

OBO Pro.2	SPECIFICATIONS	MODEL NO. OBO-20205PA
	PART NAME Piezoelectric Buzzer	SHEET 1 OF 9

ALTERNATION HISTORY

Marking	Date	ECN NO.	REV.	Description	Page	PREPARE BY	APPROVE BY
※2	MAR,06'06	0603006	H	1.Conformity RoHS Directive (2002/95/EC) Requests.	9	簡沛玲	葉河 2006/3/6

REV.	DATE	PREPARED BY	CHECKED BY	APPROVED BY
H	MAR,06,2006	PEI LING	馮仁如	葉河 2006/3/6

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Constitution List of Specifications ※2

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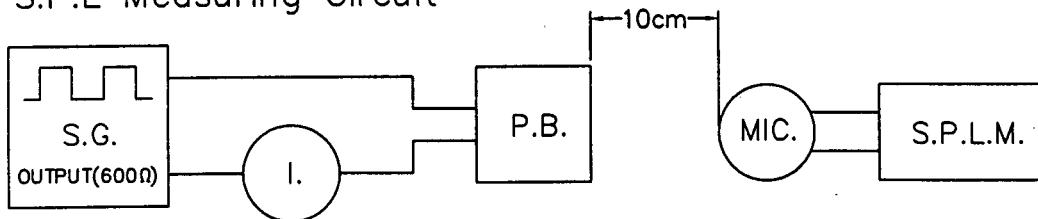
Features :Conformity RoHS Directive (2002/95/EC) Requests.
External drive & lead pin type ※2

1.General Specifications :

Items	Spec.
Sound Pressure Level	85dB min. at 4.0KHz/9Vp-p Square wave/10cm
	75dB min. at 4.0KHz/1Vrms Sine Wave/10cm
Capacitance	12,000pF ± 30% at 120Hz
Current Consumption	3mA max. at 4.0KHz/9Vp-p Square Wave
Allowable Input Voltage	30Vp-p max.
Case Material	PBT (UL 94V-0)
Lead Pin Material	Phosphor Bronze (Sn Plated)
Operating Temp. Range	-20°C to +70°C
Storage Temp. Range	-40°C to +85°C
Weight	2.7 gms

2. Measuring Method

2.1 S.P.L Measuring Circuit



- S.G. :GAG-808G Audio Generator or Equivalent
- S.P.L.M. :Sound Pressure Level Meter IEC651 TYPE2
- I. :GDM-8145 Multimeter or Equivalent
- P.B. :Piezoelectric Buzzer

Note: please pay attention never to be applied DC voltage to piezo sounder.

2.2 Measuring 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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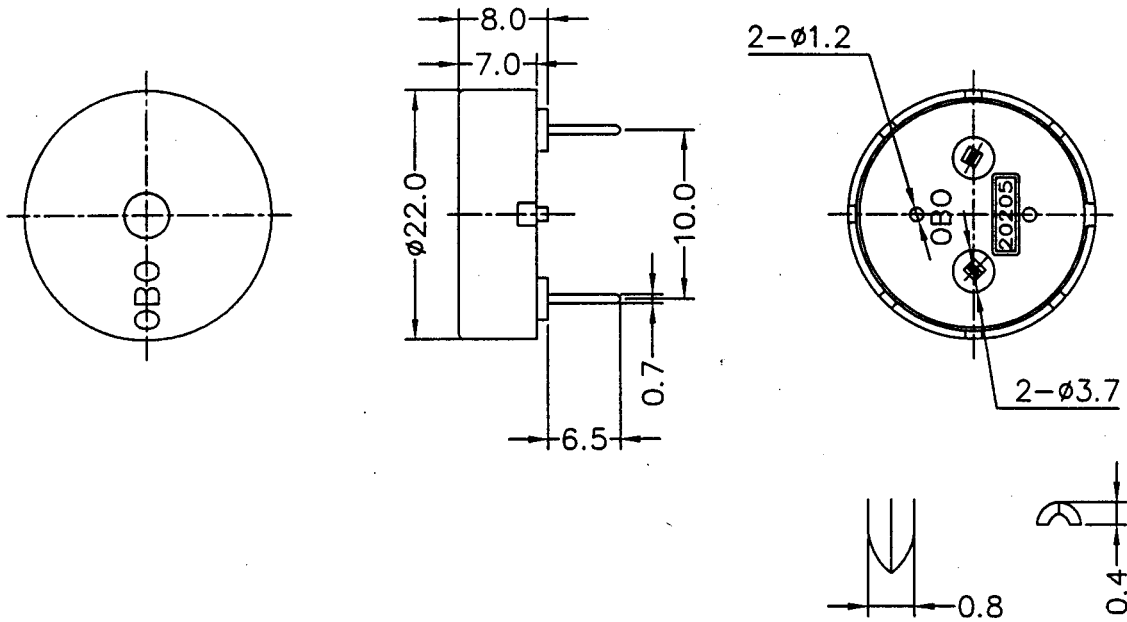
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3. Mechanical Layout and Dimensions

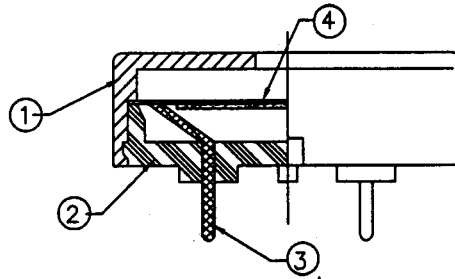
3.1 Dimensions

Tolerance: ±0.5mm Unit: mm



Pin Terminal

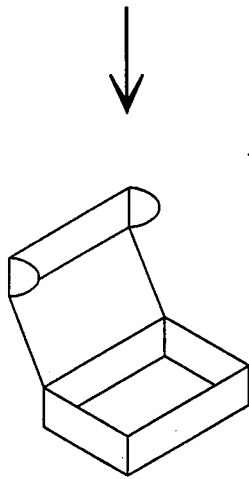
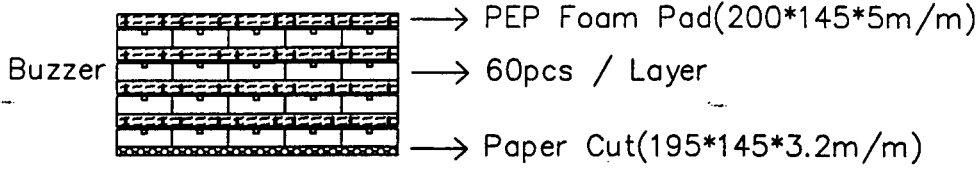
3.2 Construction (※2)



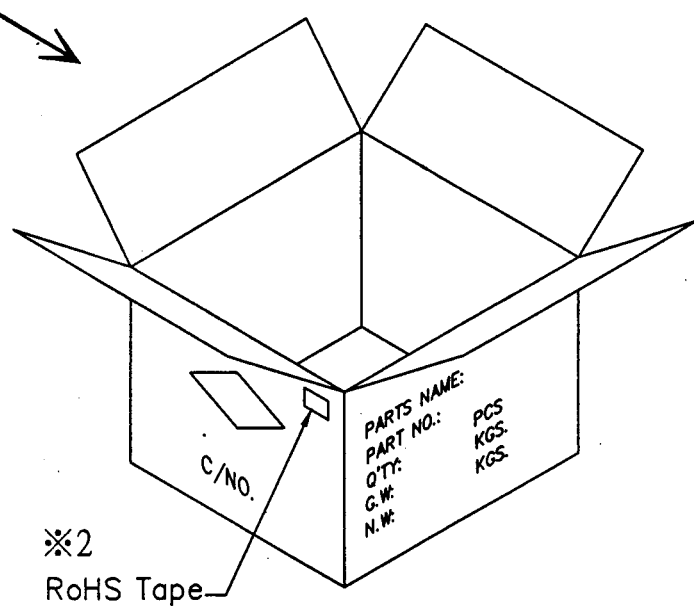
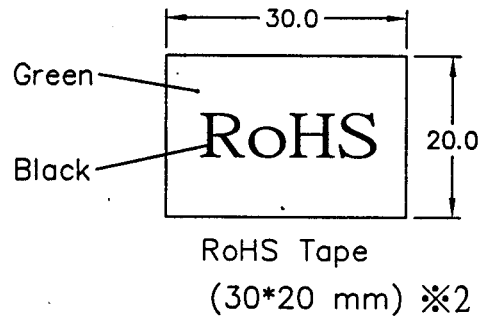
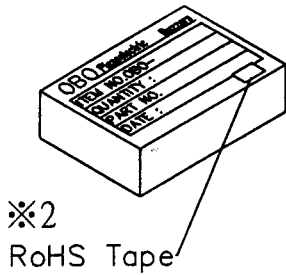
No.	Component Part	Part Number	Material	Q'TY
①	Top Case	B3120050000	P.B.T.	1
②	Bottom Case	B3120360100	P.B.T.	1
③	Lead Terminal	B4801000460	Phosphor Bronze (Sn Plated)	2
④	Piezoelectrc Diaphragm	TE20265-16	Piezoelectric Ceramic Brass	1

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4. Packing



180pcs(3 Layer)/Inside Box
218*152*61mm



5400pcs(30 box)/Carton
1.74 400*382*330mm.

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5. Reliability Test Conditions ※2

5.1 Mechanical Sequencey

	Test Items	Test Conditions	Performance Requirements
a	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
b	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 3±0.5 seconds or 260±5°C for 10±0.5 seconds.	
c	Free Drop Test	Free fall from a hight of 100 cm. Onto the 10 m/m thick hardwood board, 9 times, any directions	
d	Solderability	Lead terminals are immered in rosin for 5 seccods and then immered in solder bath of 235±5°C for 3±0.5 seconds.	90% min. lead terminals shall be wet with solder. (Except the edge of terminal.)
e	Terminal Strength Pushing	The force 10 seconds of 1.0Kg is applied to each terminal in axial direction.	No visible damage and cutting off.

5.2 Environmental Sequence

	Test Items	Test Conditions	Performance Requirements
a	Humidity Test	+70±2°C, 90 ~ 95%RH,240 hrs.	The measured values shall meet Remarks 1,2
b	High Temp. Storage	+85±2°C,240 hrs.	
c	Low Temp. Storage	-40±2°C,240 hrs.	
d	Thermal Shock	-40±2°C(30min.) → +85±2°C(30min.) 50 cycle. Transfer Time : 10 minutes	

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5.3 Operating Life Sequence

	Test Items	Test Conditions	Performance Requirements
a	Ordinary Temp. Operating Test	Continuous sound generation for 240 hrs. at rated voltage and +25±10°C	The measured values shall meet Remarks 1,2
b	High Temperature Operating Test	Continuous sound generation for 240 hrs. at rated voltage and +70±2°C	
c	Low Temperature Operating Test	Continuous sound generation for 240 hrs. at rated voltage and -20±2°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±10dB and Capacitance: Initial±20%
3. Reliability test report is available upon request.

6. Soldering condition ※2

6.1 Wave Soldering

Pre-heating conditions : P.C.B. Temp. shall be +80°C to +120°C for 60 seconds.
Soldering conditions : Solder bath Temp. shall be +240°C to +260°C for 5 seconds.

6.2 Hand Soldering

Iron Tip Temp. : 350°C, Duration : 3 seconds Max.

6.3 Heat resistance

380°C, Duration : 3 seconds Max.

7. Cautions for Use ※2

- 7.1 Please pay attention never to be applied DC voltage to piezo sounder.
- 7.2 The component may be damaged if mechanical stress over this specification is applied.

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- 7.3 Please pay attention to protect operation circuit from surge voltage provided by something of force such as falling, shock and temperature changing.
- 7.4 Washing of the component is not acceptable because it is not sealed.
- 7.5 The resistor should be used as shown in Fig.1. A suitable resistance value should be chosen, preferably 1K-ohm to 2K-ohm. instead of this measure, a diode may also be applied as shown in Fig.2

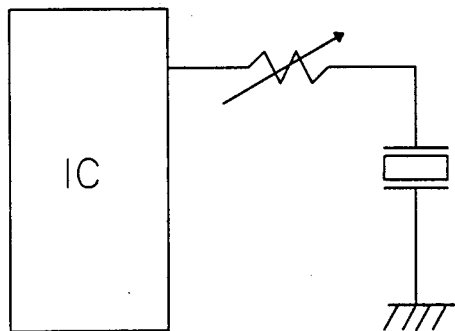


Fig.1

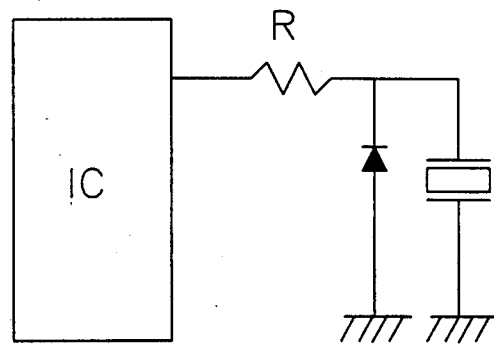


Fig.2

8. Note ※2

8.1 Production Factory

Dongguan city, Guang-dong, China

8.2 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).

