

# OBO Pro.2

## SPECIFICATIONS

MODEL NO.  
OBO-40150F-01

PART NAME  
DYNAMIC SPEAKER

SHEET  
1 OF 7

### ALTERNATION HISTORY

| Marking        | Date        | ECN NO.   | REV. | Description            | Page | PREPARE BY  | APPROVE BY |                |              |       |
|----------------|-------------|-----------|------|------------------------|------|---|------------|----------------|--------------|-------|
| ※2             | JUL,12,2006 | DG0607005 | C    | 1. Change to RoHS Type | 7    | 蔡愛國   | K.C.Wang   |                |              |       |
|                |             |           |      |                        |      | <table border="1"><tr><td>OBO PRO.2 INC.</td></tr><tr><td>2006 JUL 17.</td></tr><tr><td>文件发行章</td></tr></table> |            | OBO PRO.2 INC. | 2006 JUL 17. | 文件发行章 |
| OBO PRO.2 INC. |             |           |      |                        |      |   |            |                |              |       |
| 2006 JUL 17.   |             |           |      |                        |      |   |            |                |              |       |
| 文件发行章          |             |           |      |                        |      |   |            |                |              |       |

| REV. | DATE        | PREPARED BY | CHECKED BY | APPROVED BY |
|------|-------------|-------------|------------|-------------|
| C    | JUL,12,2006 | 蔡愛國         | K.C.Wang   | K.C.Wang    |

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OBO-40150F-01**PART NAME**  
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**Features:**Conformity RoHS Directive(2002/95/EC) Requests.(\*2)**1. General Specifications**

| Items                               | Spec.   |
|-------------------------------------|---|
| Magnet                              | Materials NdFeB Size: $\phi$ 12.5X1.5 mm.             |
| Weight                              | Approx 9.4 Grams                                      |
| Nominal Impedance                   | 150 Ohm $\pm$ 15% At 1200 Hz / 1.0V                   |
| Power Rating                        | Normal 0.2W. Maximum 0.5 W.                           |
| Lowest Resonant Frequency           | 500 $\pm$ 150 Hz.                                     |
| Output Sound Pressure Level (S.P.L) | 82 $\pm$ 3dB /0.2W 0.5Meter.                          |
|                                     | Average at 1000,1200,1500,2000Hz.                     |
| Frequency Range                     | 350 ~ 6,000 Hz. Average SPL-10 dB.                    |
| Distortion                          | 5% Maximum At 1200 Hz. 0.2W.                          |
| Abnormal Sound Test                 | Must be Normal Tested by 5.48Volts. Sine Wave.        |
| Polarity                            | Diaphragm shall move Forward when Apply a Positive DC |
|                                     | Current to the "+" or "Marked" Terminal.              |
| Operating Temperature               | -25°C to +50°C  |
| Storage Temperature                 | -25°C to +55°C  |

**2. Environmental Test**

|                        |   |   |   |
|------------------------|---|---|---|
| Humidity Test          | High Temperature  | : | +40°C $\pm$ 3°C   |
|                        | Relative Humidity   | : | 90% ~ 95%   |
|                        | Duration  | : | 96 Hours  |
|                        | Duration of recovery  | : | 6 Hours   |
| Temperature Cycle Test | Temperature   | : | +85°C $\rightarrow$ +25°C $\rightarrow$ -25°C $\rightarrow$ +25°C |
|                        | Duration  | : | 1Hour 1Hour 1Hour 1Hour   |
|                        | Cycle   | : | 3 Cycles  |
| Vibration Test         | Vibration Direction   | : | 3 axes  |
|                        | Mounting  | : | Unit Shall Be Rigidly Restrained On The Table                     |
|                        | Frequency   | : | 1,000 Cycle/Minute  |
|                        | Amplitude   | : | 1.5m/m  |
|                        | Endurance   | : | 1 Hour in Each Plane  |
|                        | Duration of Transfer Time   | : | Less Than 5Minutes  |
| Load Test              | White Noise With Weighted Filter 5.48 Volts.(RMS) 100 Hrs.<br>20~20,000Hz Resonant Frequency. |   |   |
| Drop Test              | 75cm Free Falling On Concrete Floor, with 10 times.   |   |   |

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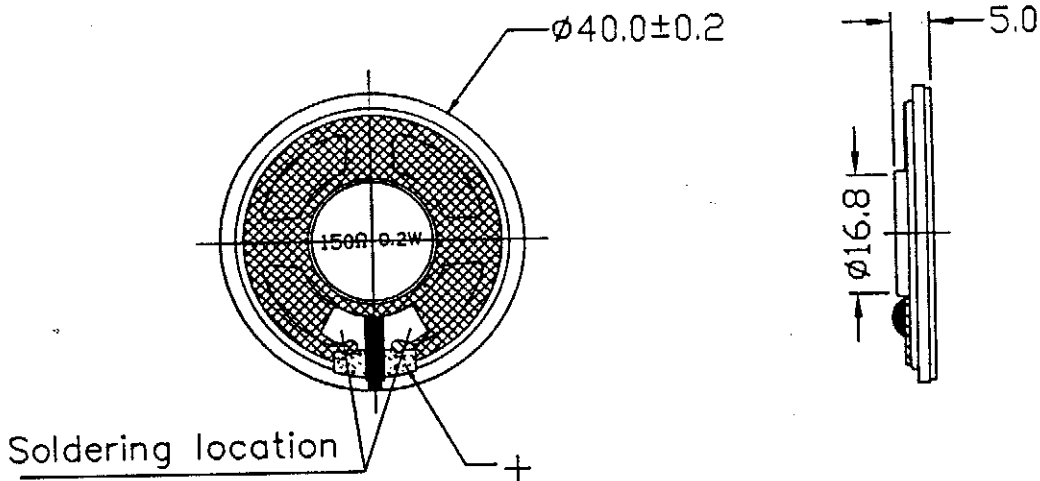
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**3. Mechanical Layout And Dimensions**

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3.1 Dimensions

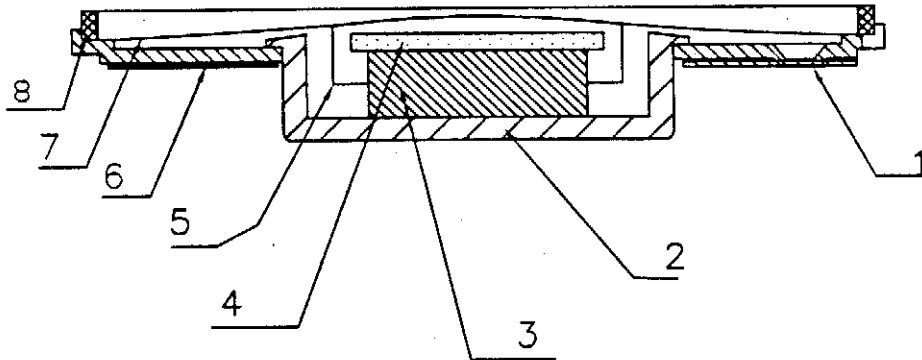
Unit:mm Tolerance:±0.3



※2 PCB Soldering Temperature 380° Max For 3 Seconds.

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### 3.2 Construction Diagram



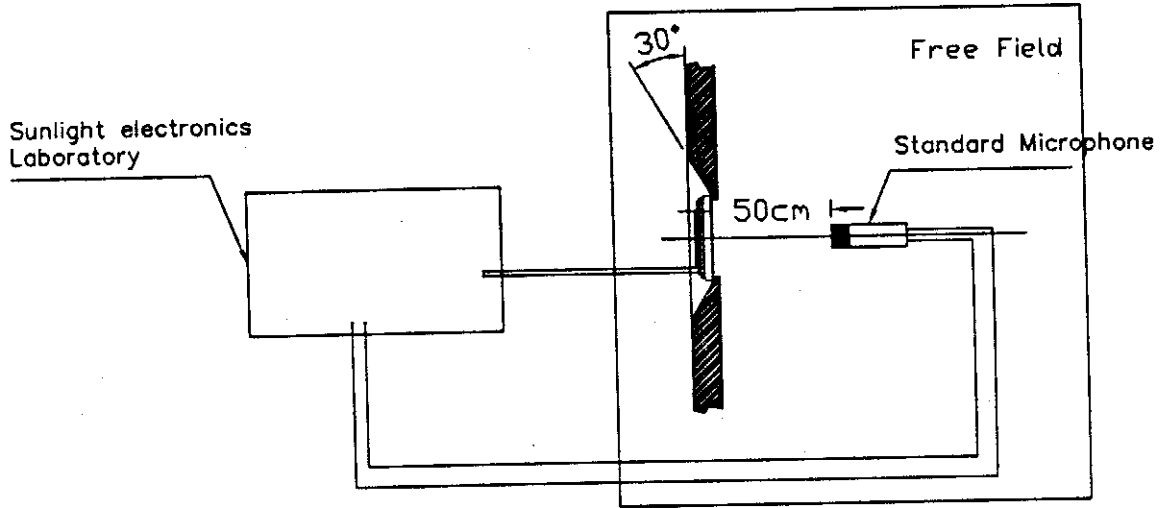
|    |            |             |      |
|----|------------|-------------|------|
| 8  | GASKET     | ABS         | 1    |
| 7  | DIAPHRAGM  | MYLAR       | 1    |
| 6  | CLOTH      | CLOTH       | 1    |
| 5  | VOICE COIL | DIA 13.30mm | 1    |
| 4  | WASHER     | SPCC        | 1    |
| 3  | MAGNET     | NdFeB       | 1    |
| 2  | YOKE       | SPCC        | 1    |
| 1  | TERMINAL   | P.C.B       | 1    |
| NO | PART NAME  | MATERIAL    | Q'TY |

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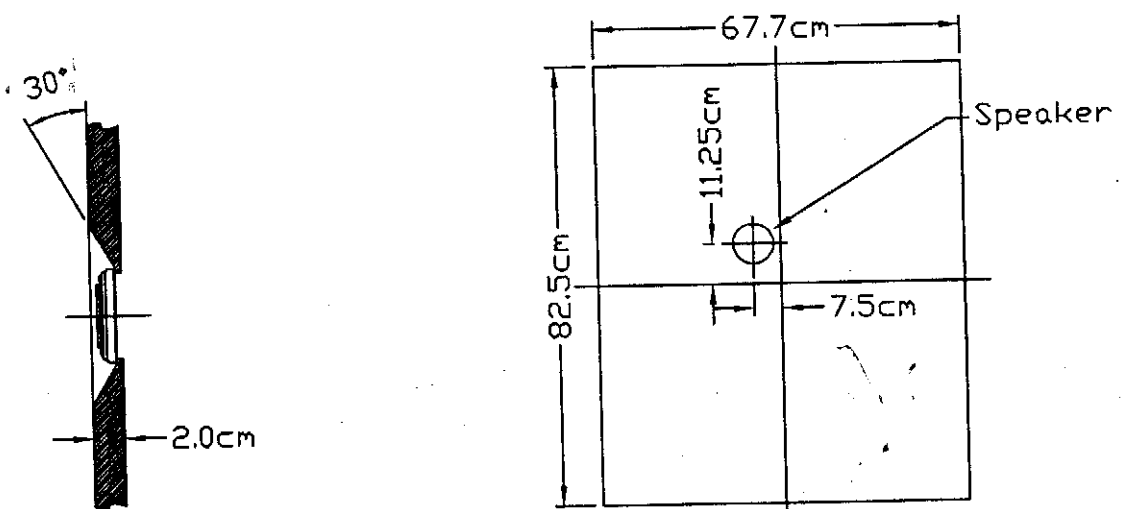
**4. Test Method**

**4.1 Measurement Diagram**

Electroacoustic  
Testing Adapter



**4.2 Standard Baffle**



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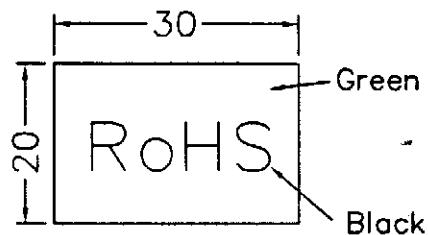
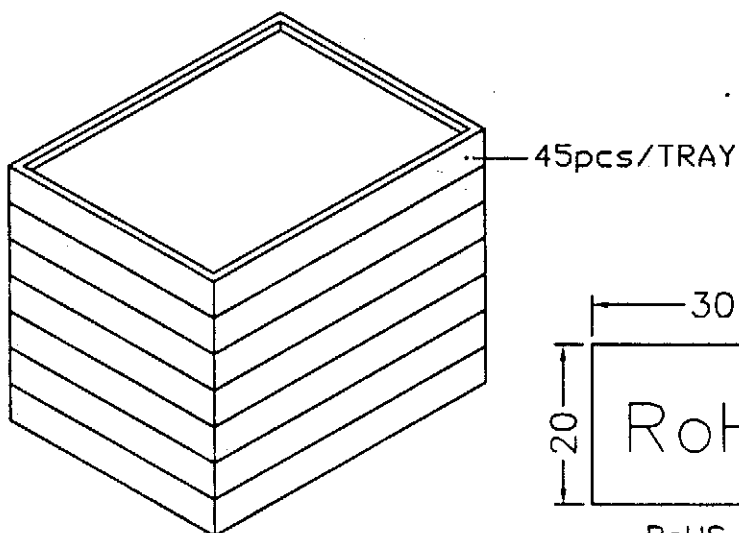
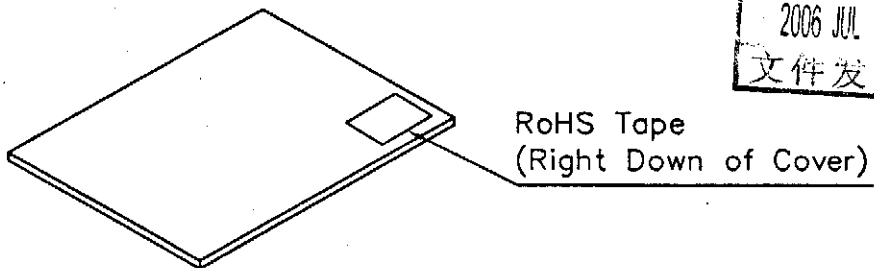
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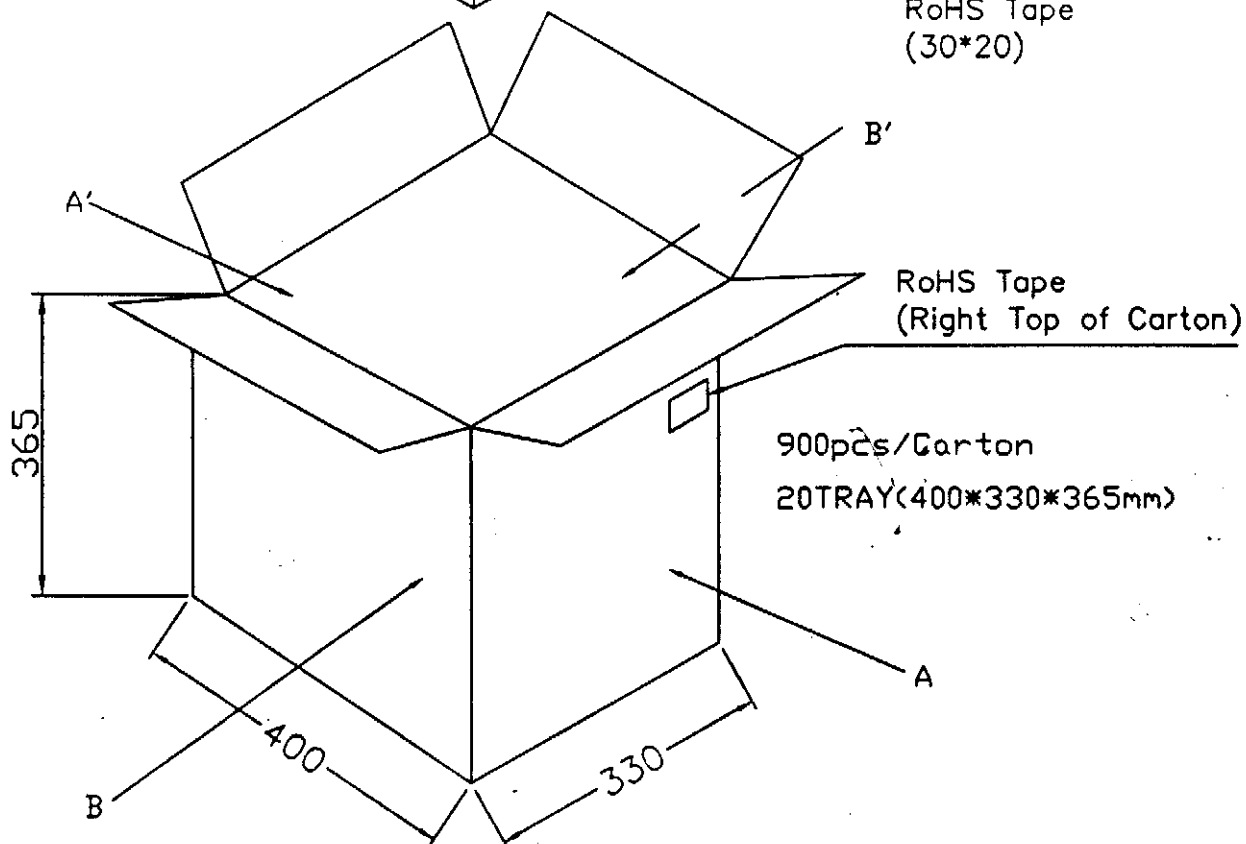
※2 **5. Package**

Unit:mm

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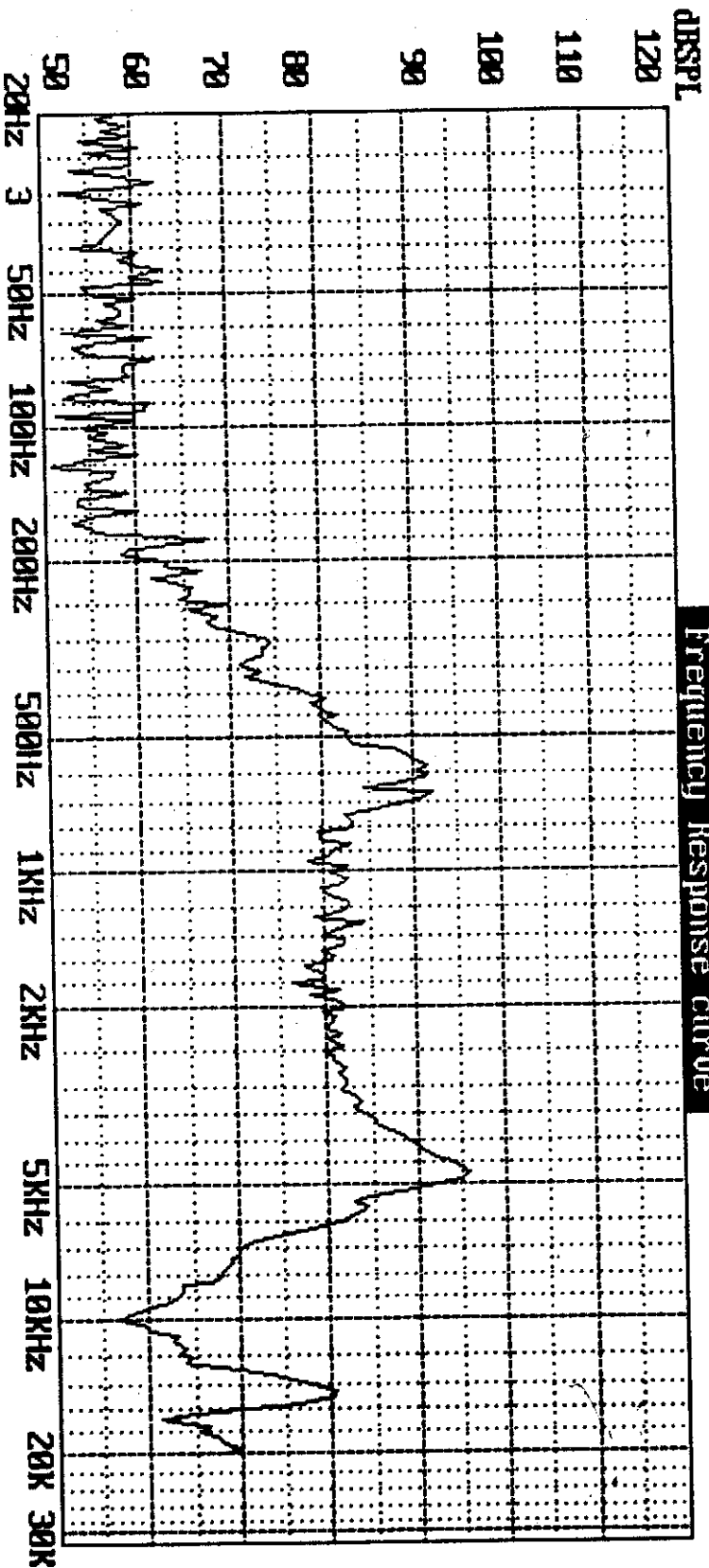


RoHS Tape  
(30\*20)



Firm: OBO      Model: OBO-40150F-01      DATE: 07-11-2006      TIME: 11:13:11  
 1000Hz Sens.: = 00.4dB SPL Pass      F.R.: Pass      DCR: 153.00 Pass  
 Average SPL: 81.3dB SPL Pass      (1000;1200;1500; 2000Hz)      Sweep Speed: 1/24 Oct.

B 6.11



Voltage applied for **F.R.** = 5.478V      **Start F.** = 20Hz      **Stop F.** = 20000Hz  
 Measuring Distance = 0.50M

Mfg.: OBO-40150F-01      Measured using Sunlight 1600; Fax: 886-2-22230727