



**JAPAN QUALITY ASSURANCE ORGANIZATION**

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JQA APPLICATION NO.: 400-00529

Issue Date : December 26, 2000

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## **EMI TEST REPORT**

JQA APPLICATION NO. : 400-00529

Model No. : TP6770

Type of Equipment : Radio Controlled Toy

Regulations Applied : CFR 47 FCC Rules and Regulations Part 15

FCC ID : CVTTP6770

Applicant : NIKKO CO., LTD.

Address : 1-7-14, Mizumoto, Katsushika-ku,  
Tokyo 125-0032, Japan

Manufacture : NIKKO TEC INTERNATIONAL LTD.

Address : Room 812, Houston Center, 63 Mody Road,  
Tsimshatsui, Kowloon, Hong Kong

Received date of EUT : December 15, 2000

**Final Judgment : Passed**

**TEST RESULTS IN THIS REPORT** are obtained in use of equipment that is traceable to Electrotechnical Lab. of MITI Japan and Communications Research Lab. of MPT Japan.

**The test results** only respond to the tested sample. It is not allowed to copy this report even partly without the allowance of JQA EMC Engineering Dept. Testing Div.

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## **1 DOCUMENTATION**

### **1.1 TEST REGULATION**

FCC Rules and Regulations Part 15 Subpart A and C (June 23, 1989) Intentional Radiators

#### **Test procedure :**

AC power line conducted emission, radiated emission, frequency stability and occupied bandwidth tests were performed according to the procedures in ANSI C63.4-1992.

### **1.2 GENERAL INFORMATION**

#### **1.2.1 Test facility :**

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

- No.2 and 3 Anechoic Chambers( 3 meters Site ).
- Shielded Enclosure.

Expiration date of FCC test facility filing : June 04, 2002

2) EMC Engineering Dept. Testing Div. is recognized 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, 2001)

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

- |                                      |                                  |
|--------------------------------------|----------------------------------|
| 1) Type of Equipment                 | : Radio Controlled Toy           |
| 2) Product Type                      | : Pre-Production                 |
| 3) Category                          | : Low Power Communication Device |
|                                      | Transmitter                      |
| 4) EUT Authorization                 | : Certification                  |
| 5) FCC ID                            | : CVTTP6770                      |
| 6) Trade Name                        | : NIKKO                          |
| 7) Model No.                         | : TP6770                         |
| 8) Operating Frequency Range         | : 26.995 MHz - 27.255 MHz        |
| 9) Highest Frequency Used in the EUT | : 27.145 MHz                     |
| 10) Serial No.                       | : None                           |
| 11) Date of Manufacture              | : December 2000                  |
| 12) Power Rating                     | : DC 9.0V(Battery)               |
| 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.

☒ - was not applicable.

#### Test location :

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

☐ - Shielded Enclosure

☐ - Anechoic Chamber No. 2 (portable Type)

#### Used test instruments :

| Type                                            | Model No. | Manufacturer        | Serial No.   | Last Cal. | Interval |
|-------------------------------------------------|-----------|---------------------|--------------|-----------|----------|
| <input type="checkbox"/> - Test Receiver        | ESH-2     | Rohde & Schwarz     | 880370/016   | Sep. 2000 | 1 Year   |
| <input type="checkbox"/> - Test Receiver        | ESH-3     | Rohde & Schwarz     | 881460/030   | June 2000 | 1 Year   |
| <input type="checkbox"/> - LISN(for Peripheral) | KNW-407   | Kyoritsu Electrical | 8-833-6      | Apr. 2000 | 1 Year   |
| <input type="checkbox"/> - LISN(for EUT)        | KNW-407   | Kyoritsu Electrical | 8-855-2      | Apr. 2000 | 1 Year   |
| <input type="checkbox"/> - LISN                 | KNW-407   | Kyoritsu Electrical | 8-757-1      | Apr. 2000 | 1 Year   |
| <input type="checkbox"/> - RF Cable             | 3D-2W     | Fujikura            | 155-21-006E0 | Apr. 2000 | 1 Year   |
| <input type="checkbox"/> - RF Cable             | 3D-2W     | Fujikura            | 155-21-007E0 | Apr. 2000 | 1 Year   |
| <input type="checkbox"/> - 50ohm Termination    |           | SUHNER              | 154-06-501E0 | Jan. 2000 | 1 Year   |
| <input type="checkbox"/> - 50ohm Termination    |           | SUHNER              | 154-06-502E0 | Jan. 2000 | 1 Year   |

### 1.3.2 The measurement of the Radiated Emission(9 kHz - 30 MHz)

  x   - was performed in the following test site.

       - was not applicable.

#### Test location :

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

  x   - Anechoic Chamber No. 2 (3 meters)

       - Anechoic Chamber No. 3 (3 meters)

#### Validation of Site Attenuation :

1) Last Confirmed Date : N/A

2) Interval : N/A

#### Used test instruments :

| Type                         | Model No. | Manufacturer    | Serial No. | Last Cal. | Interval |
|------------------------------|-----------|-----------------|------------|-----------|----------|
| <u>  x  </u> - Test Receiver | ESH-2     | Rohde & Schwarz | 880370/016 | Sep. 2000 | 1 Year   |
| <u>  x  </u> - Antenna       | HFH2-Z2   | Rohde & Schwarz | 881058/62  | Nov 2000  | 1 Year   |

### 1.3.3 The measurement of the Radiated Emission(30 MHz - 1000 MHz)

  x   - was performed in the following test site.

       - was not applicable.

#### Test location :

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

  x   - Anechoic Chamber No. 2 (3 meters)

       - Anechoic Chamber No. 3 (3 meters)

#### Validation of Site Attenuation :

1) Last Confirmed Date :March, 2000

2) Interval :1 year

#### Used test instruments :

| Type                                 | Model No. | Manufacturer        | Serial No.   | Last Cal. | Interval |
|--------------------------------------|-----------|---------------------|--------------|-----------|----------|
| <u>      </u> - Test Receiver        | ESH-2     | Rohde & Schwarz     | 880370/016   | Sep. 2000 | 1 Year   |
| <u>      </u> - Test Receiver        | ESV       | Rohde & Schwarz     | 872148/039   | May 2000  | 1 Year   |
| <u>  x  </u> - Test Receiver         | ESVS10    | Rohde & Schwarz     | 826148/002   | May 2000  | 1 Year   |
| <u>      </u> - Test Receiver        | ESVP      | Rohde & Schwarz     | 881487/004   | May 2000  | 1 Year   |
| <u>      </u> - Test Receiver        | ESVP      | Rohde & Schwarz     | 881487/005   | May 2000  | 1 Year   |
| <u>  x  </u> - Antenna               | KBA-511A  | Kyoritsu Electrical | 0-170-1      | Nov. 2000 | 1 Year   |
| <u>      </u> - Antenna              | KBA-511A  | Kyoritsu Electrical | 0-201-13     | Nov. 2000 | 1 Year   |
| <u>  x  </u> - Antenna               | KBA-611   | Kyoritsu Electrical | 0-147-14     | Nov. 2000 | 1 Year   |
| <u>      </u> - Antenna              | KBA-611   | Kyoritsu Electrical | 0-210-5      | Nov. 2000 | 1 Year   |
| <u>      </u> - Biconical Antenna    | BBA9106   | Schwarzbeck         | VHA91031150  | May 2000  | 1 Year   |
| <u>      </u> - Biconical Antenna    | BBA9106   | Schwarzbeck         | 11905078E0   | May 2000  | 1 Year   |
| <u>      </u> - Log-Periodic Antenna | UHALP9107 | Schwarzbeck         | 11905079E0   | May 2000  | 1 Year   |
| <u>      </u> - Log-Periodic Antenna | UHALP9107 | Schwarzbeck         | 11905110     | May 2000  | 1 Year   |
| <u>  x  </u> - RF Cable              | 5D-2W     | Fujikura            | 155-21-001E0 | Feb. 2000 | 1 Year   |
| <u>      </u> - RF Cable             | 5D-2W     | Fujikura            | 155-21-002E0 | Feb. 2000 | 1 Year   |

#### 1.3.4 The measurement of the Radiated Emission(Above 1000 MHz)

\_\_\_ - was performed in the following test site.

x - was not applicable.

#### Test location :

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

\_\_\_ - No. 2 site (3 meters)

\_\_\_ - No. 3 site (3 meters)

#### Validation of Site Attenuation :

1) Last Confirmed Date : N/A

2) Interval : N/A

#### Used test instruments :

| Type                       | Model No.         | Manufacturer       | Serial No.   | Last Cal. | Interval |
|----------------------------|-------------------|--------------------|--------------|-----------|----------|
| ___ - Spectrum Analyzer    | 8560E             | Hewlett Packard    | 3240A00189   | Nov. 2000 | 1 Year   |
| ___ - Spectrum Analyzer    | 8566B             | Hewlett Packard    | 2140A01091   | Apr. 2000 | 1 Year   |
| ___ - RF Pre-selector      | 85685A            | Hewlett Packard    | 2648A00522   | Apr. 2000 | 1 Year   |
| ___ - Spectrum Analyzer    | 8566B             | Hewlett Packard    | 2747A05855   | June 2000 | 1 Year   |
| ___ - RF Pre-selector      | 85685A            | Hewlett Packard    | 2091A00933   | June 2000 | 1 Year   |
| ___ - Log-Periodic Antenna | HL 025            | Rohde & Schwarz    | 340182/015   | Nov. 2000 | 1 Year   |
| ___ - RF Amplifier         | DBP-0102N5334272B | DBS Microwave Inc. | 012          | Jun. 1999 | 1 Year   |
| ___ - RF Amplifier         | WJ-6882-814       | Watkins-Johnson    | 0414         | June 2000 | 1 Year   |
| ___ - RF Amplifier         | WJ-5315-556       | Watkins-Johnson    | 106          | June 2000 | 1 Year   |
| ___ - RF Amplifier         | WJ-5320-307       | Watkins-Johnson    | 645          | June 2000 | 1 Year   |
| ___ - RF Cable(10m)        | S 04272B          | Suhner             | 155-21-011E0 | May 2000  | 1 Year   |
| ___ - RF Cable(2m)         | SUCOFLEX 104      | Suhner             | 155-21-012E0 | May 2000  | 1 Year   |
| ___ - RF Cable(1m)         | SUCOFLEX 104      | Suhner             | 155-21-013E0 | May 2000  | 1 Year   |

**1.3.5 The measurement of the Frequency Stability**☐ - was performed.☒ - was not applicable.**Used test instruments :**

| Type                                         | Model No. | Manufacturer     | Serial No. | Last Cal. | Interval |
|----------------------------------------------|-----------|------------------|------------|-----------|----------|
| <input type="checkbox"/> - Frequency Counter | 53131A    | Hewlett Packard  | 3546A11807 | May 2000  | 1 Year   |
| <input type="checkbox"/> - Oven              | -         | Ohnishi Co. Ltd. | -          | Aug. 2000 | 1 Year   |
| <input type="checkbox"/> - DC Power Supply   | 6628A     | Hewlett Packard  | 3224A00284 | July 2000 | 1 Year   |

**1.3.6 The measurement of the Occupied Bandwidth**☒ - was performed.☐ - was not applicable.**Used test instruments :**

| Type                                                    | Model No. | Manufacturer    | Serial No. | Last Cal. | Interval |
|---------------------------------------------------------|-----------|-----------------|------------|-----------|----------|
| <input type="checkbox"/> - Spectrum Analyzer            | 8560E     | Hewlett Packard | 3240A00189 | Nov. 2000 | 1 Year   |
| <input checked="" type="checkbox"/> - Spectrum Analyzer | 8566B     | Hewlett Packard | 2140A01091 | Apr. 2000 | 1 Year   |
| <input type="checkbox"/> - Spectrum Analyzer            | 8566B     | Hewlett Packard | 2747A05855 | June 2000 | 1 Year   |
| <input type="checkbox"/> - Function Generator           | 3325A     | Hewlett Packard | 2512A21776 | May 2000  | 1 Year   |
| <input type="checkbox"/> - FM Linear Detector           | MS61A     | Anritsu Corp.   | M77486     | Sep. 2000 | 1 Year   |
| <input type="checkbox"/> - Level Meter                  | ML422C    | Anritsu Corp.   | M87571     | June 2000 | 1 Year   |



## 1.4 EUT MODIFICATION / Deviation from Standard

### 1.4.1 EUT MODIFICATION

- ☒ - 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 :

### 1.4.2 Deviation from Standard:

- ☒ - 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

**AC Power Line Conducted Emission**                           - Applicable        x   - NOT Applicable

The requirements are                           - PASSED                           - NOT PASSED

Remarks :

**Radiated Emission [§15.227]**                        x   - Applicable                           - NOT Applicable

The requirements are                        x   - PASSED                           - NOT PASSED

Remarks:

**Frequency Stability**                           - Applicable                        x   - NOT Applicable

The requirements are                           - PASSED                           - NOT PASSED

Remarks:

**Occupied Bandwidth [§15.215(c)]**                        x   - Applicable                           - NOT Applicable

The requirements are                        x   - PASSED                           - NOT PASSED

Remarks:

## 1.6 SUMMARY

### General Remarks :

The EUT was tested according to the requirements of FCC Rules and Regulations Part 15 Subpart A and C (June 23, 1989) under the test configuration, as shown in clause 1.7 to 1.9.

The conclusion for the test items which are required by the applied regulation is indicated under the final judgment.

### Final Judgment :

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 : December 20, 2000

End of testing : December 21, 2000

- JAPAN QUALITY ASSURANCE ORGANIZATION -  
Approved by:

Signatories:  
Issued by:



Masaaki Takahashi  
Manager  
JQA EMC Engineering Dept.



Shigeru Osawa  
Assistant Manager  
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 :

| Item                 | Manufacturer                    | Model No. | FCC ID    | Serial No. |
|----------------------|---------------------------------|-----------|-----------|------------|
| Radio Controlled Toy | NIKKO TEC<br>INTERNATIONAL LTD. | TP6770    | CVTTP6770 | None       |

### 1.7.2 Operating condition

Power supply Voltage : 9.0 VDC(Battery)

The tests have been carried out under the transmitting condition.

COPY

## 1.8 PRELIMINARY TEST AND TEST-SETUP (DRAWINGS)

### 1.8.1 AC Power Line Conducted Emission ( 450 kHz - 30 MHz ) :

According to description of ANSI C63.4-1992 sec.13.1.3.1, the AC power line preliminary conducted emissions measurements were carried out.

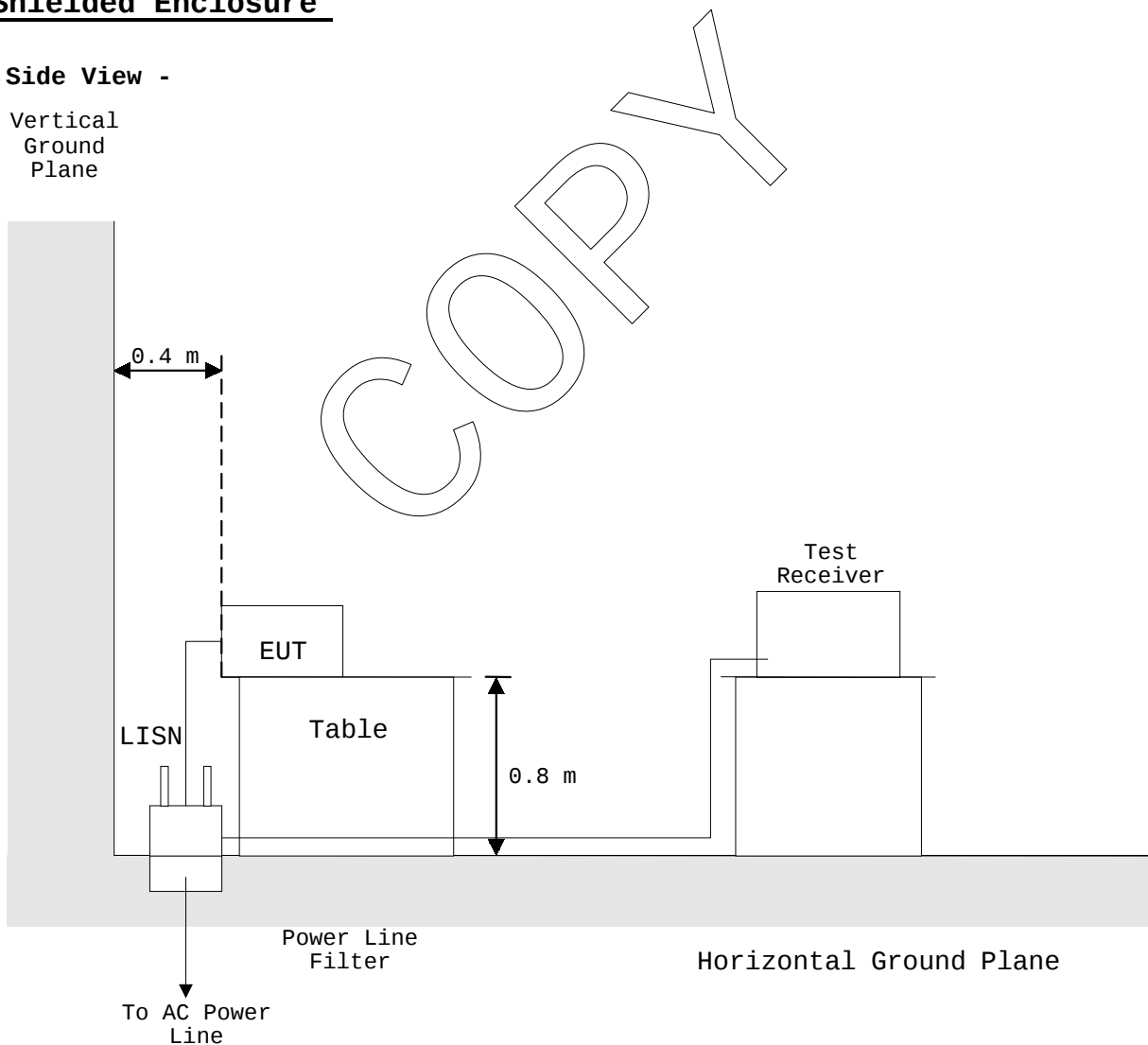
The preliminary conducted measurements were performed using the spectrum analyzer to observe the emission characteristics of the EUT.

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

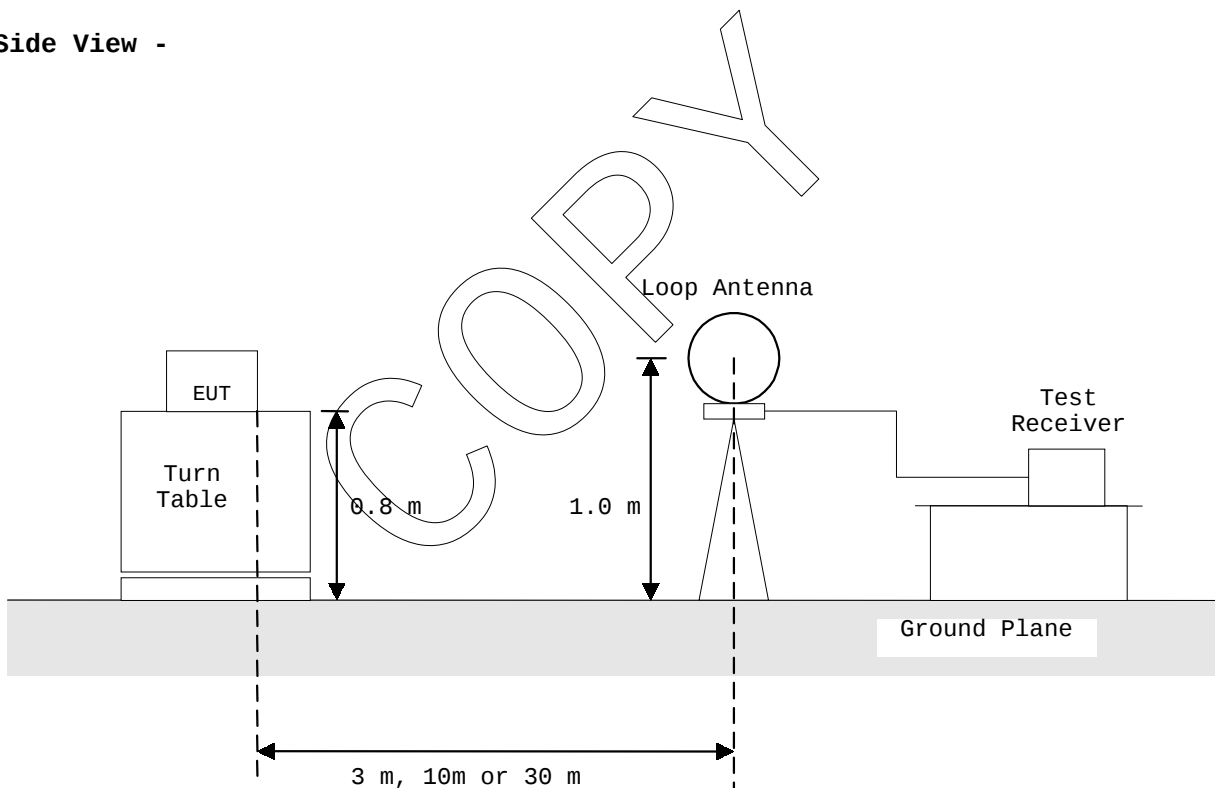


### 1.8.2 Radiated Emission ( 9 kHz - 30 MHz ) :

According to description of ANSI C63.4-1992 sec.13.1.4.1, the preliminary radiated emissions measurement 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.

- Side View -



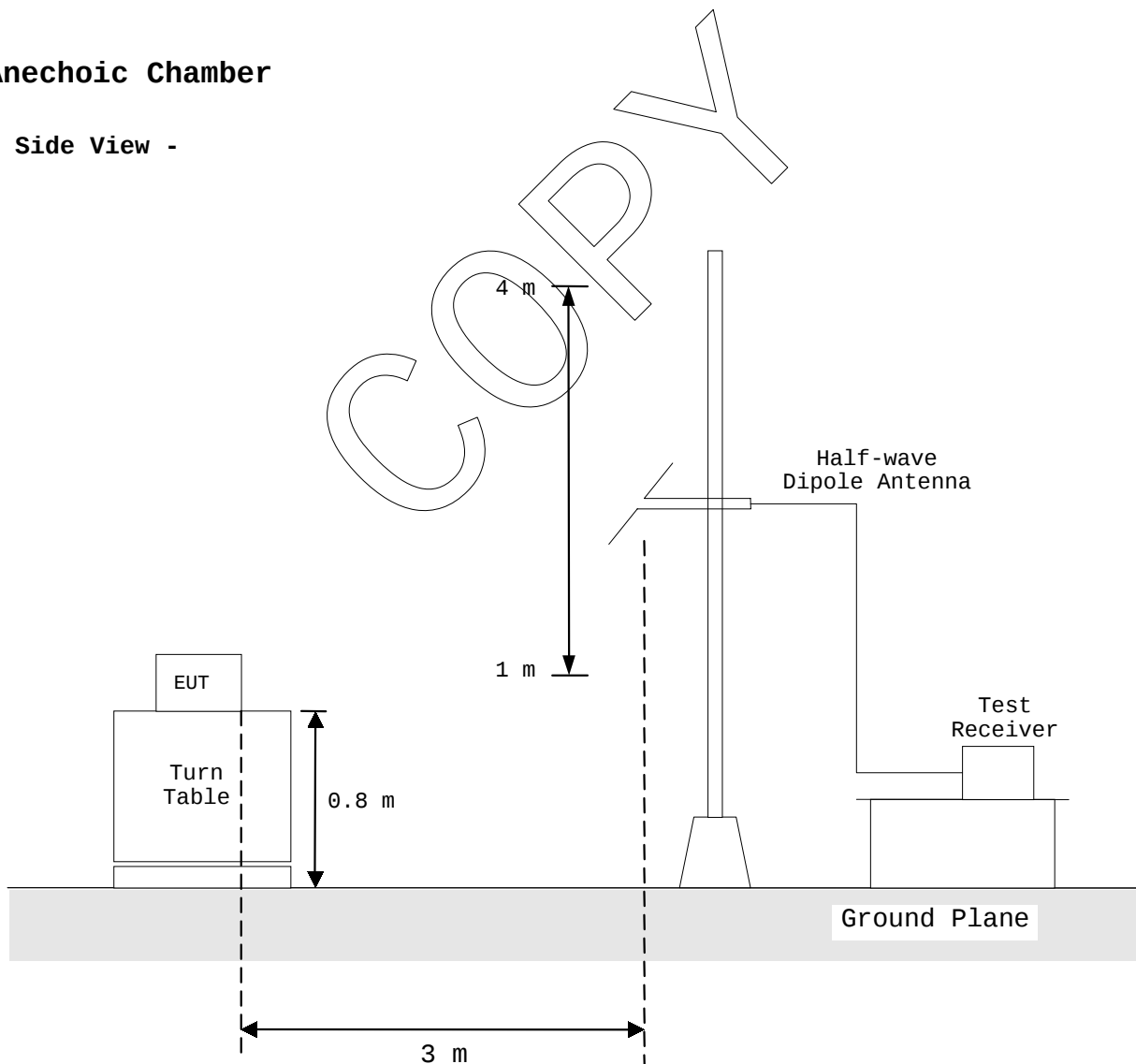
### 1.8.3 Radiated Emission ( 30 MHz - 1000 MHz ) :

According to description of ANSI C63.4-1992 sec.13.1.4.1, the preliminary radiated emissions measurement 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 -



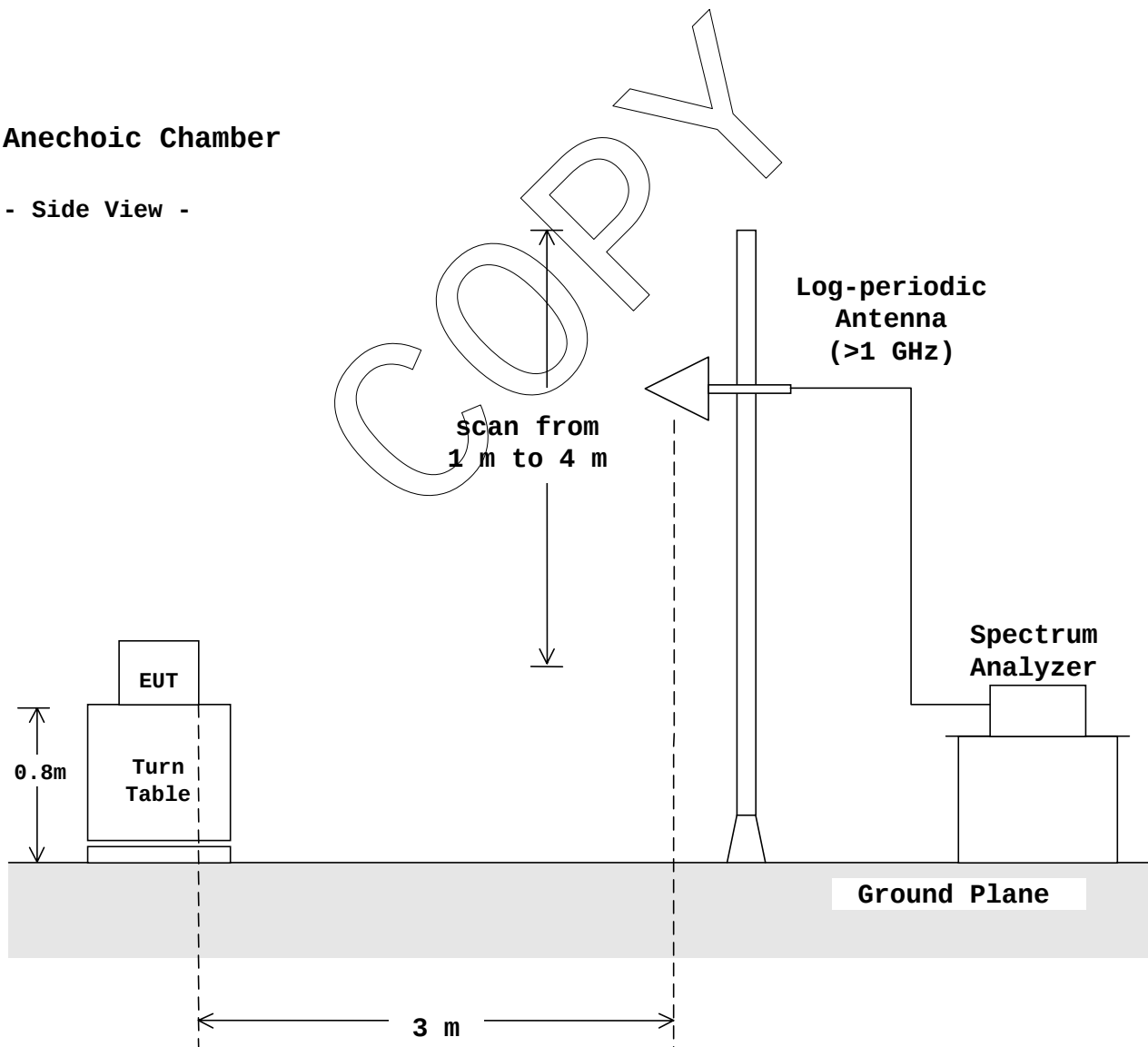
#### 1.8.4 Radiated Emission (Above 1 GHz) :

According to description of ANSI C63.4-1992 sec.13.1.4.1, 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

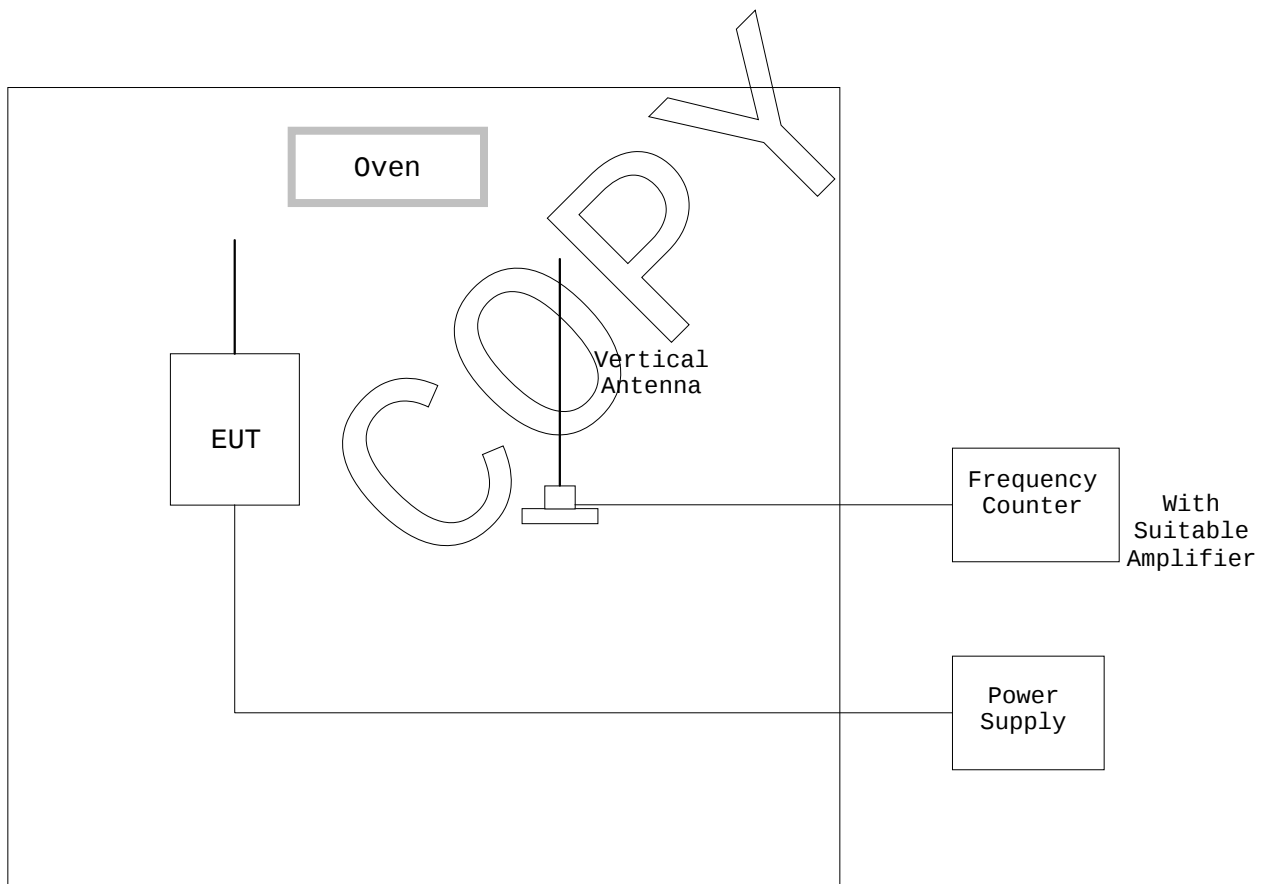
- Side View -



### 1.8.5 Frequency Stability :

According to description of ANSI C63.4-1992 sec.13.1.5 and sec.13.1.6, the frequency stability measurements were carried out. By using frequency counter with suitable RF amplifier, the carrier frequency of the transmitter under test was measured with a temperature variation of  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  at the normal supply voltage, and if required, with a variation in the primary voltage from 85 % to 115 % the rated supply voltage at the temperature of  $+20^{\circ}\text{C}$ .

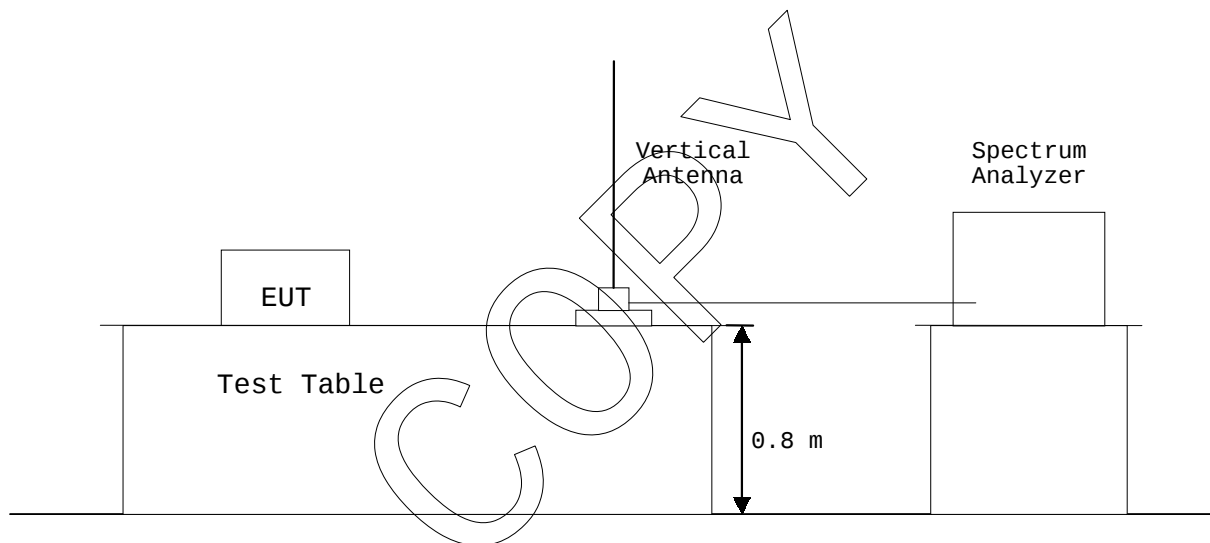
These measurements were carried out after allow sufficient time (approximately 1 hour) for the temperature of the chamber to stabilize.



**1.8.6 Occupied Bandwidth :**

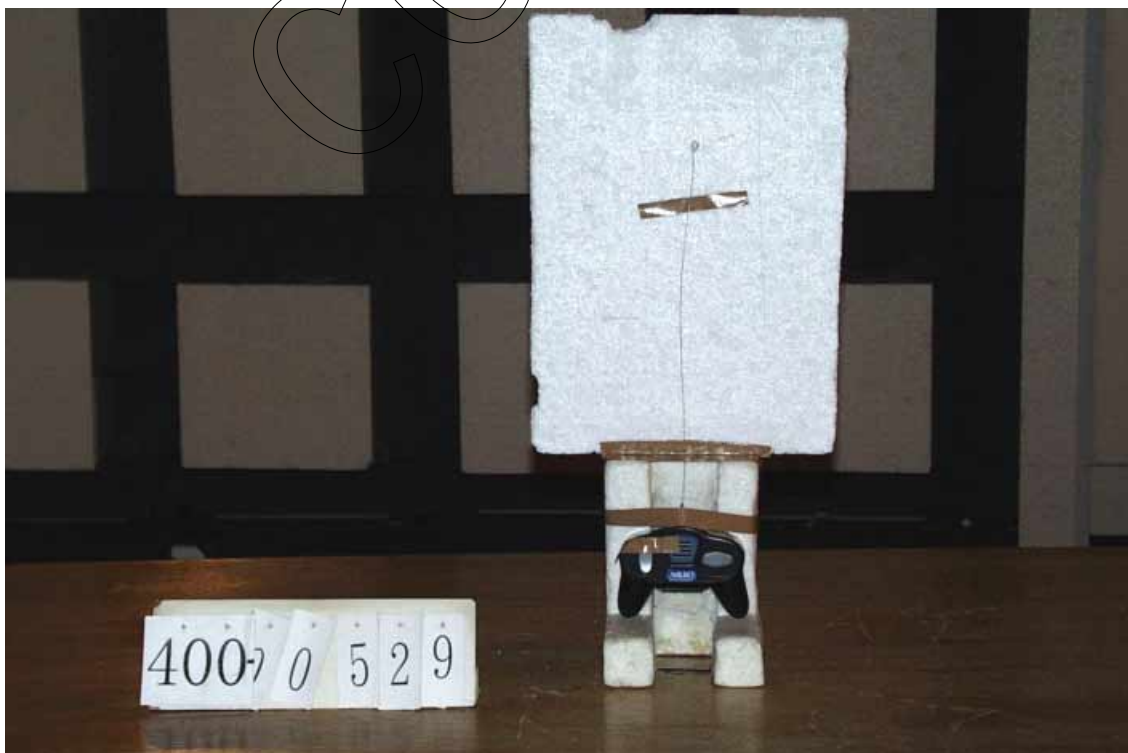
According to description of ANSI C63.4-1992 sec.13.1.7, the occupied bandwidth measurements were carried out. By using a spectrum analyzer with a vertical antenna for picking up the signal, the measurements of the emission were made under the transmitting modes of the EUT.

The resolution bandwidth of spectrum analyzer was set to the value specified in sec.13.1.7.



## 1.9 TEST ARRANGEMENT (PHOTOGRAPHS)

PHOTOGRAPHS OF EUT CONFIGURATION FOR RADIATED EMISSIONS MEASUREMENT  
 Photograph present configuration with maximum emission





## TEST DATA

### 2.2 Radiated Emissions Measurement

Date : December 21, 2000  
Temp.: 20 °C Humi.: 54 %

Operating Frequency : 27.145 MHz  
Distance of Measurement : 3 meters

| Frequency<br>(MHz) | Limits<br>(dBμV/m) | Field Strength<br>(dBμV/m) |           |
|--------------------|--------------------|----------------------------|-----------|
| Fundamental        |                    |                            |           |
| 27.145             | 80.0               | 71.5                       | (Average) |
| 27.145             | 100.0              | 76.6                       | (Peak)    |

Note: 1. Meter reading value shows field strength, because the value includes antenna factor.

2. The symbol of "<" means "or less".

3. Measuring Instrument Setting:

Detector Function : Average/Peak  
IF Band width : 10 kHz



|                                        | Antenna | Meter Reading |        |          | Field Strength at 3 m |          |
|----------------------------------------|---------|---------------|--------|----------|-----------------------|----------|
| Frequency                              | Factor  | Horiz.        | Vert.  | Limits   | Horiz.                | Vert.    |
| (MHz)                                  | (dB/m)  | (dBμV)        | (dBμV) | (dBμV/m) | (dBμV/m)              | (dBμV/m) |
| Harmonics & other Frequency components |         |               |        |          |                       |          |
| 54.290                                 | 4.3     | 12.7          | 9.5    | 40.0     | 17.0                  | 13.8     |
| 81.435                                 | 8.1     | 12.7          | 13.4   | 40.0     | 20.8                  | 21.5     |
| 108.580                                | 10.7    | 5.5           | 3.5    | 43.5     | 16.2                  | 14.2     |
| 135.725                                | 12.8    | 7.3           | 4.5    | 43.5     | 20.1                  | 17.3     |
| 162.870                                | 14.5    | 9.6           | 4.0    | 43.5     | 24.1                  | 18.5     |
| 190.015                                | 15.9    | 3.0           | < 0.0  | 43.5     | 18.9                  | < 15.9   |
| 217.160                                | 17.2    | 2.2           | < 0.0  | 46.0     | 19.4                  | < 17.2   |
| 244.305                                | 18.3    | 1.9           | 0.2    | 46.0     | 20.2                  | 18.5     |
| 271.450                                | 19.4    | 0.2           | < 0.0  | 46.0     | 19.6                  | < 19.4   |
| 298.595                                | 20.3    | < 0.0         | < 0.0  | 46.0     | < 20.3                | < 20.3   |
| 325.740                                | 21.1    | < 0.0         | < 0.0  | 46.0     | < 21.1                | < 21.1   |
| 352.885                                | 21.9    | < 0.0         | < 0.0  | 46.0     | < 21.9                | < 21.9   |
| 380.030                                | 22.6    | < 0.0         | < 0.0  | 46.0     | < 22.6                | < 22.6   |
| 407.175                                | 23.3    | < 0.0         | < 0.0  | 46.0     | < 23.3                | < 23.3   |
| 434.320                                | 24.0    | < 0.0         | < 0.0  | 46.0     | < 24.0                | < 24.0   |
| 461.465                                | 24.6    | < 0.0         | < 0.0  | 46.0     | < 24.6                | < 24.6   |
| 488.610                                | 25.1    | < 0.0         | < 0.0  | 46.0     | < 25.1                | < 25.1   |
| 515.755                                | 25.7    | < 0.0         | < 0.0  | 46.0     | < 25.7                | < 25.7   |
| 542.900                                | 26.2    | < 0.0         | < 0.0  | 46.0     | < 26.2                | < 26.2   |
| 570.045                                | 26.7    | < 0.0         | < 0.0  | 46.0     | < 26.7                | < 26.7   |
| 597.190                                | 27.2    | < 0.0         | < 0.0  | 46.0     | < 27.2                | < 27.2   |
| 624.335                                | 27.7    | < 0.0         | < 0.0  | 46.0     | < 27.7                | < 27.7   |
| 651.480                                | 28.2    | < 0.0         | < 0.0  | 46.0     | < 28.2                | < 28.2   |
| 678.625                                | 28.6    | < 0.0         | < 0.0  | 46.0     | < 28.6                | < 28.6   |
| 705.770                                | 29.1    | < 0.0         | < 0.0  | 46.0     | < 29.1                | < 29.1   |
| 732.915                                | 29.6    | < 0.0         | < 0.0  | 46.0     | < 29.6                | < 29.6   |
| 760.060                                | 30.0    | < 0.0         | < 0.0  | 46.0     | < 30.0                | < 30.0   |
| 787.205                                | 30.4    | < 0.0         | < 0.0  | 46.0     | < 30.4                | < 30.4   |
| 814.350                                | 30.9    | < 0.0         | < 0.0  | 46.0     | < 30.9                | < 30.9   |
| 841.495                                | 31.3    | < 0.0         | < 0.0  | 46.0     | < 31.3                | < 31.3   |
| 868.640                                | 31.7    | < 0.0         | < 0.0  | 46.0     | < 31.7                | < 31.7   |
| 895.785                                | 32.1    | < 0.0         | < 0.0  | 46.0     | < 32.1                | < 32.1   |
| 922.930                                | 32.5    | < 0.0         | < 0.0  | 46.0     | < 32.5                | < 32.5   |
| 950.075                                | 32.9    | < 0.0         | < 0.0  | 46.0     | < 32.9                | < 32.9   |
| 977.220                                | 33.3    | < 0.0         | < 0.0  | 54.0     | < 33.3                | < 33.3   |

Note: 1. The spectrum was checked from 30 MHz to 1000 MHz.  
All emissions not listed were found to be more than 20 dB below the limits.

2. The symbol of "<" means "or less".

3. The cable loss was included in the antenna factor.

4. Sample calculation :

at 54.290 MHz

$A_f + M_r = 4.3 + 12.7 = 17.0 \text{ dB}\mu\text{V/m}$

Where,

$A_f$  = Antenna Factor including the cable loss.

$M_r$  = Meter Reading

5. Measuring Instrument Setting:

Harmonics & other Frequency components

Detector function : CISPR quasi-peak

IF Bandwidth : 120 kHz

Tested by :

*Shigeru Osawa*

Shigeru Osawa

Testing Engineer

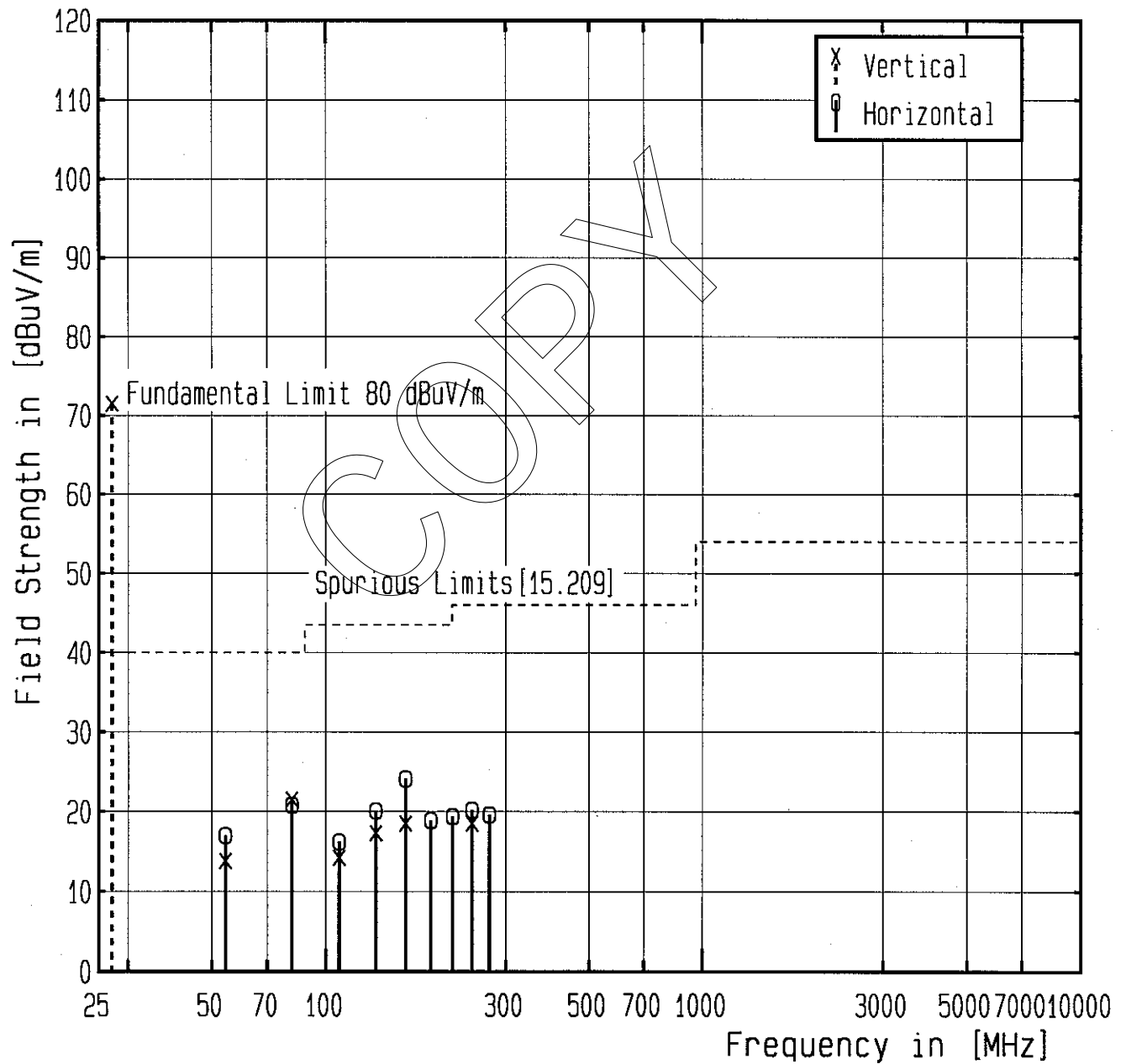


## Transmitter Fundamental and Spurious Emissions

Model No. : TP6770

Operating Frequency : 27.145 MHz

Test Condition :





JQA Application No. :400-00529

Model No. :TP6770

Standard :CFR 47 FCC Rules Part 15

FCC ID :CVTTP6770

Issue Date :December 26, 2000

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## 2.4 Occupied Bandwidth Measurement

Date : December 20, 2000

Temp.: 22 °C Humi.: 39 %

Measurements Results : Refer to the attached graphs.

Tested by :

*Shigeru Osawa*

Shigeru Osawa

Testing Engineer

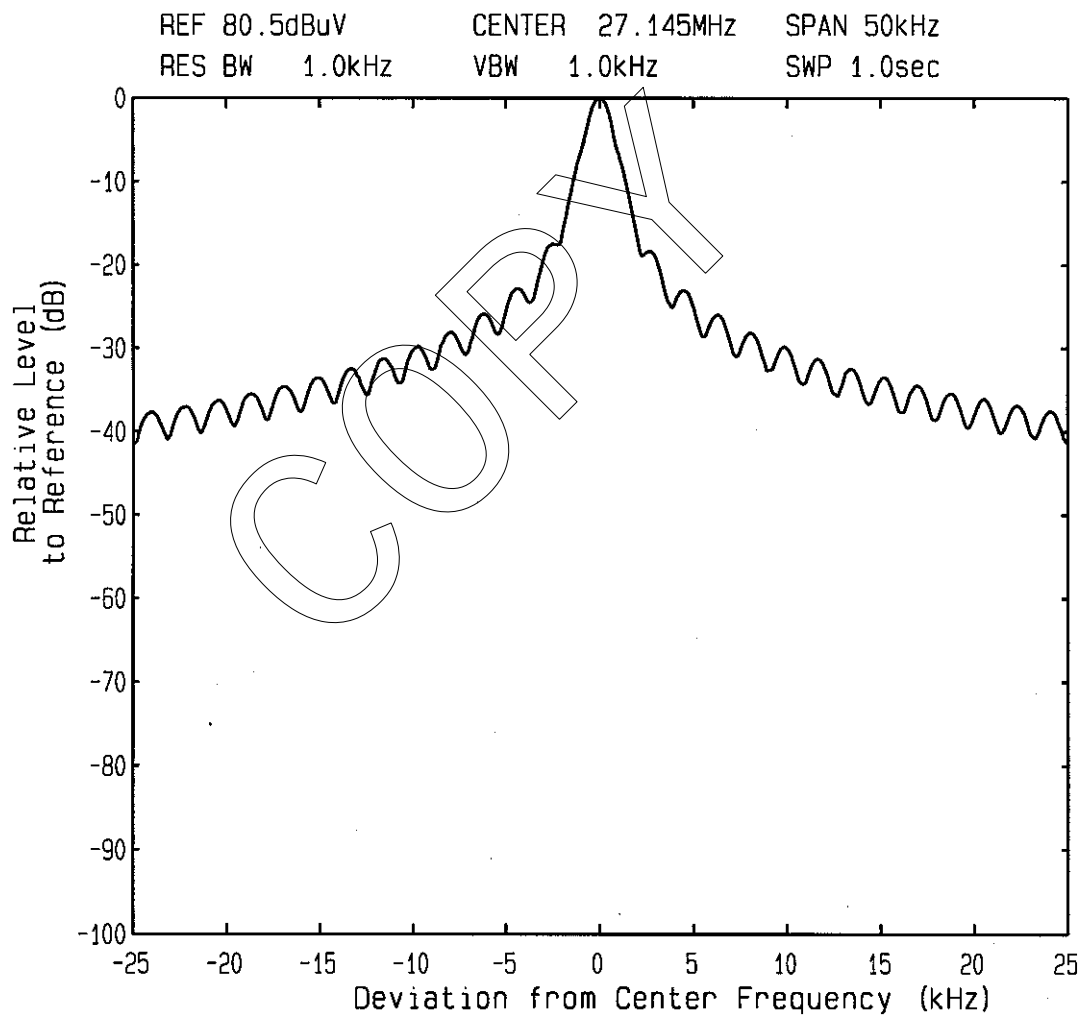
COPY

## Emission Limitation

FCC ID : CVTTP6770

Model : TP6770

Mode of EUT : Forward Button



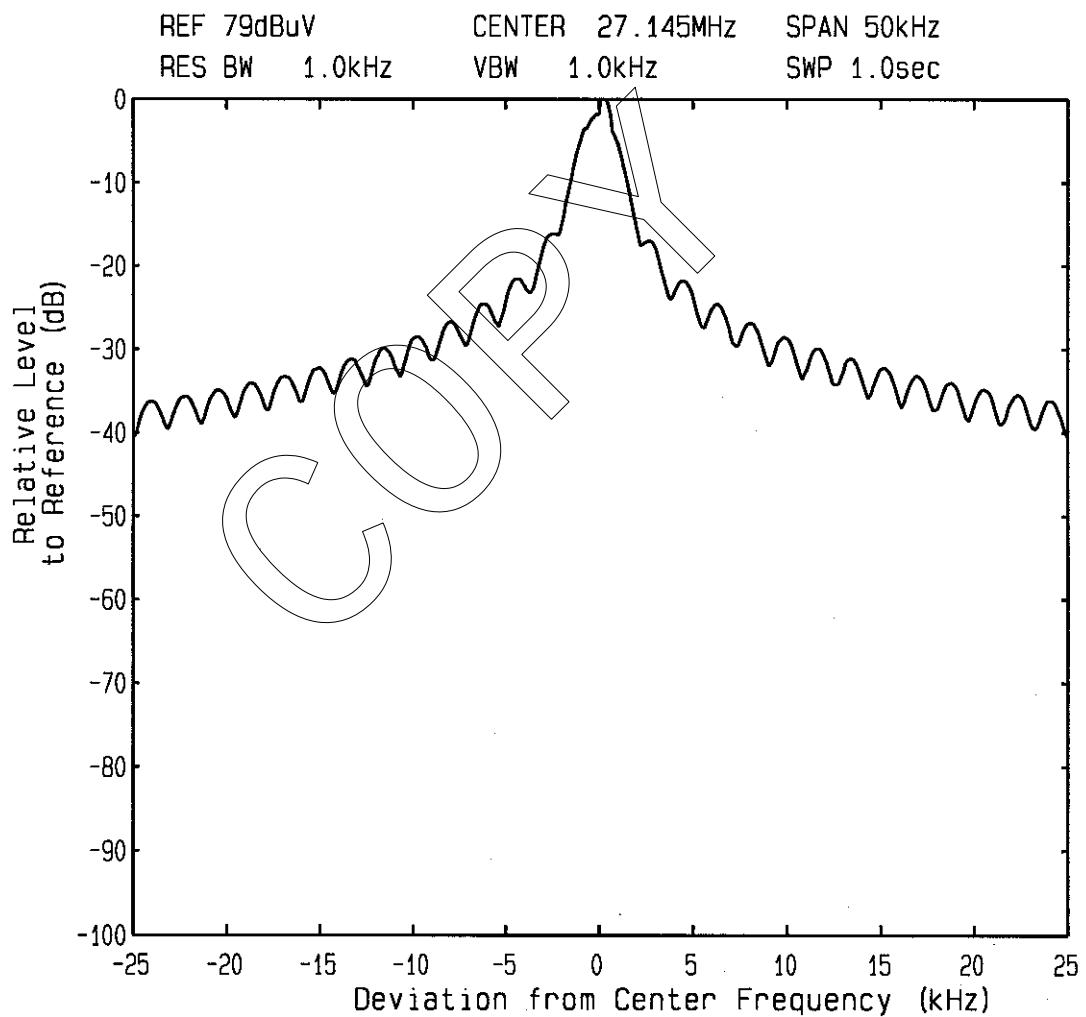


## Emission Limitation

FCC ID : CVTTP6770

Model : TP6770

Mode of EUT : Reverse Button



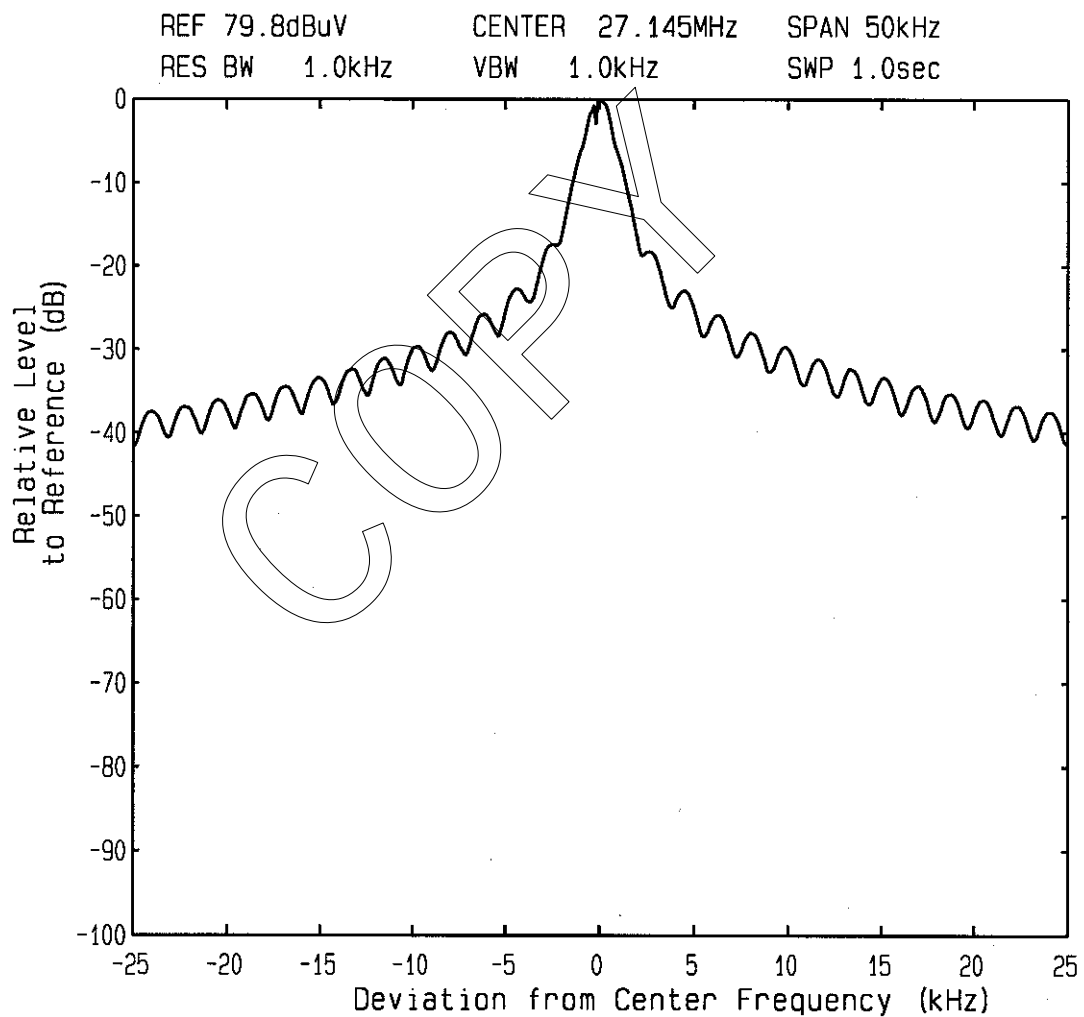


## Emission Limitation

FCC ID : CVTTP6770

Model : TP6770

Mode of EUT : Right Button



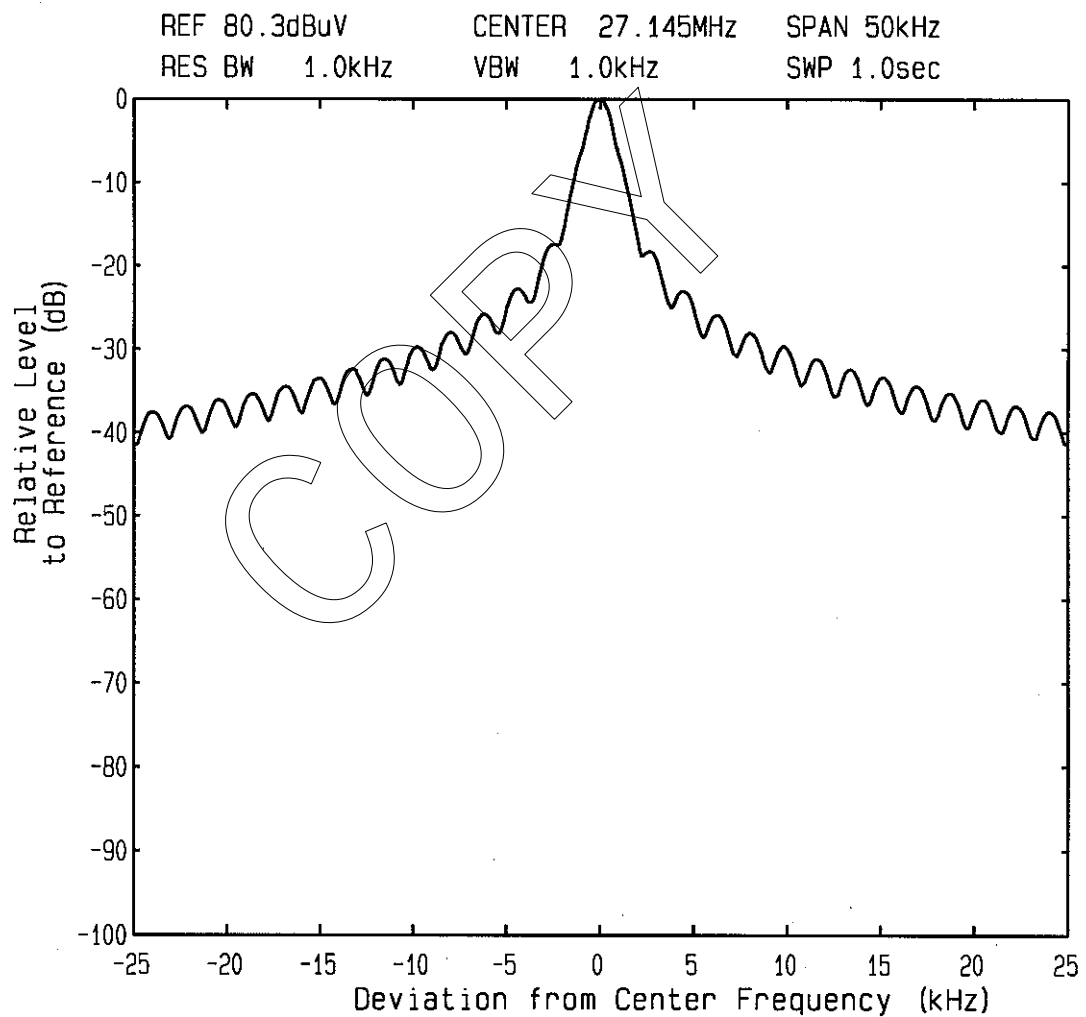


## Emission Limitation

FCC ID : CVTTP6770

Model : TP6770

Mode of EUT : Left Button

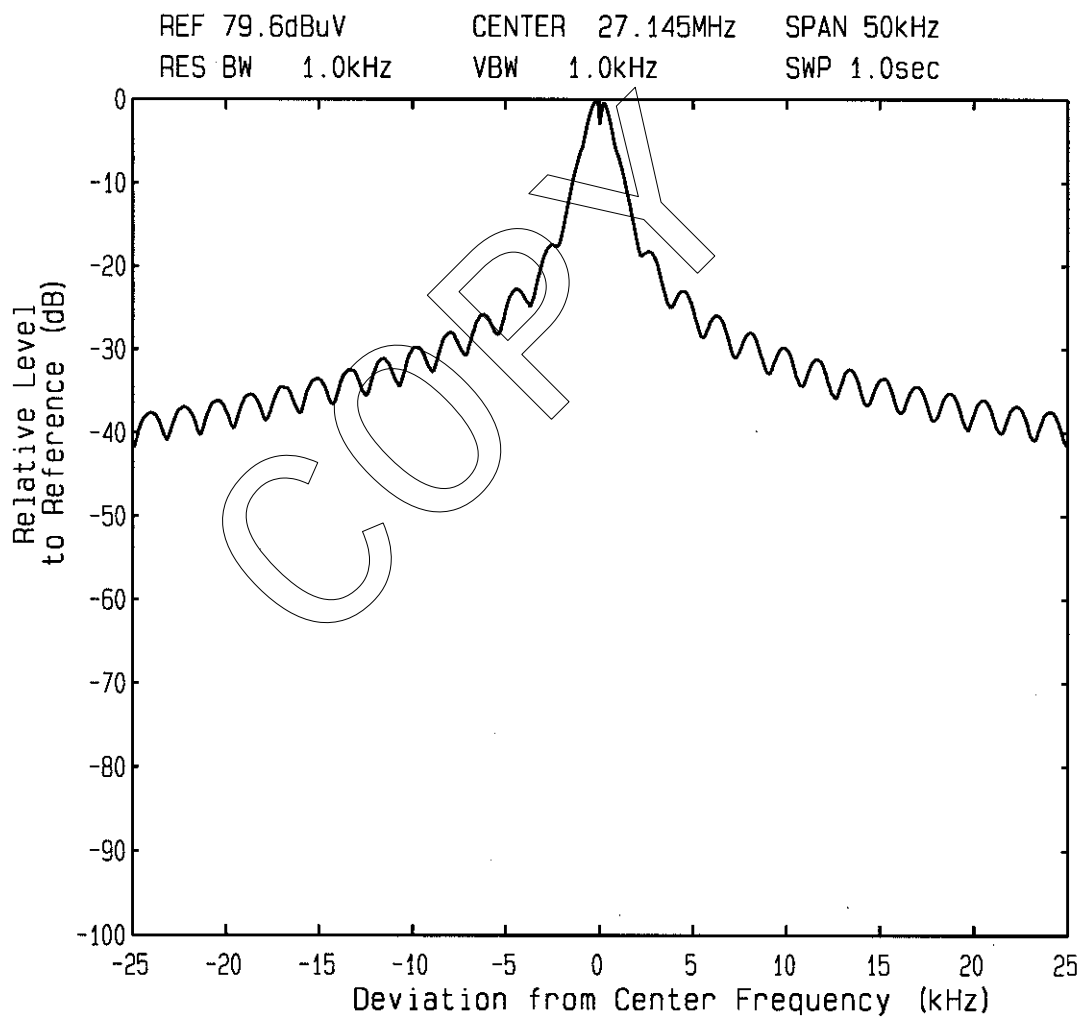


## Emission Limitation

FCC ID : CVTTP6770

Model : TP6770

Mode of EUT : Forward Right

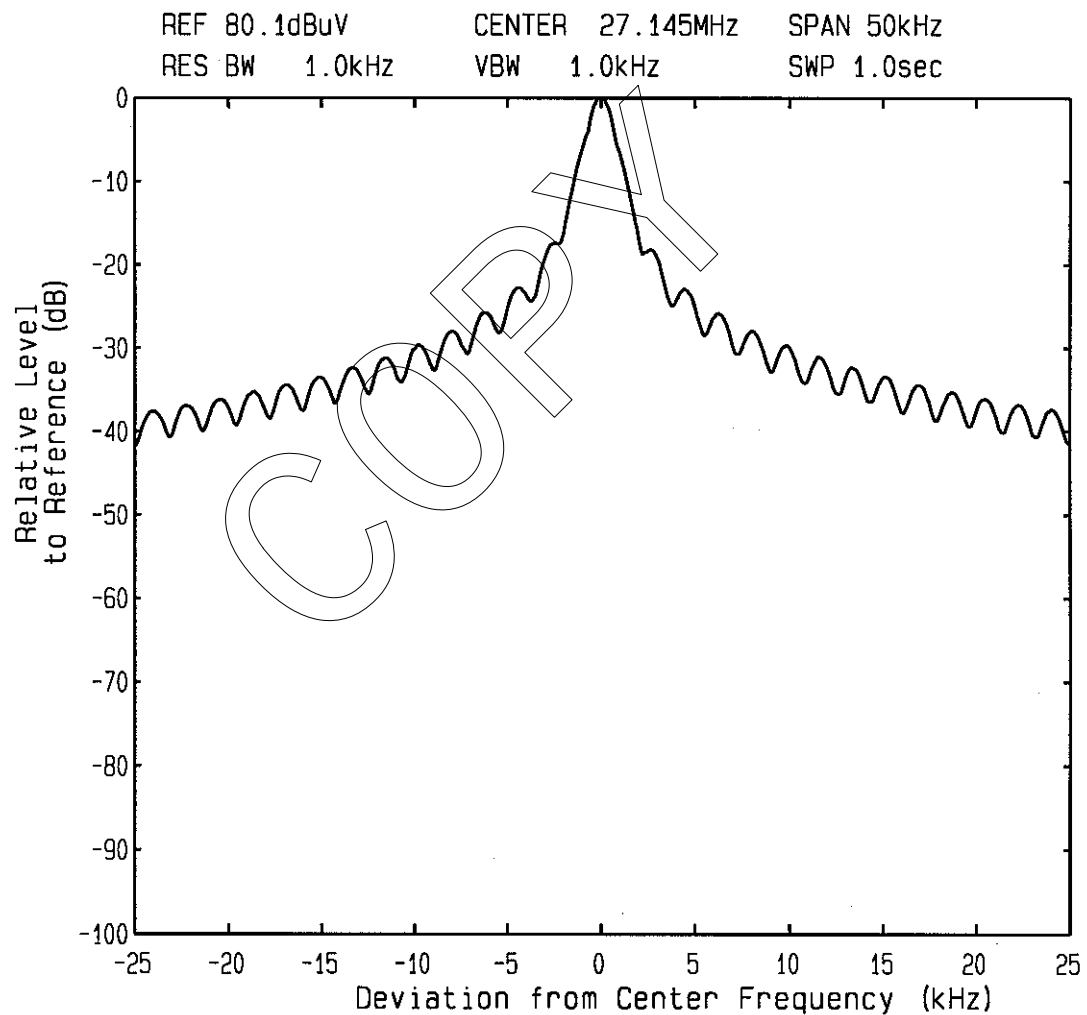


## Emission Limitation

FCC ID : CVTTP6770

Model : TP6770

Mode of EUT : Forward Left



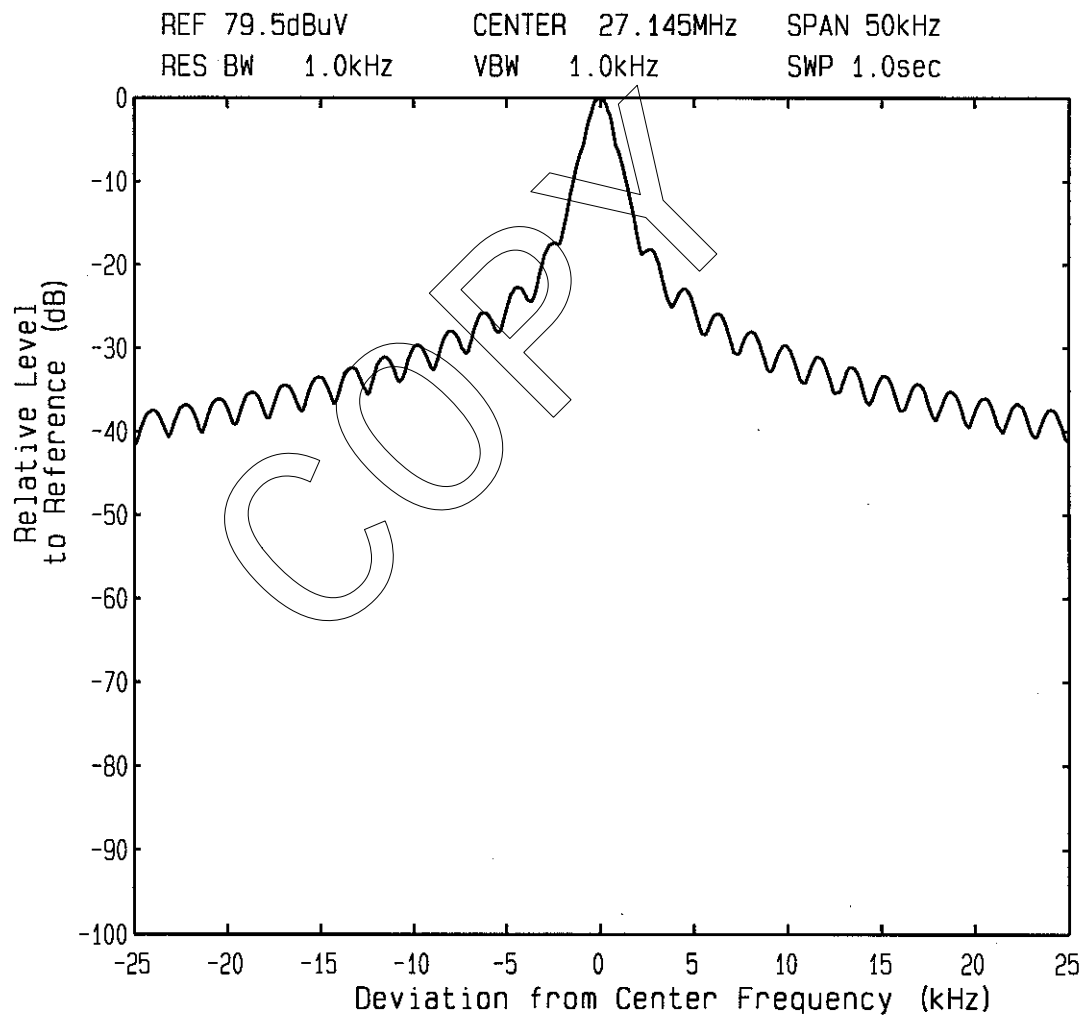


## Emission Limitation

FCC ID : CVTTP6770

Model : TP6770

Mode of EUT : Reverse Right



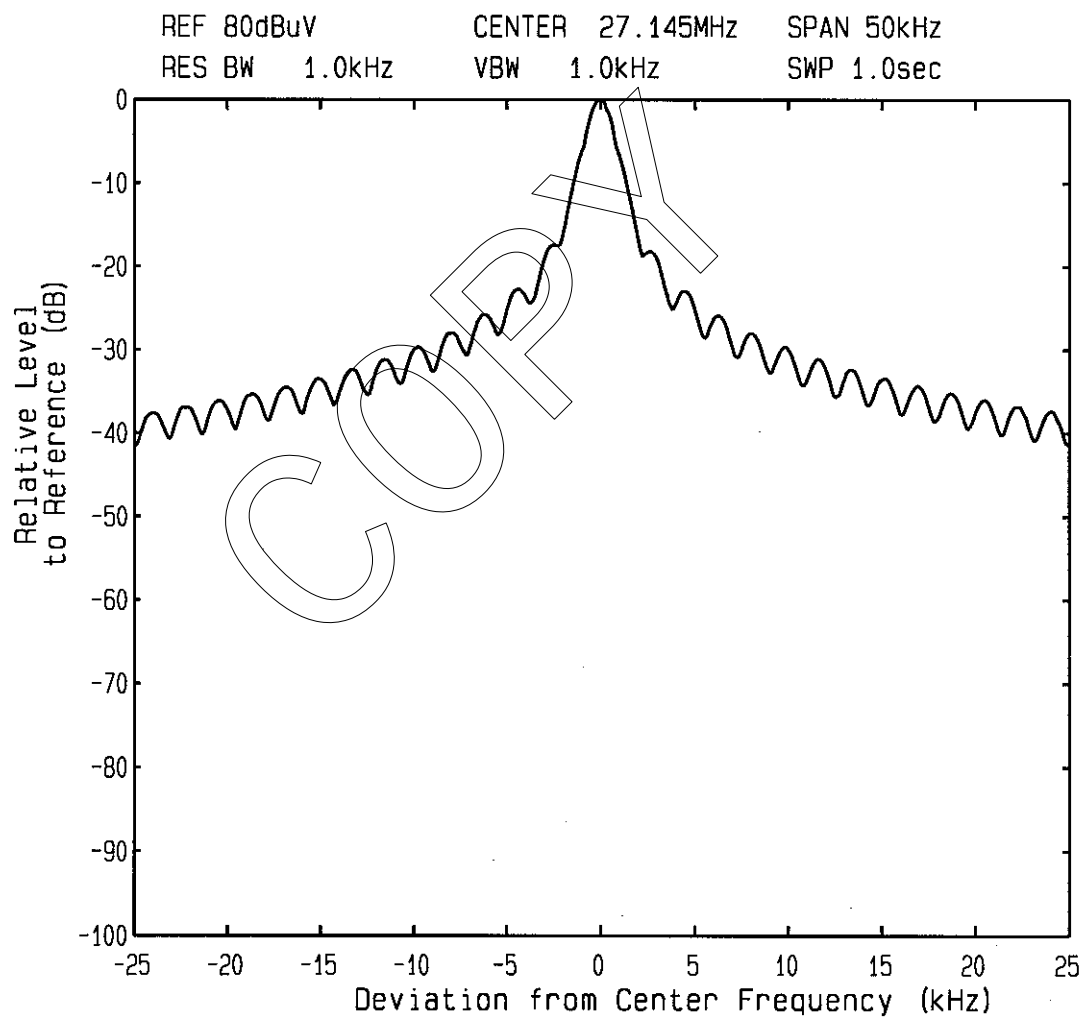


## Emission Limitation

FCC ID : CVTTP6770

Model : TP6770

Mode of EUT : Reverse Left



## Emission Limitation

FCC ID : CVTTP6770

Model : TP6770

Mode of EUT : Reverse Button

