 3D-2W              | Fujikura                 | -          | 155-21-005E0 | Apr 2006 1 Year    |
| 41                        | RF Cable             | 3D-2W              | Fujikura                 | -          | 155-21-006E0 | Apr 2006 1 Year    |
| 42                        | RF Cable             | 3D-2W              | Fujikura                 | -          | 155-21-007E0 | Apr 2006 1 Year    |
| 43                        | RF Cable             | RG213/U            | Rohde & Schwarz          | -          | 155-21-010E0 | Apr 2006 1 Year    |
| 44                        | RF Cable(10m)        | S 04272B           | Suhner                   | -          | 155-21-011E0 | May 2006 1 Year    |
| 45                        | RF Cable(1.5m 18GHz) | S 04272B           | Suhner                   | -          | 155-21-012E0 | May 2006 1 Year    |
| 46                        | RF Cable(1m 18GHz)   | SUCOFLEX           | Suhner                   | -          | 155-21-013E0 | May 2006 1 Year    |
| 47                        | RF Cable(1m N)       | S 04272B           | Suhner                   | -          | 155-21-015E0 | Jun 2006 1 Year    |
| 48                        | RF Cable(1m 26GHz)   | SUCOFLEX           | Suhner                   | 14543/4E   | 155-21-016E0 | Dec 2006 1 Year    |
| 49                        | RF Cable(4m 26GHz)   | SUCOFLEX           | Suhner                   | 190630     | 155-21-017E0 | Dec 2006 1 Year    |
| 50                        | RF Cable(10m)        | F130-S1S1-394      | MEGA PHASE               | 10510      | 155-21-018E0 | Dec 2006 1 Year    |
| 51                        | RF Cable(7m)         | 3D-2W              | Fujikura                 | -          | 155-21-009E0 | Apr 2006 1 Year    |
| 52                        | RF Cable(7m)         | RG223/U            | Suhner                   | -          | 155-21-021E0 | May 2006 1 Year    |
| <b><u>Networks:</u></b>   |                      |                    |                          |            |              |                    |
| 33                        | LISN                 | KNW-407            | Kyoritsu                 | 8-833-6    | 149-04-052E0 | Apr 2006 1 Year    |
| 34                        | LISN                 | KNW-407            | Kyoritsu                 | 8-855-2    | 149-04-055E0 | Apr 2006 1 Year    |
| 35                        | LISN                 | KNW-407            | Kyoritsu                 | 8-1130-6   | 149-04-062E0 | Apr 2006 1 Year    |
| 36                        | LISN                 | KNW-242C           | Kyoritsu                 | 8-837-13   | 149-04-054E0 | Apr 2006 1 Year    |
| 37                        | Absorbing Clamp      | MDS21              | Luthi                    | 03293      | 119-06-506E0 | Aug 2006 1 Year    |
| 164                       | LISN                 | KNW-403D           | Kyoritsu                 | 8-1474-3   | 149-04-059E0 | Apr 2006 1 Year    |
| 173                       | Pulse Limiter        | ESH3-Z2            | Rohde & Schwarz          | -          | 156-01-501E0 | Apr 2006 1 Year    |
| 174                       | Pulse Limiter        | ESH3-Z2            | Rohde & Schwarz          | -          | 156-01-502E0 | Apr 2006 1 Year    |
| 175                       | Pulse Limiter        | ESH3-Z2            | Rohde & Schwarz          | -          | 156-01-503E0 | Apr 2006 1 Year    |
| <b><u>Amplifiers:</u></b> |                      |                    |                          |            |              |                    |
| 53                        | AF Amplifier         | P-500L             | Accuphase                | BOY806     | 127-01-501E0 | Feb 2006 1 Year    |
| 54                        | RF Amplifier         | WJ-6882-814        | Watkins-Johnson          | 0414       | 127-04-017E0 | Jun 2006 1 Year    |
| 55                        | RF Amplifier         | WJ-5315-556        | Watkins-Johnson          | 106        | 127-04-006E0 | Jun 2006 1 Year    |
| 56                        | RF Amplifier         | WJ-5320-307        | Watkins-Johnson          | 645        | 127-04-005E0 | Jun 2006 1 Year    |
| 57                        | RF Amplifier         | JS4-00102600-28-5A | MITEQ                    | 669167     | 127-04-502E0 | Apr 2006 1 Year    |
| <b><u>Generators:</u></b> |                      |                    |                          |            |              |                    |
| 58                        | Function Generator   | 3325B              | Hewlett Packard          | 2847A03284 | 118-08-124E0 | Jul 2006 1 Year    |
| 59                        | Function Generator   | VP-7422A           | Matsushita Communication | 050351E122 | 118-08-503E0 | Jul 2006 1 Year    |
| 60                        | Signal Generator     | 8664A              | Hewlett Packard          | 3035A00140 | 118-03-014E0 | May 2006 1 Year    |
| 61                        | Signal Generator     | 8664A              | Hewlett Packard          | 3438A00756 | 118-04-502E0 | May 2006 1 Year    |
| 62                        | Signal Generator     | 6061A              | Gigatronics              | 5130593    | 118-04-024E0 | Mar 2006 1 Year    |

| No                    | Type              | Model          | Manufacturer    | Serial     | 27-Dec-2006  |           |          |
|-----------------------|-------------------|----------------|-----------------|------------|--------------|-----------|----------|
|                       |                   |                |                 |            | ID           | Last Cal. | Interval |
| <b><u>Others:</u></b> |                   |                |                 |            |              |           |          |
| 63                    | Termination(50)   | -              | Suhner          | -          | 154-06-501E0 | Jan 2006  | 1 Year   |
| 64                    | Termination(50)   | -              | Suhner          | -          | 154-06-502E0 | Jan 2006  | 1 Year   |
| 71                    | Microphone        | 4134           | B & K           | 1253497    | 147-01-502E0 | May 2006  | 1 Year   |
| 72                    | Preamplifier      | 2639           | B & K           | 1268763    | 127-01-504E0 | -         | -        |
| 73                    | Pistonphone       | 4220           | B & K           | 1165008    | 147-02-501E0 | Mar 2006  | 1 Year   |
| 74                    | Artificial Mouth  | 4227           | B & K           | 1274869    | -            | -         | -        |
| 76                    | Oven              | -              | Ohnishi         | -          | 023-02-018E0 | -         | -        |
| 77                    | DC Power Supply   | 6628A          | Hewlett Packard | 3224A00284 | 072-05-503E0 | Jun 2006  | 1 Year   |
| 78                    | Band RejectFilter | BRM12294       | Micro-tronics   | 003        | 149-01-501E0 | Jan 2006  | 1 Year   |
| 79                    | High Pass Filter  | F-100-4000-5-R | RLC Electronics | 0149       | 149-01-502E0 | Feb 2006  | 1 Year   |
| 80                    | Attenuator        | 43KC-10        | Anritsu         | -          | 148-03-506E0 | Feb 2006  | 1 Year   |
| 81                    | Attenuator        | 43KC-20        | Anritsu         | -          | 148-03-507E0 | Feb 2006  | 1 Year   |
| 82                    | Attenuator        | 355D           | Hewlett Packard | 219-10782  | 148-03-065E0 | Apr 2006  | 1 Year   |
| 85                    | RF Detector       | 75KC-50        | Anritsu         | 305002     | 100-02-506E0 | Jul 2006  | 1 Year   |