



**OBO Pro.2****SPECIFICATIONS****MODEL NO.**  
OBO-14C45PA**PART NAME**  
Piezoelectric Buzzer**SHEET**  
2 OF 8  
OBO PRO INC.

2015.12.03

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**MODEL NO : OBO-14C45PA**

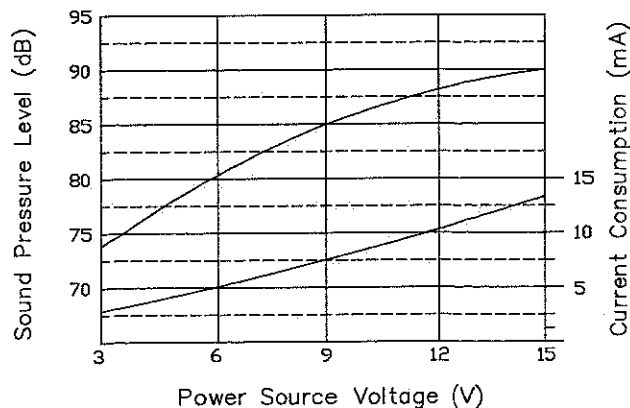
Features : Drive circuit built-in and lead pin type Wave solder and wash allowed.

Conformity RoHS Directive ( 2011/65/EU ) Requests.

— **General Specifications :**

Items	Specification
1.1 Sound Pressure Level	82dB min./10cm/DC9V
1.2 Oscillating Frequency	4.4 ± 0.5KHz
1.3 Current Consumption	7mA max./DC9V
1.4 Tone	Single Tone
1.5 Operating Voltage	DC 3 to 15V
1.6 Case Material	PBT (UL 94V-0)
1.7 Lead Pin Material	Brass (Plated of Sn)
1.8 Operating Temp. Range	-20°C to +70°C
1.9 Storage Temp. Range	-40°C to +85°C
1.10 Weight	1.2 gms
1.11 Voltage vs Sound Pressure vs Current Consumption Curve	As Per Fig.1

Fig.1:

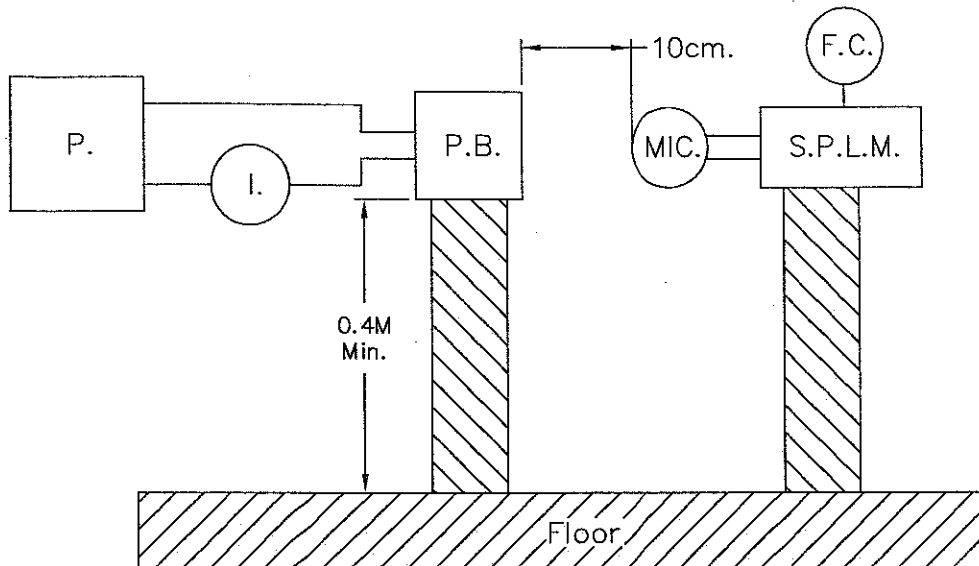
Measurement distance : 10cm. / Current consumption by GDM-8145  
Sound level meter by B&K-2232 / DC power supply by GPC-3030D

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**二、Test Method :**

2.1 Standard Test Diagram



- P. : DC Power Supply GPC-3030D or Equivalent
- S.P.L.M. : Sound Pressure Level Meter IEC651 TYPE2
- I. : GDM-8145 Multimeter or Equivalent
- F.C. : FFG-8016G or Equivalent
- P.B. : Piezoelectric Buzzer

2.2 Standard Test Condition

Part shall be measured under a condition  
(Temperature : +5 to +35°C, Humidity : 45% to 85%R.H.)  
unless the standard condition.(Temperature : +25±3°C,  
Humidity : 60±10%R.H.) is regulated to measure.

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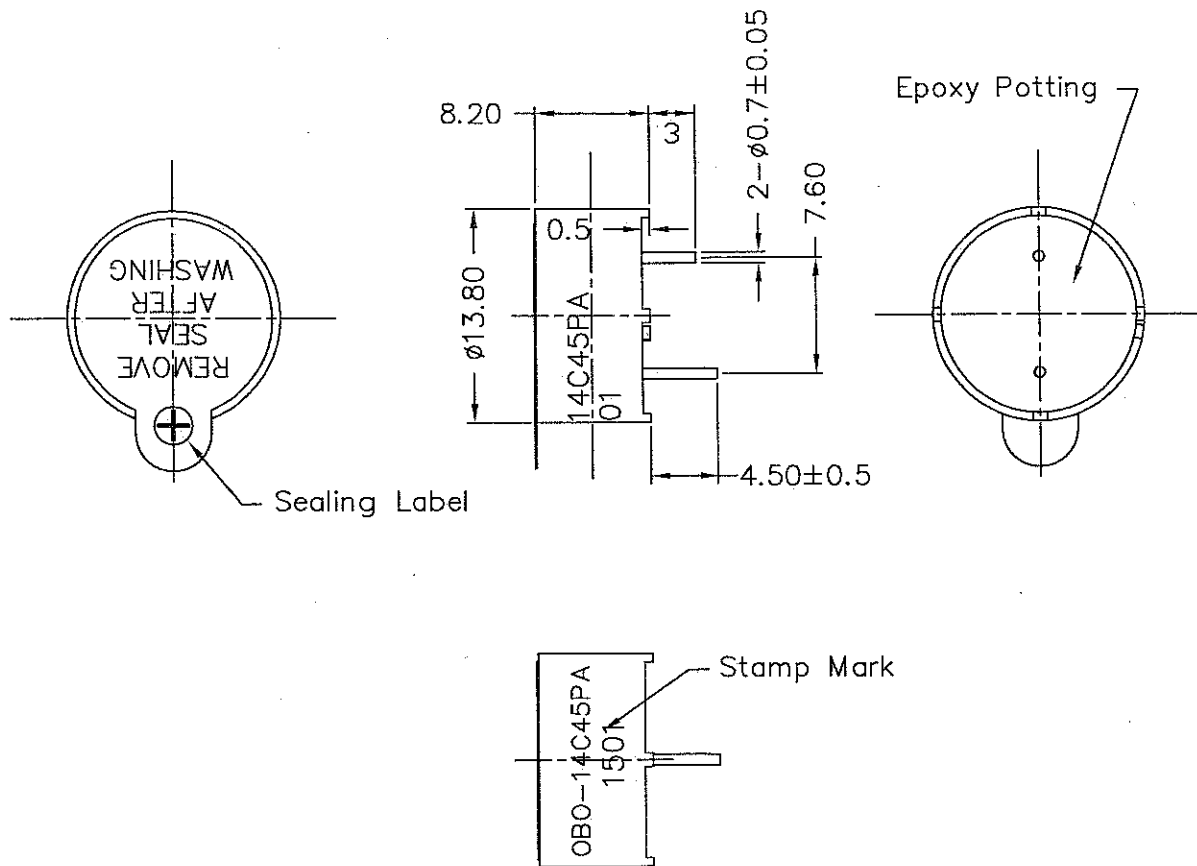
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三、 Mechanical Layout & Dimensions :

3.1 Dimensions

Tolerance:  $\pm 0.3$  mm except specified

Unit: mm



Note : Meaning of Stamp Mark

OBO-14C45PA : Model No.

1501 : Production Lot No.

15 : Year 2015 (last 1 figures of the year)

01 : Week ( 01 to 52 )

<b>OBO.Pro.2.</b>	<b>SPECIFICATIONS</b>	<b>MODEL NO.</b> OBO-14C45PA
	<b>PART NAME</b> Piezoelectric Buzzer	<b>OBO SHIELDING INC.</b> 5-0F8 2015.12.03

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**四、Environment-related substances to be controlled**

4.1 Piezoelectric Ceramic Disc.

RoHs Annex :

Application of lead, mercury, cadmium and hexavalent chromium, which are exempted from the requirement of article 4(1).

\* Lead in electronic ceramic parts.(e.g. piezoelectronic devices).

**五、Soldering Condition :**

5.1 Wave Soldering

Peak temperature	Dipping time	Soldering
+ 260°C	5 seconds	1 time

5.2 Hand Soldering

Iron Tip Temperature	Soldering time
+ 380°C	Duration 3 seconds Max.

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## 六、Reliability Test Conditions :

### 6.1 Mechanical Sequence

	Test Items	Test Conditions	Performance Requirements
1	Vibration	10 – 55 –10Hz, Sinewave sweep 15 minutes. X,Y,Z 3 direction 2 hours each, Total 6 hours	The measured values shall meet Remarks 1,2
2	Resistance to Soldering Heat	Lead terminal are immersed up to 1.5m/m from sounder's body in solder bath of 300±5°C for 5±0.5 seconds.	
3	Free Drop Test	Free fall from a hight of 100 cm. Onto the 10 m/m thick hardwood board, 9 times, any directions	
4	Solderability	Lead terminals are immered in rosin for 5 seccods and then immered in solder bath of 260±5°C for 5±0.5 seconds.	90% min. lead terminals shall be wet with solder. (Except the edge of terminal.)
5	Terminal Strength Pushing	The force 10 seconds of 1.0Kg is applied to each terminal in axial direction.	No visible damage and cutting off.

### 6.2 Environmental Sequence

	Test Items	Test Conditions	Performance Requirements
1	Humidity Test	+70±2°C, 90 ~ 95%RH,96 hrs.	The measured values shall meet Remarks 1,2
2	High Temp. Sotorage	+85±2°C,96 hrs.	
3	Low Temp. Sotorage	-40±2°C,96 hrs.	
4	Thermal Shock	-40±2°C(30min.) → +85±2°C (30min.) 50 cycle. Transfer Time : 10 minutes	

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6.3 Operating Life Sequence

	Test Items	Test Conditions	Performance Requirements
1	Ordinary Temp. Operating Test	Continuous sound generation for 96 hrs. at rated voltage and $+25\pm 10^{\circ}\text{C}$	The measured values shall meet Remarks 1,2
2	High Temp. Operating Test	Continuous sound generation for 96 hrs. at rated voltage and $+70\pm 2^{\circ}\text{C}$	
3	Low Temp. Operating Test	Continuous sound generation for 96 hrs. at rated voltage and $-20\pm 2^{\circ}\text{C}$	

REMARKS:

1. Sounder shall be measured after being placed in natural condition for 4 hours.
2. After the test the part shall meet specifications without any degradation in appearance and performance except SPL: Initial $\pm 10\text{dB}$

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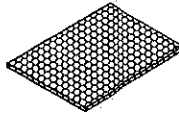
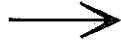
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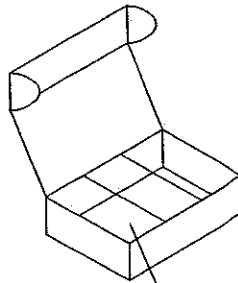
七、Packing Information :



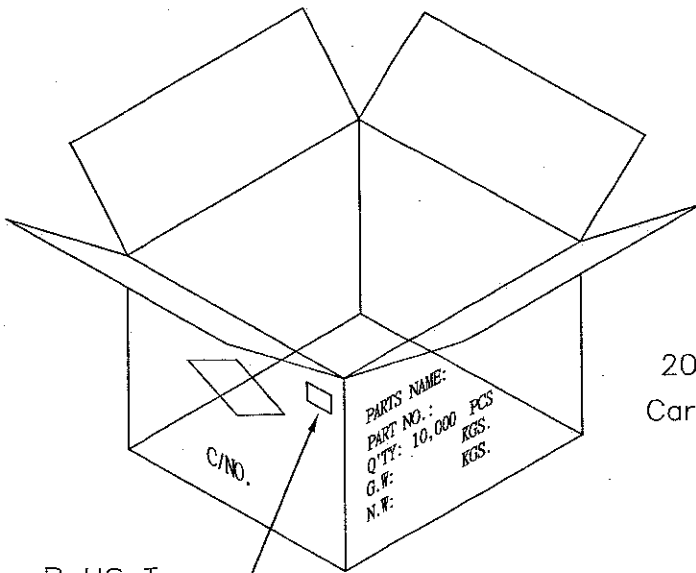
Buzzer



Sponge (195\*145\*6mm)

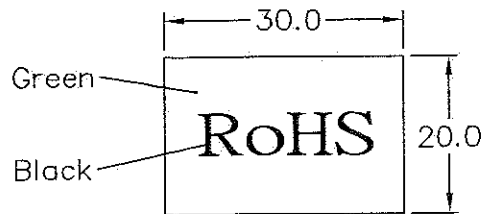


PVC Contents (205\*152\*60mm)  
500pcs/ box (218\*152\*61mm)



RoHS Tape

20 box(10,000pcs)/ Carton  
Carton: 1.74才 (400\*382\*358mm)



RoHS Tape