



# Specification For Approval

# 承認書

|                            |                     |
|----------------------------|---------------------|
| 客戶 (Customer)              |                     |
| 品名(Product Name)           | 揚聲器 Dynamic Speaker |
| 客戶料號(Customer Parts No.)   |                     |
| 供應商料號(Supplier Model No.)  | P2514KN04           |
| 承認簽章<br>Approval Signature |                     |

## Revision History

| Version | Date      | Description       | Author |
|---------|-----------|-------------------|--------|
| V1.0    | 2004/8/13 | Preliminary       | 湯海林    |
| V1.1    | 2004/9/22 | Modify Fig.1&No.5 | 湯海林    |
|         |           |                   |        |
|         |           |                   |        |

絨立企業有限公司

E-mail: [vanson2@ms27.hinet.net](mailto:vanson2@ms27.hinet.net)

Vansonic Enterprise Co., Ltd.

Tel: +886-2-2962 6335

Fax: +886-2-2962 5220

佛山宏立電子有限公司

E-mail: [gzfsveco@pub.foshan.gd.cn](mailto:gzfsveco@pub.foshan.gd.cn)

FoshanVanson Electronics Co., Ltd.

Tel: +86-757-8381 5788

Fax: +86-757-8381 8577

鴻立電子上海有限公司

E-mail: [yesf@shtel.net.cn](mailto:yesf@shtel.net.cn) Office: [yesi@shtel.net.cn](mailto:yesi@shtel.net.cn)

Vanson Electronics Shanghai Inc.

Tel: +86-21-5958 5999

Fax: +86-21-5958 5678

|               |  |           |
|---------------|--|-----------|
| 審查 (Checked)  |  | 2004/9/22 |
| 批准 (Approval) |  | 2004/9/22 |

# **VECO** VANSONIC ENTERPRISE CO.,LTD.

8F., No7, Lane16, Sec2, Szechwan Road, Panchiao, Taipei Hsien, TAIWAN.  
 E-mail: [Vansonic@ms4.hinet.net](mailto:Vansonic@ms4.hinet.net) Homepage: <http://www.veco.com.tw>  
 TEL: +886-2-962 6335 FAX: +886-2-962 5220

|     |                                |                                                                                                          |
|-----|--------------------------------|----------------------------------------------------------------------------------------------------------|
| 1.  | <b>MODEL:</b>                  | <b>2514KN04 DYNAMIC SPEAKER</b>                                                                          |
| 2.  | Dimension                      | Outer Diameter <b>25*14</b> mm.<br>Height <b>Refer to Fig 1</b> mm. Weight <b>4.5</b> Grams.             |
| 3.  | Magnet                         | Materials <b>NdFeB</b>                                                                                   |
| 4.  | Impedance                      | <b>4 Ω ± 15 %</b> At <b>1500</b> Hz.                                                                     |
| 5.  | Power Rating                   | Normal <b>2.0</b> W. Maximum <b>2.5</b> W.                                                               |
| 6.  | Lowest Resonant Frequency      | <b>600 ± 20% Hz</b> at 1.0V measured by SUNLILAB® 7117C                                                  |
| 7.  | Output Sound Pressure (S.P.L.) | <b>82 ± 3 db / 1.0Watt · 0.5Meter</b> , Measured by B&K Type 2012<br>At 800, 1000, 1200 ,1500 HZ Average |
| 8.  | Frequency Range                | <b>400 ~ 20,000+</b> Hz. Average SPL -10db Refer to Fig. 2                                               |
| 9.  | Distortion                     | <b>5% Maximum</b> at 1000 Hz 1 W.                                                                        |
| 10. | Abnormal Sound Test            | Must be Normal Tested By <b>2.83</b> Volts. Sine Wave.                                                   |
| 11. | Load Test                      | Pink noise with HPF(High Pass Filter 235HZ-3db-11db/Oct) <b>2.83</b> Volts(RMS.) <b>24</b> hrs.          |
| 12. | Storage Temperature            | <b>- 25°C ~ + 65°C</b>                                                                                   |
| 13. | Operating Temperature          | <b>- 20°C ~ + 60°C</b>                                                                                   |

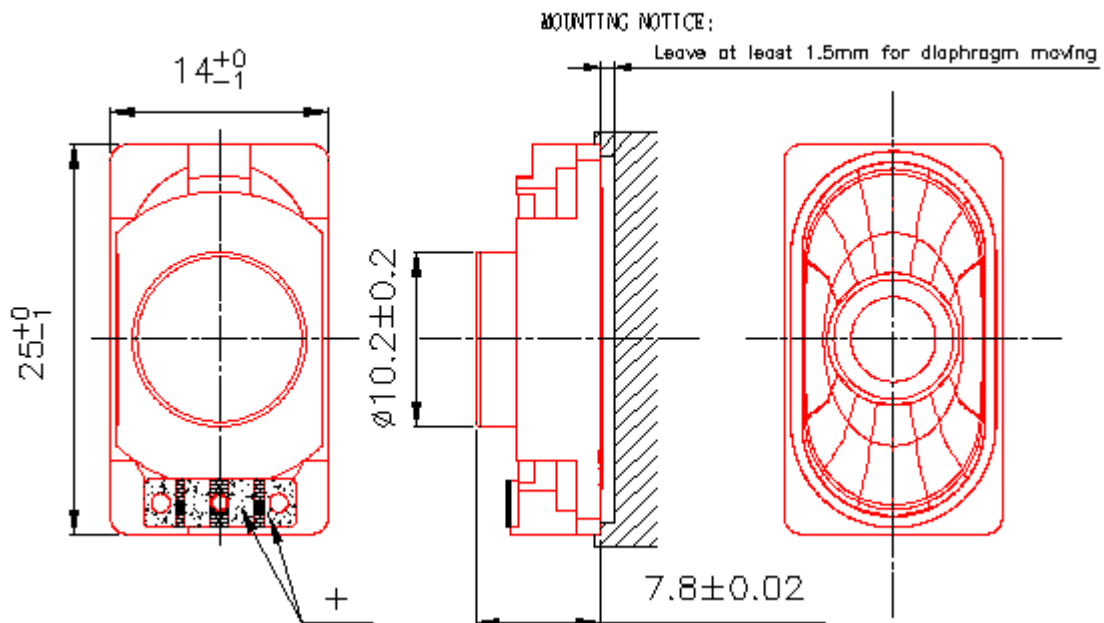


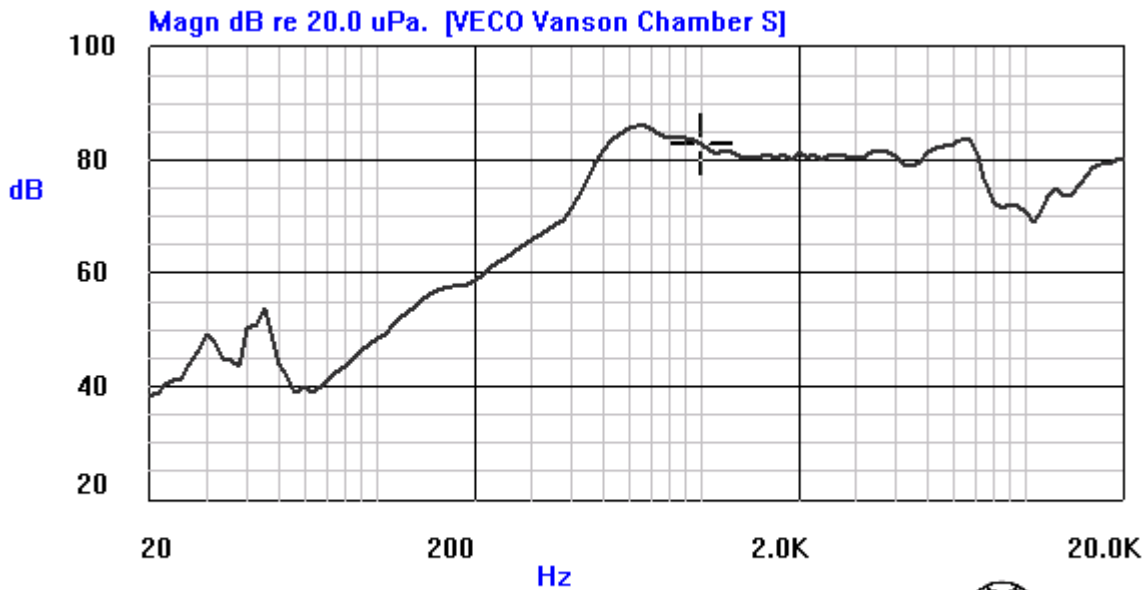
Fig.1

**PRELIMINARY**

### 14.Frequency Response Curve.

14.1 Speaker

Sound Pressure Level(SPL) :82± 3dB 1.0W/0.5M at (800,1k,1.2k,1.5k) AV

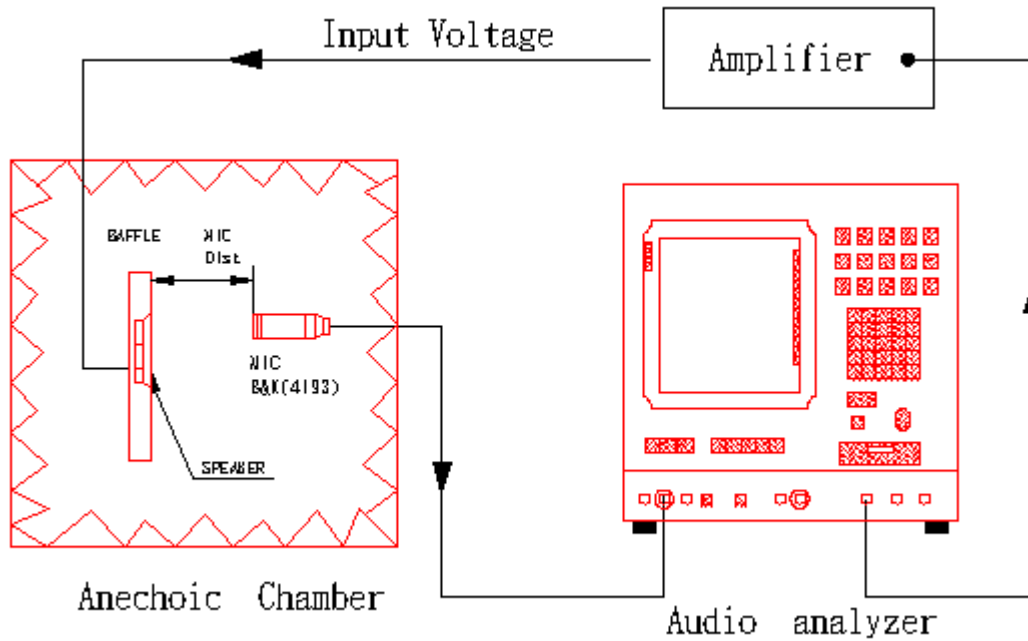


Current Curve: 0 X: 1000 Hz Y: 82.67 dB

Time[Y/M/D H:M:S]: 2004/ 8/ 2 5:55:29



INPUT: 1.0W  
 MIC DIST: 0.5M  
 BAFFLE: IEC6028-5



**PRELIMINARY**

Fig.2

## 15.Environment Test

### 15.1 Environment test – High temperature.

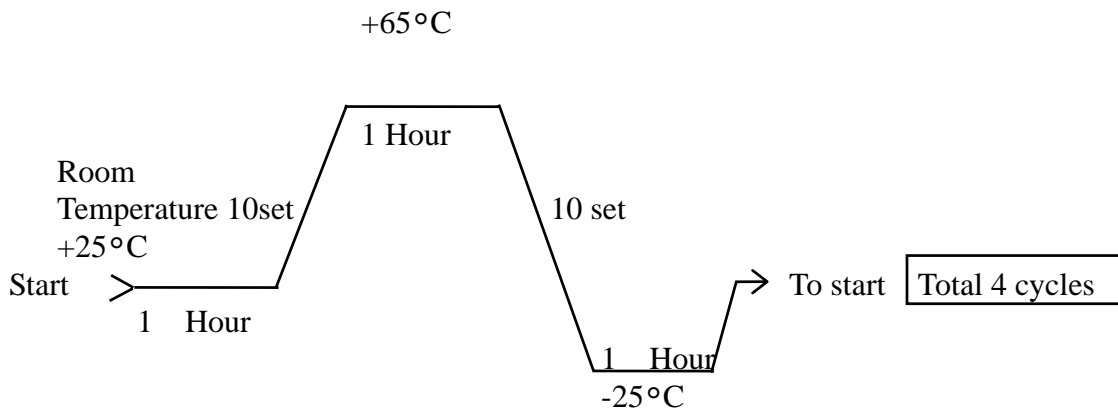
After exposure the speaker in the  $+ 65 \pm 3$  °C chamber for 24 hours, then leave the speaker at room temperature for 1 hour, the SPL should not deviate by  $\pm 3$  db, compare with pre-test measurement.

### 15.2 Environment test - Low temperature.

After exposure the speaker in the  $- 25 \pm 3$  °C chamber for 24 hours, then leave the speaker at room temperature for 1 hour, the SPL should not deviate by  $\pm 3$  db, compare with pre-test measurement.

### 15.3 Environment test-Temperature cycle.

After exposure the speaker in the chamber, temperature cycle setting as below shows, SPL should not Deviate by  $\pm 4$ db,compare with pre-test measurement.



### 15.4 Environment test – Humidity.

After exposure the speaker in the  $+ 40 \pm 3$  , relative humidity 90% ~95% chamber for 24 hours, then leave the speaker at room temperature for 6 hours, the SPL should not deviate by  $\pm 3$ db, compare with pre-test measurement.

**PRELIMINARY**