



**EMC & Radio Equipment Testing Lab**  
**Telecommunication Equipment Testing Center**  
**Telecommunication Laboratories**  
**Chunghwa Telecom Co., Ltd.**

TEL : +886 3 4244238 FAX : +886 3 4202444  
E-mail:chichao@cht.com.tw <http://www.chttl.com.tw>  
NO.12,Lane 551,Min-Tsu Road Sec.5,  
Yang-Mei, Taoyuan  
Taiwan, R.O.C.

Date of Issue : Oct. 12, 2001



**0280**

# **FCC**

## **TEST REPORT**

**Client : Flying Technology Co., Ltd**

**Product : Wireless headset (Handfree)**

**Model No. : Vivid 6.0**

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NO.12,Lane 551,Min-Tsu Road Sec.5,  
Yang-Mei, Taoyuan  
Taiwan, R.O.C.

## STATEMENT

**Client** : Flying Technology Co., Ltd.  
8F, No 3, Lane 163, Sin- Yi Road, Pan-Chiao, Taipei Hsien, Taiwan

**Manufacturer** : Flying Technology Co., Ltd.  
8F, No 3, Lane 163, Sin- Yi Road, Pan-Chiao, Taipei Hsien, Taiwan

**FCC ID** : PXC-VIVID-60A

**Product** : Wireless Headset (Base Set)  
**Model Number** : Vivid 6.0  
**Serial Number** : N/A  
**Brand** : Flying Technology  
**Date of Test Sample Received** : Sep.3, 2001  
**Date of Test** : Sep. 8, 2001 – Oct. 12, 2001  
**Regulation Applied** : FCC Part 15 Subpart C

**Test Result** : **Compliant**

WE HEREBY CERTIFY THAT the test data in this report were made in accordance with the regulation FCC Part 15 Subpart C. We assume full responsibility for the accuracy of these data measured. The results in this report is only related to the test sample.

**Test Engineer** : Yu-Min Hsieh

**Technical Manager** : Chi-Chao Chang

**Chief** : Ho-Yun Lin



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## **1. General Information**

### **1.1 Description of EUT**

The Equipment Under Test(EUT) is a wireless handfree headset, which is designed to work between ears of a person and a mobile phone in a distance of about 3m. The Vivid 6.0 base set, as shown in Appendix, working without a battery can be plugged in most of types of mobile phones such as GSM900, DCS 1800 or PHS 1800 as one end of a voice transceiver. The Vivid 6.0 headset, as shown in Appendix, powered by Ni-Mh 3.6V battery hooks to a person's right ear as the other end of a transceiver. When a mobile phone with Vivid 6.0 base set rings, just press the button one time on the Vivid 6.0 headset to get the call. The Vivid 6.0 headset can be charged by the battery of a mobile phone through a bridge wire for longer use. The pair of transceiver won't radiate after power-on when in charge mode.

### **1.2 Basic Specification of EUT**

**RF Transmission Frequency :** 2410 MHz / 2420MHz

**Type of Modulation :** FM

**Transmission Range :** 0 ~ 3 m

**Working Duration :** 60 minutes

**Charge time :** 3 ~ 5 Hours

**Compatible System :** GSM 900 / DCS 1800 / PHS 1800

**Dimension :**

Headset 82(L) X 33(W) X 11.5(T) mm

Base set 40(L) X 37(W) X 16.2(T) mm

**Weight :**

Headset : 22g

Base set : 21g

**Rechargeable Battery :** Ni-Mh 3.6V, 40mA

**Operation Mode :** On Mode / Off Mode/ Charge Mode



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### 1.3 Test Applicability Table

| Test Item                                | Applicability | Remark                                                   |
|------------------------------------------|---------------|----------------------------------------------------------|
| Antenna requirement – per 15.203         | no            | The antenna is soldered on board and not interchangeable |
| Radiated Emissions – per 15.209 & 15.249 | yes           | none                                                     |
| Conducted Emissions – per 15.207         | no            | Powered by 3.6V battery                                  |



## 2. Measurements and Results

### 2.1 Field Strength Inside of Band

#### 2.1.1 Test procedure

The test sample transceivers(EUT) were switched on and placed on a wooden turntable of 80 cm high in a semi-anechoic chamber. The mic input of the transceiver was connected to a signal generator with 1000Hz tone at 10dBm. The EUTs were X-axis orinated and turned 360 degree to detect the emission and then Y-axis and Z-axiz orinated to dertermine the max emissions that will be recorded in the report. A microwave receiver system with a receiving horn antenna was set 3m away from the EUT. The maximum emission of the fundamental radiation strength was measured and recorded. The microwave receiver was previously programed to offset the cable factors and antenna factors, and therefore the readings of the spectrum were already the field strength from the EUTs.

#### 2.1.2 Test Facilities Used

| Description                   | Manufacturer | Model No. | Serial No. | Last Cal. | Cal. Interval |
|-------------------------------|--------------|-----------|------------|-----------|---------------|
| Microwave EMI Receiver System | HP           | 84125C    | 36433007   | MAY 22,01 | 1 YEAR        |
| Horn Antenna                  | EMCO         | 3115      | 9012-3608  | ----      | ----          |
| RF Preamp                     | HP           | 83051A    | 3332A00392 | JUN 12,01 | 1 YEAR        |



## 2.1.3 Test Results

**Model No. : Vivid 6.0 Base Set**

| Frequency<br>MHz                                 | Polarization | Corrected<br>Measurement<br>dBuV/m | Limit<br>dBuV/m |
|--------------------------------------------------|--------------|------------------------------------|-----------------|
| 2420.090                                         | H            | 68.3                               | 94              |
|                                                  | V            | 65.8                               |                 |
| Measurement Uncertainty                          |              |                                    | 3dB             |
| Ambient Temperature : 28 °C Humidity : 55 % R.H. |              |                                    |                 |



## 2.2 Emissions outside of authorized band

### 2.2.1 Test procedure

The test sample transceivers(EUT) were switched on and placed on a wooden turntable of 80 cm high in a semi-anechoic chamber. The EUTs were X-axis orinated and turned 360 degree to detect the emission and then Y-axis and Z-axiz orinated to dertermine the max emissions that will be recorded in the report. A microwave receiver system with a receiving horn antenna was set 3m away from the EUT. After the maximum emission of the harmonic radiation and other spurious power were recorded, the receiving horn antenna was changed to a bilog antenna to take measurement of spurious emissions at 30 – 1000MHz. A 3.5GHz high pass filter(HPF) was connected to preamplifier to protect it from being operating in satuated condition when 2.6GHz – 26.5GHz was measured.

### 2.2.2 Test Facilities Used

| Description            | Manufacturer | Model No.   | Serial No. | Last Cal. | Cal. Interval |
|------------------------|--------------|-------------|------------|-----------|---------------|
| RF Preamp              | HP           | 83051A      | 3332A00392 | JUN 12,01 | 1 YEAR        |
| Microwave EMI Receiver | HP           | 84125C      | 36433007   | MAY 22,01 | 1 YEAR        |
| Bi-Log Antenna         | EMCO         | 3142        | 1331       | MAY 23,01 | 1 YEAR        |
| Horn Antenna           | EMCO         | 3115        | 9012-3608  | ----      | ----          |
| Horn Antenna           | HP           | 3160-09     | 9805-1103  | ----      | ----          |
| HPF                    | HP           | 84300-80038 | 007        | ----      | ----          |



## 2.2.3 Test Results

**Model No. : Vivid 6.0 Base Set**

| Frequency<br>MHz                                 | Polarization | Corrected<br>Measurement<br>dBuV/m | Limit<br>dBuV/m |
|--------------------------------------------------|--------------|------------------------------------|-----------------|
| 30 - 88                                          | H            | < 40                               | 44              |
|                                                  | V            | < 40                               |                 |
| 88 - 216                                         | H            | < 40                               | 44              |
|                                                  | V            | < 40                               |                 |
| 902 - 1000                                       | H            | < 40                               | 46              |
|                                                  | V            | < 40                               |                 |
| Measurement Uncertainty                          |              |                                    | 3dB             |
| Ambient Temperature : 28 °C Humidity : 55 % R.H. |              |                                    |                 |



**Model No. : Vivid 6.0 Base Set**

| Frequency<br>MHz                                 | Polarization | Corrected<br>Measurement<br>dBuV/m | Limit<br>dBuV/m |
|--------------------------------------------------|--------------|------------------------------------|-----------------|
| 4840.18                                          | H            | 36.7                               | 54              |
|                                                  | V            | 43.6                               |                 |
| 7260.27                                          | H            | 51.1                               | 54              |
|                                                  | V            | 53.3                               |                 |
| 9680.36                                          | H            | 40.6                               | 54              |
|                                                  | V            | 42.5                               |                 |
| 12100.45                                         | H            | < 44                               | 54              |
|                                                  | V            | < 44                               |                 |
| 14520.54                                         | H            | < 44                               | 54              |
|                                                  | V            | < 44                               |                 |
| 16940.63                                         | H            | < 44                               | 54              |
|                                                  | V            | < 44                               |                 |
| 19360.72                                         | H            | < 44                               | 54              |
|                                                  | V            | < 44                               |                 |
| 21780.81                                         | H            | < 44                               | 54              |
|                                                  | V            | < 44                               |                 |
| 24200.0                                          | H            | < 44                               | 54              |
|                                                  | V            | < 44                               |                 |
| Measurement Uncertainty                          |              |                                    | 3dB             |
| Ambient Temperature : 28 °C Humidity : 55 % R.H. |              |                                    |                 |



## Appendix

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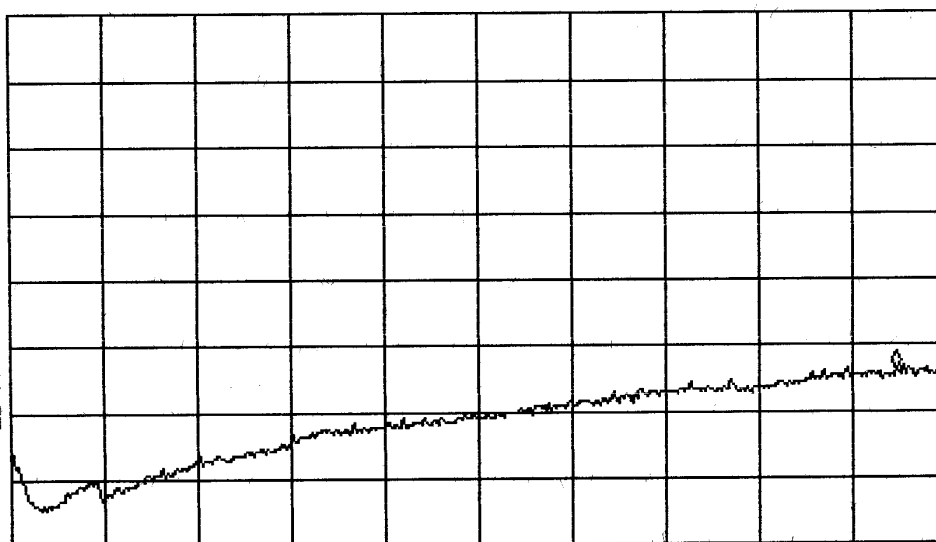
MARKER  
949.1 MHz  
38.07 dB $\mu$ V/m

ACTV DET: PEAK  
MEAS DET: PEAK QP AVG  
MKR 949.1 MHz  
38.07 dB $\mu$ V/m

LOG REF 92.0 dB $\mu$ V/m

10  
dB/  
ATN  
10 dB

WA SB  
SC FC  
ACORR



START 30.0 MHz

IF BW 120 kHz

AVG BW 300 kHz

STOP 1.0000 GHz

SWP 909 msec

## Base Set – H Polarization



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NO.12,Lane 551,Min-Tsu Road Sec.5,  
Yang-Mei, Taoyuan  
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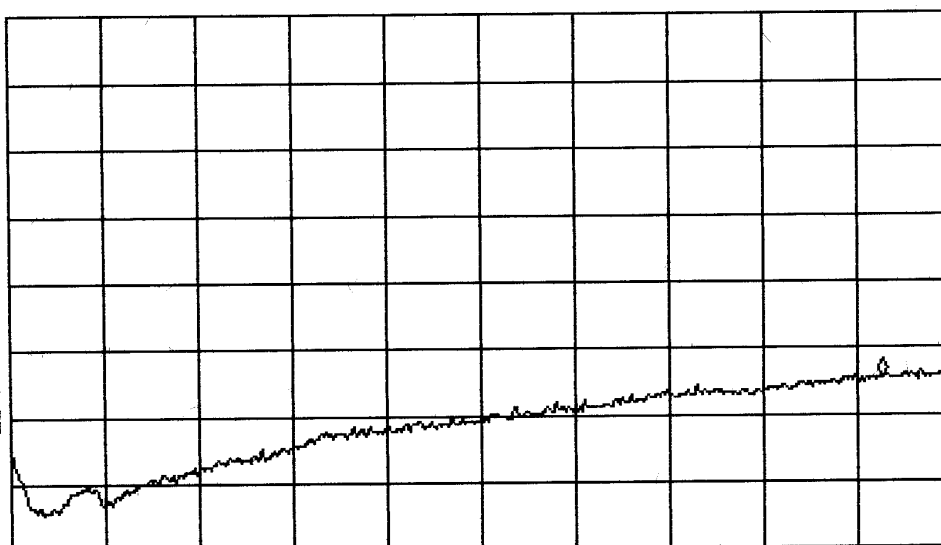
MARKER  
929.7 MHz  
37.29 dB $\mu$ V/m

ACTV DET: PEAK  
MEAS DET: PEAK QP AVG  
MKR 929.7 MHz  
37.29 dB $\mu$ V/m

LOG REF 92.0 dB $\mu$ V/m

10  
dB/  
ATN  
10 dB

WA SB  
SC FC  
ACORR



START 30.0 MHz

IF BW 120 kHz

AVG BW 300 kHz

STOP 1.0000 GHz

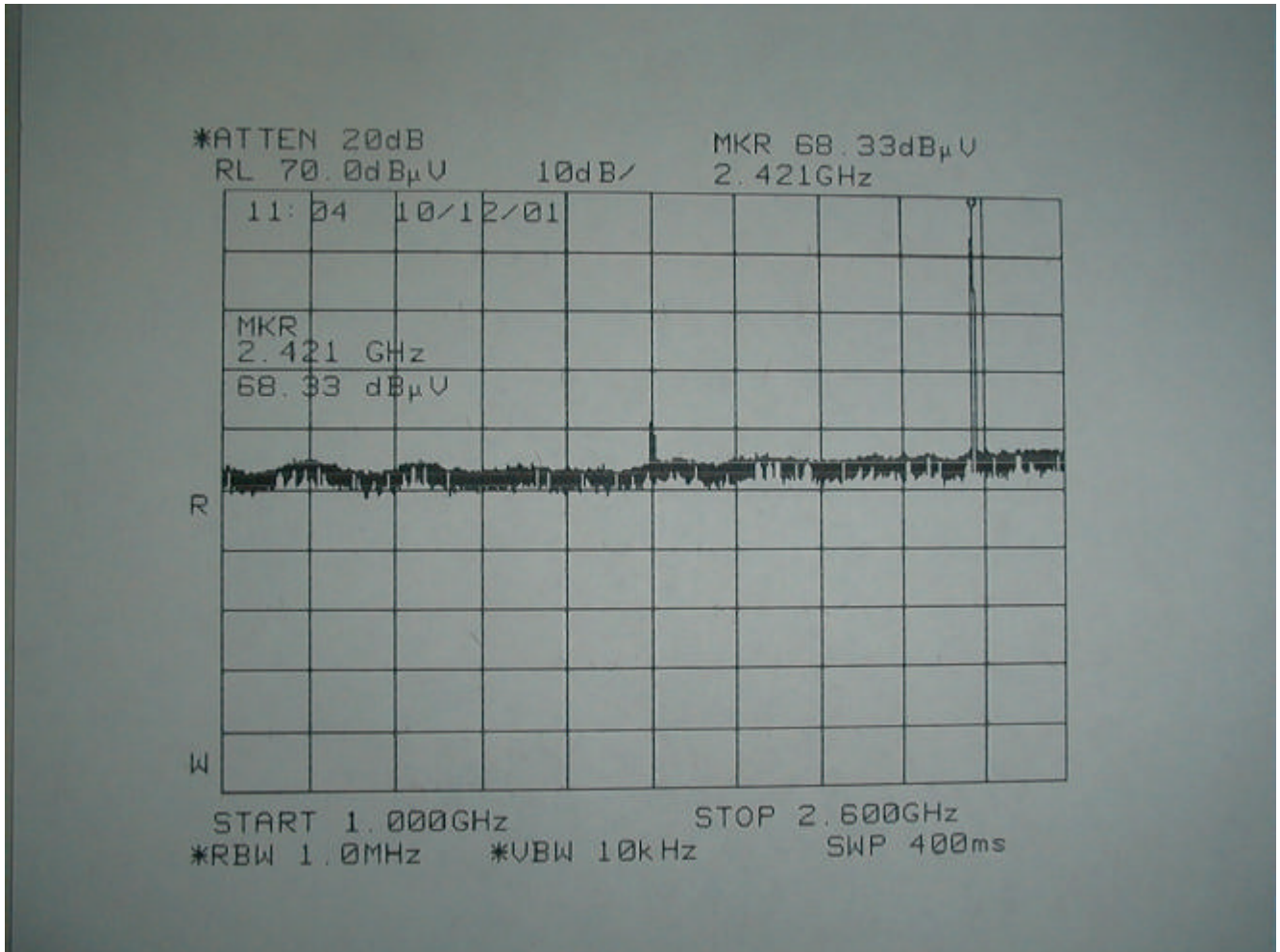
SWP 909 msec

## Base Set – V Polarization



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Taiwan, R.O.C.

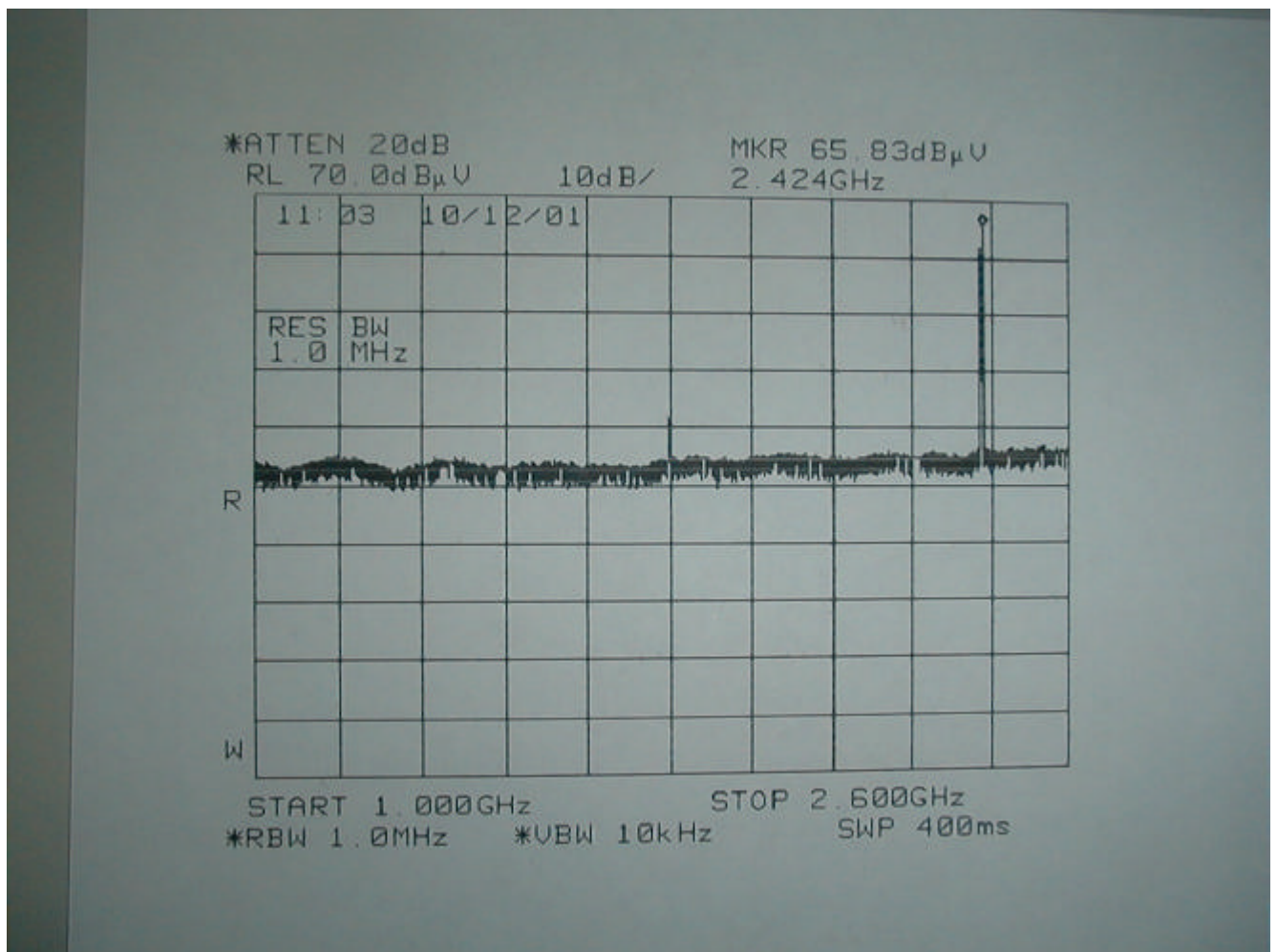


### Base Set – H Polarization



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Yang-Mei, Taoyuan  
Taiwan, R.O.C.

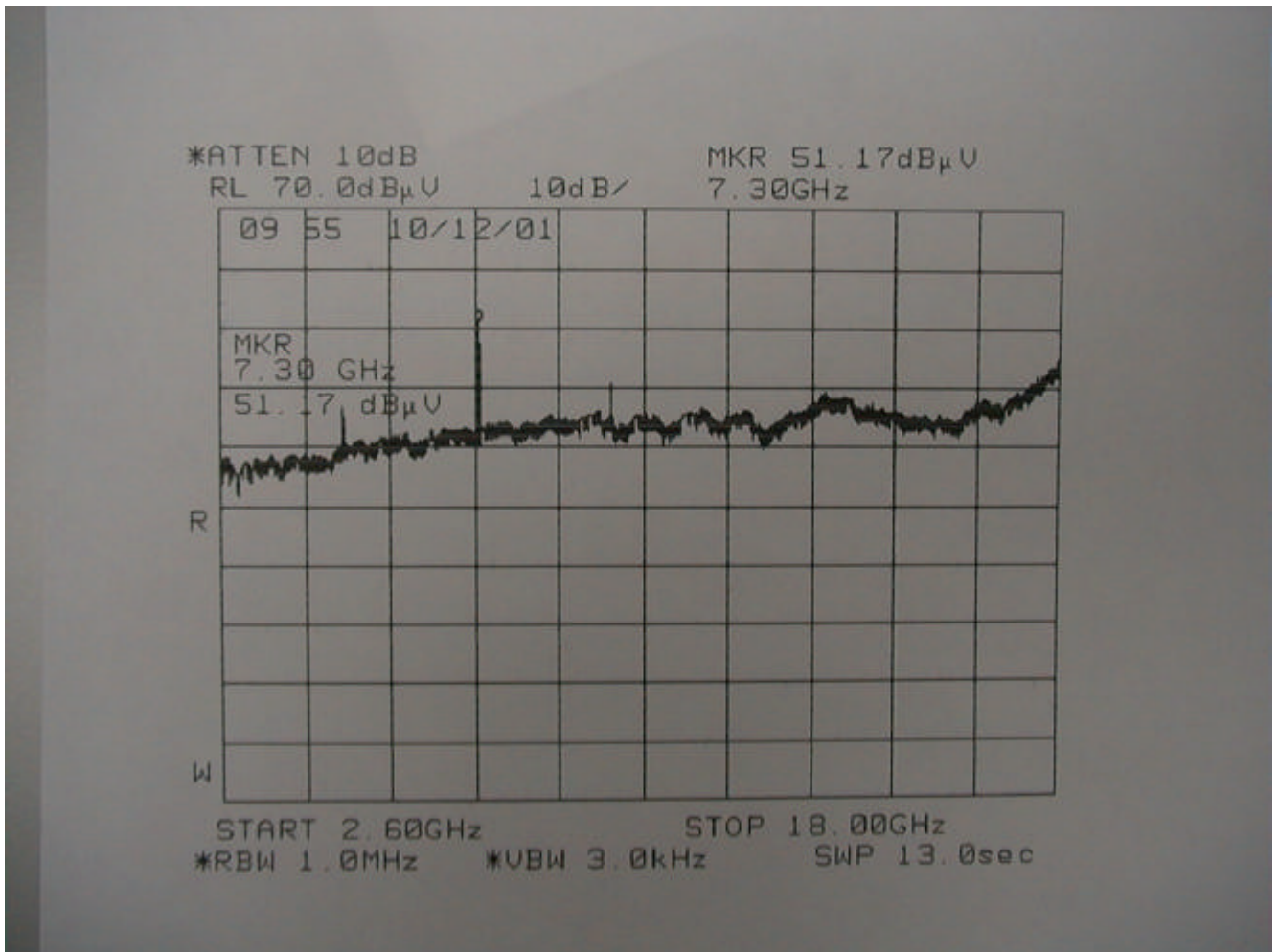


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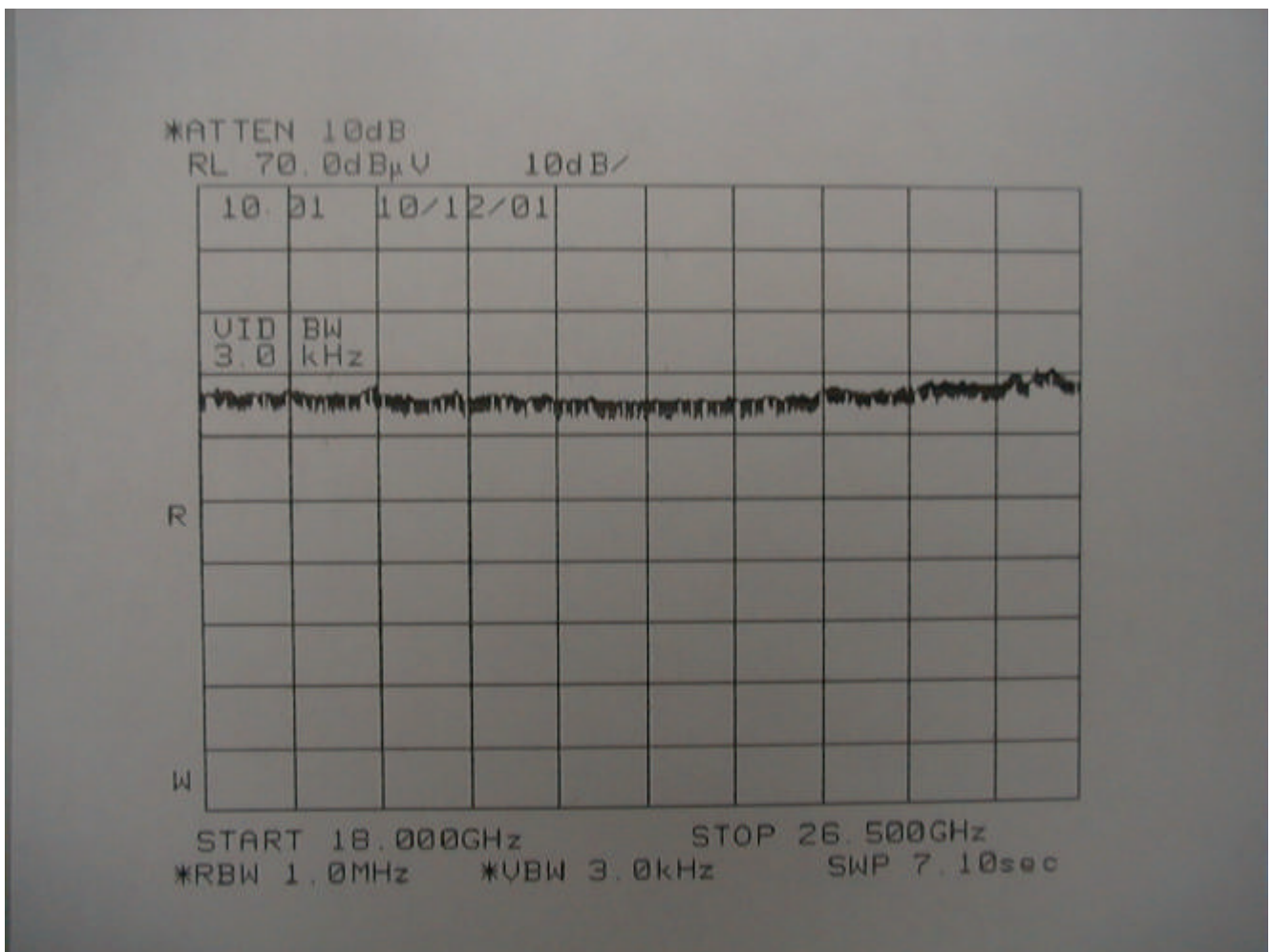


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Taiwan, R.O.C.

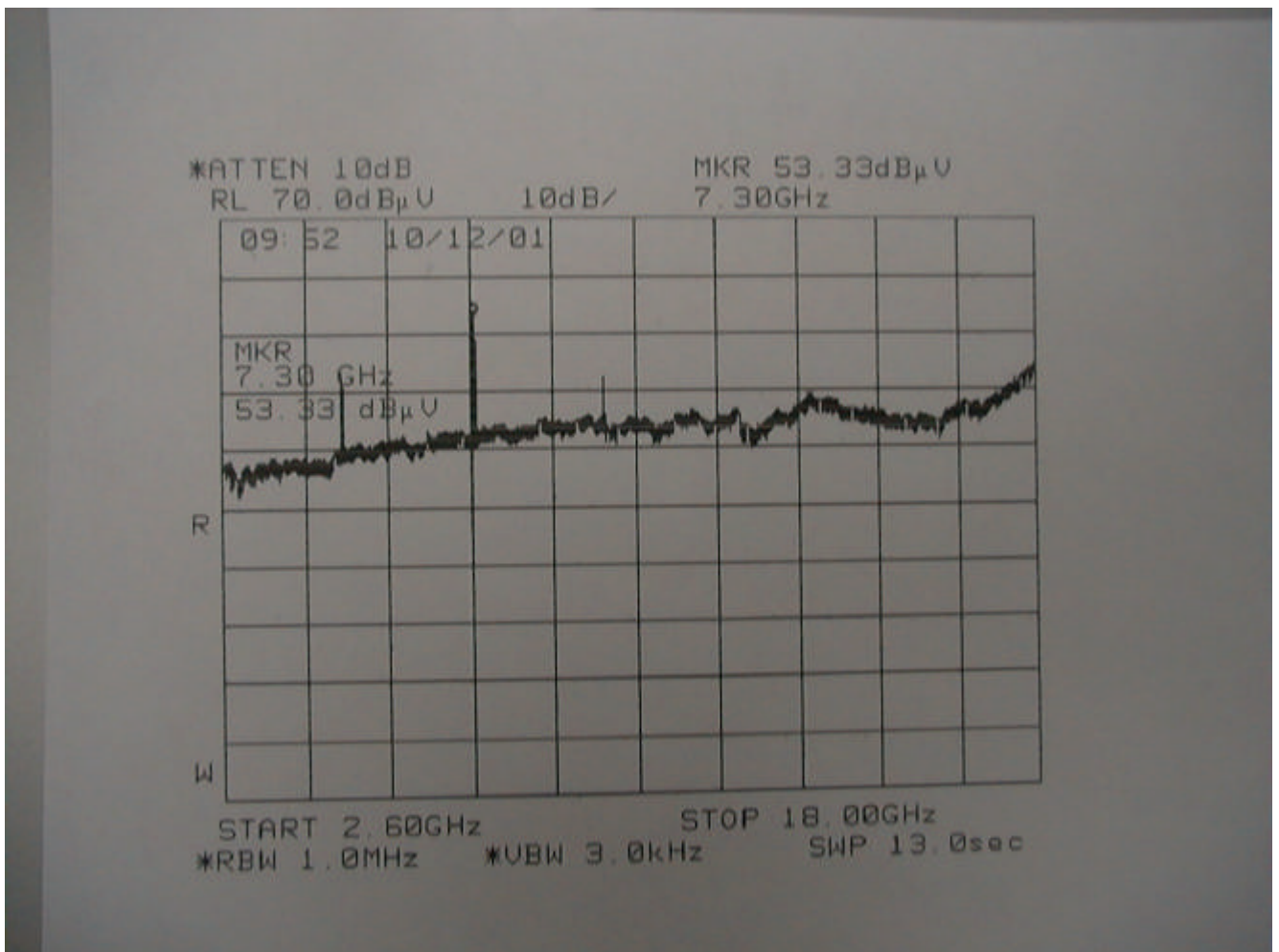


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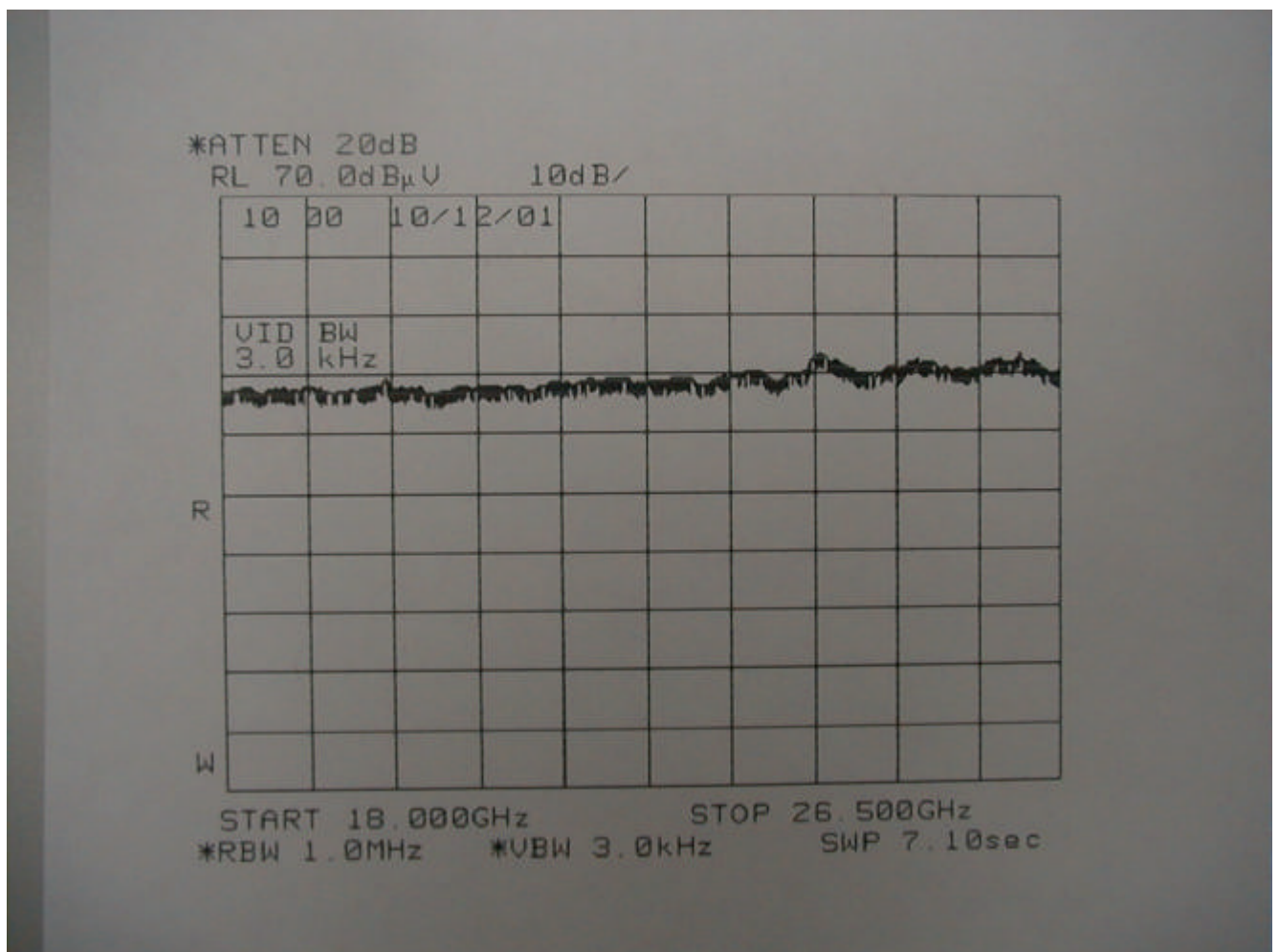


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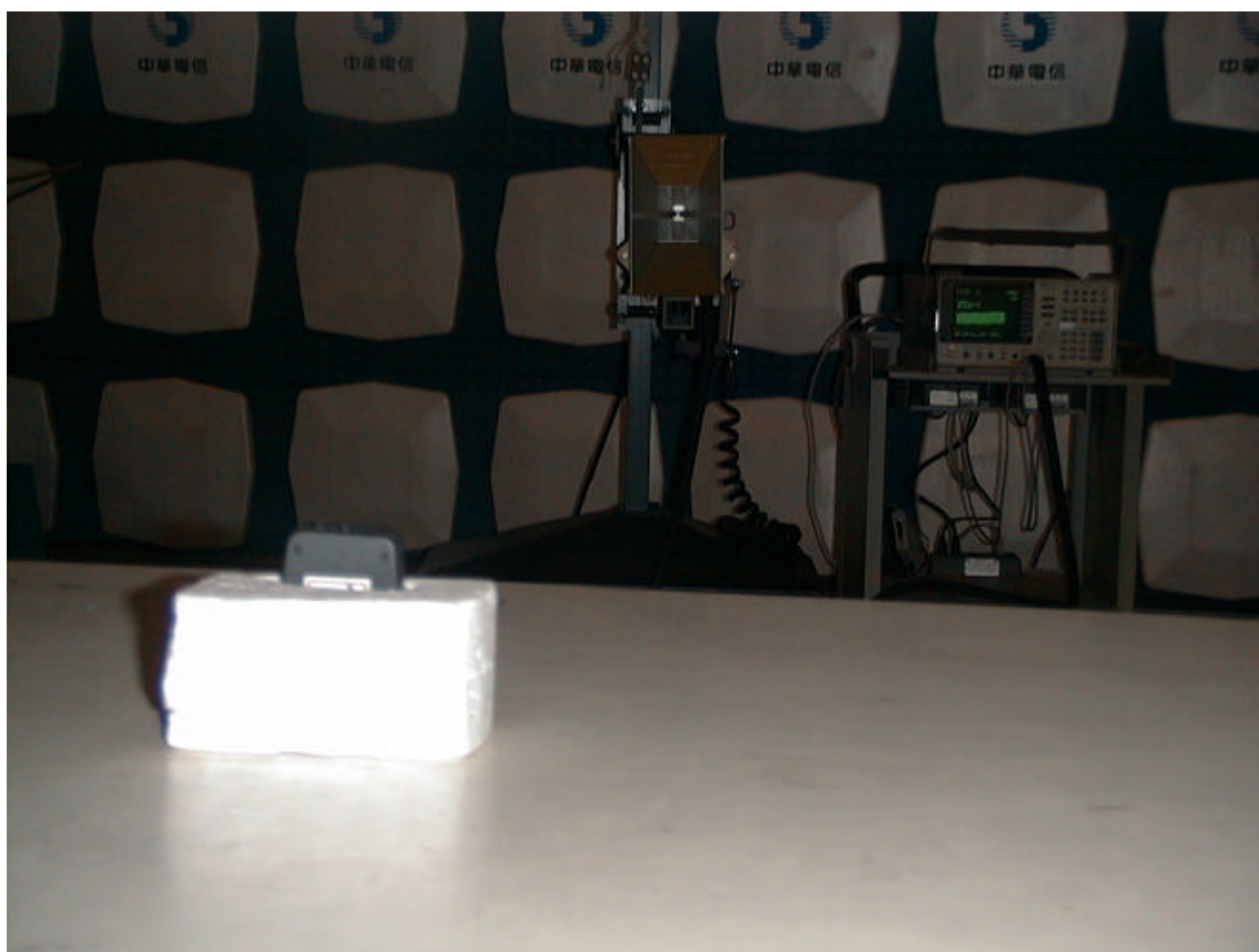


### Base Set – V Polarization



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**Test Setup – Rear View**



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**Test Setup – Front View**



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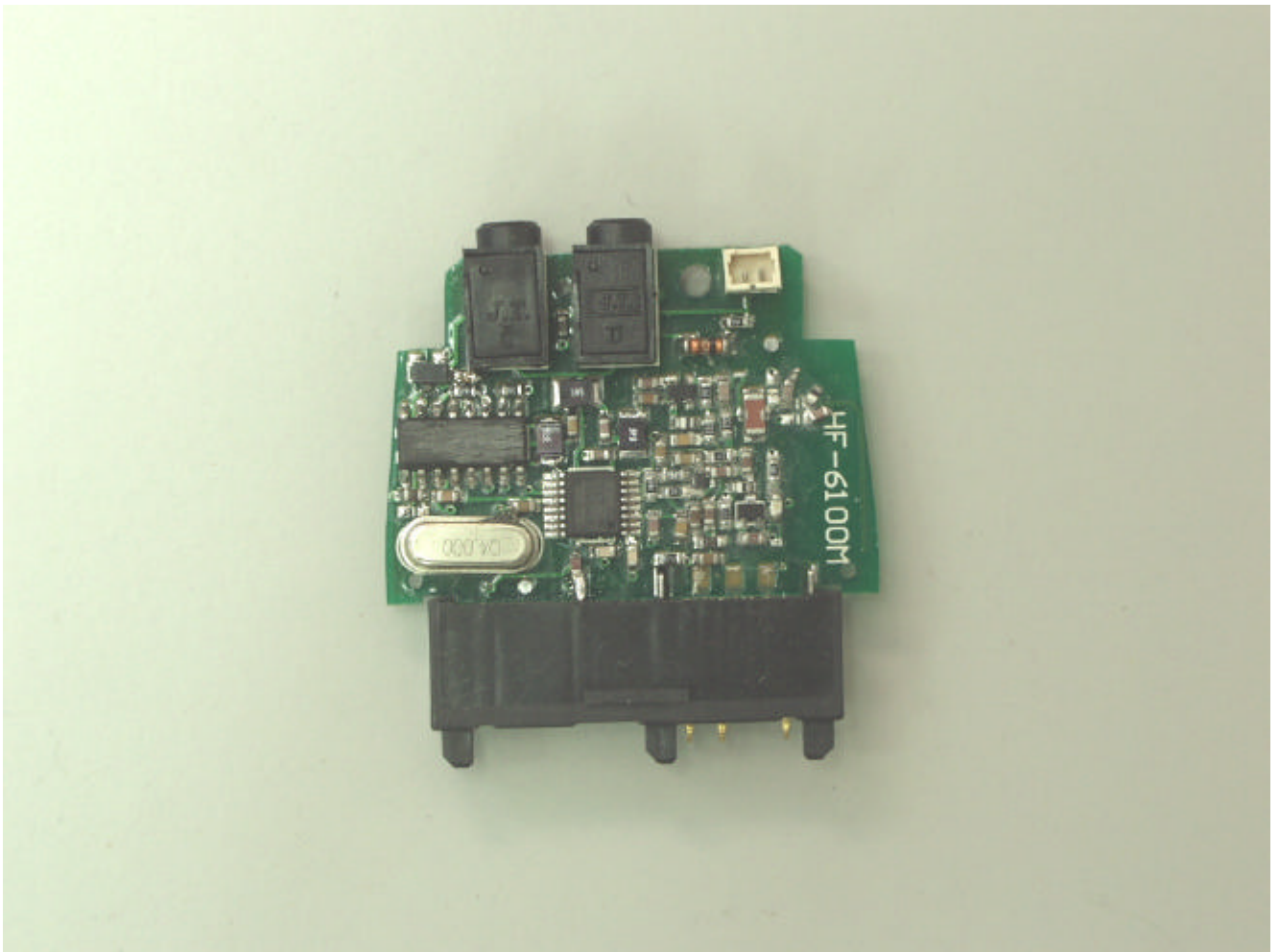


**Base Set Facade**



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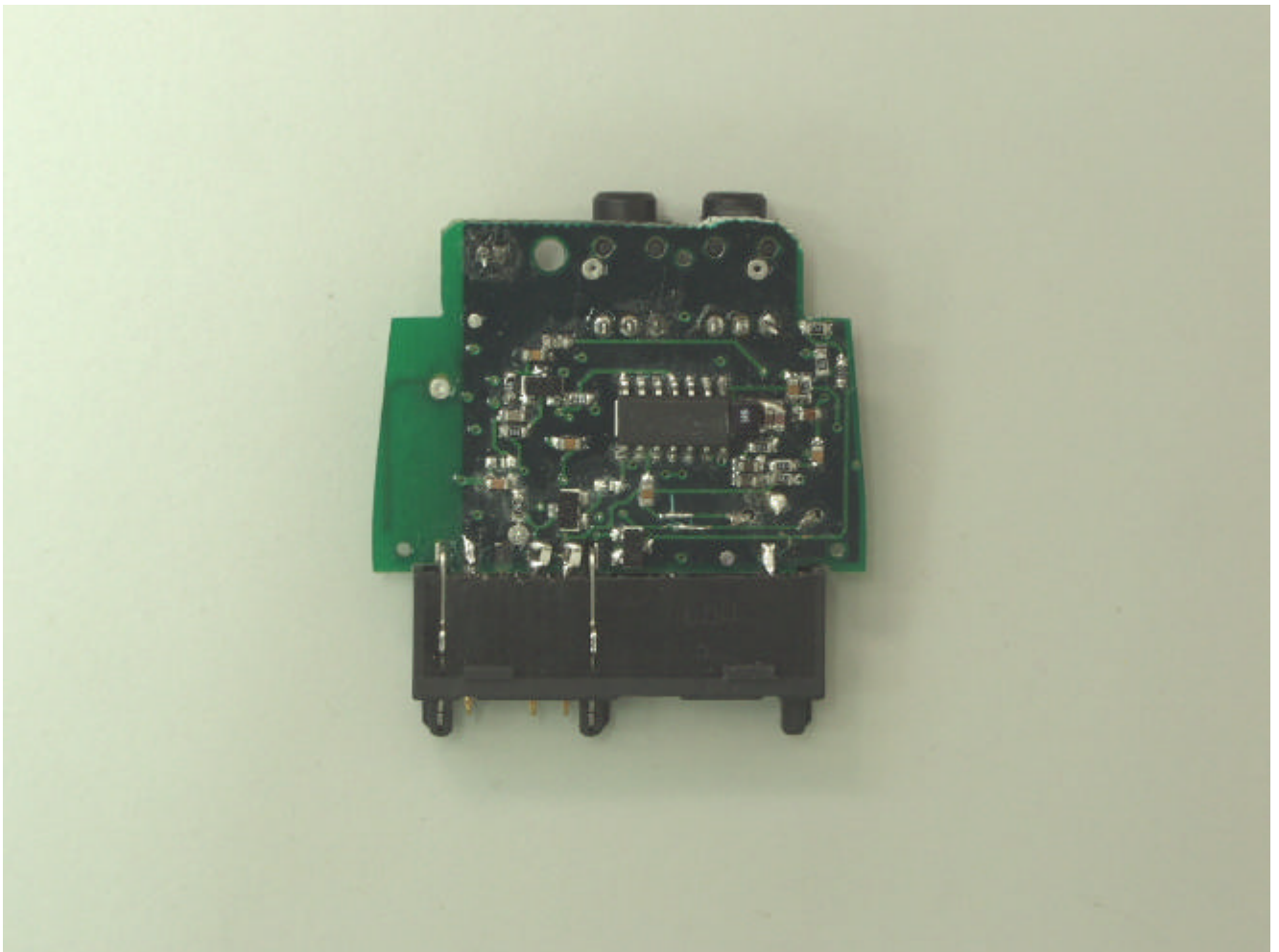


**Component Side of PCB**



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**Solder Side of PCB**