





OBO Pro.2	SPECIFICATIONS	MODEL NO. OBO-40BS2
	PART NAME SMD-Electromagnetic Transducer	SHEET 1 OF 8

ALTERNATION HISTORY

Marking	Date	ECN NO.	REV.	Description	Page	PREPARE BY	APPROVE BY
※1	MAR,22'07	0612012	C	Conformity RoHS Directive (2002/95/EC) Requests.	8		

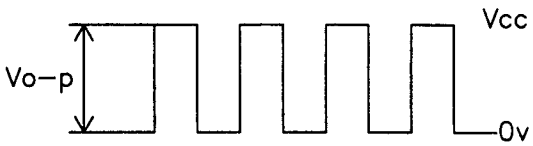
REV.	DATE	PREPARED BY	CHECKED BY	APPROVED BY
C	MAR,22,2007	Eileen		

OBO Pro.2 [®]	SPECIFICATIONS	MODEL NO. OBO-40BS2
	PART NAME SMD-Electromagnetic Transducer	SHEET 2 OF 8

MODEL NO : OBO-40BS2

Features : Conformity RoHS Directive (2002/95/EC) Requests. ※1

1、General Specifications :

	Items	Spec.	Conditions
1.1	Rated Voltage	3.0 Vo-p	 <p>Square wave 1/2 Duty</p>
1.2	Operating Voltage	2-4 Vo-p	
1.3	Resonant Frequency	2730Hz	
1.4	Sound Pressure Level at 10 cm	min. 85dB	Standard State, Standard Drive circuit, Rated Voltage, Distance at 0.1m(A-weight) 2730Hz Squarewave 1/2 Duty.
1.5	Average Current Consumption	max. 80mA	
1.6	Coil Resistance	15±3Ω	SPL ≥ 80dB at "1.4"
1.7	Operating Temp. Range	-30°C ~ +70°C	
1.8	Storage Temp. Range	-40°C ~ +85°C	
1.9	Housing Material	LCP	
1.10	Weight	1g	

OBO Pro.2

SPECIFICATIONS

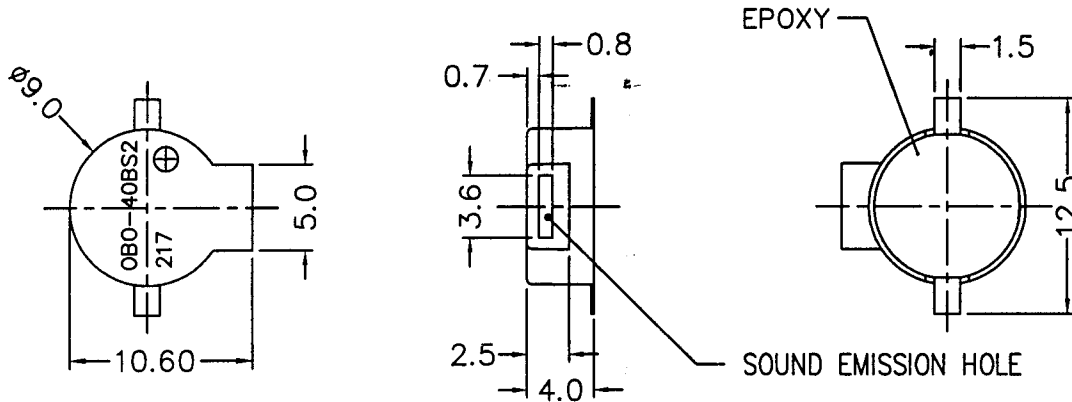
MODEL NO.
OBO-40BS2

PART NAME
SMD-Electromagnetic Transducer

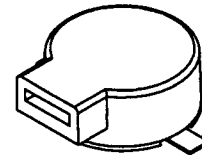
SHEET
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2、Mechanical Layout and Dimensions :

Tolerance: $\pm 0.2\text{mm}$ Unit: mm



Note : Meaning of Stamp Mark
 217 : Production Lot No.
 2 : Year 2002(last 1 figures of the year)
 17 : Week (01~ 55)
 ⊕ : Polarity indentification mark



3、Standard test Conditions :

3.1 Standard State	Ordinary Temperature	15°C to 35°C
	Ordinary Humidity	25% to 85%
	Ordinary air pressure	860 to 1060hPa

In case of doubtful judgment, the test is re-performed under Basic State.

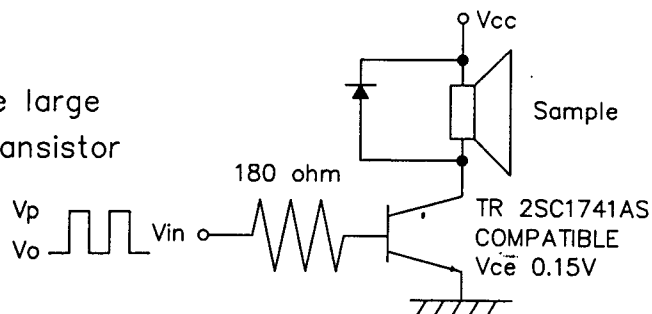
3.2 Basic State	Temperature	20 \pm 2°C
	Humidity	60% to 70%
	Ordinary air pressure	860 to 1060hPa

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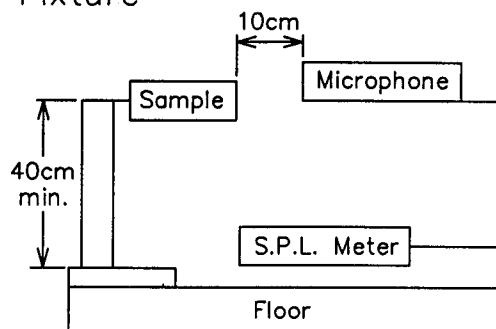
4、Test method :

4.1 Standard Drive Circuit

Signal amplitude should be large enough to saturate the transistor which drives the buzzer.

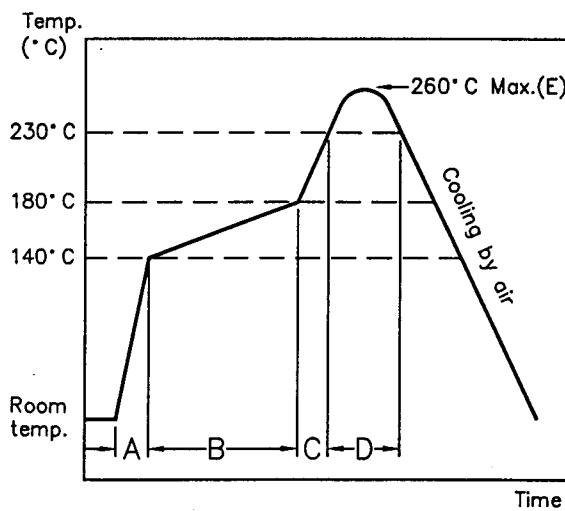


4.2 Standard Test Fixture



5、Soldering Condition :

5.1 Reflow Soldering ※1



NO.	Items	Condition	Unit
A	Temp. rise gradient	1 ~ 4	°C/sec
B	Heating time	50~150	sec
	Heating temperature	140~180	°C
C	Temp. rise gradient	1 ~ 4	°C/sec
D	Time over 230°C	48 Max.	sec
E	Peak temperature	260°C Max.	°C
	Peak-temp. hold time	Momentary	sec
Soldering		2	times

Note :

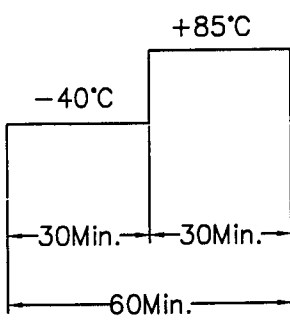
It is requested that second reflow soldering should be executed after heat of product goes down to normal temperature.

5.2 Hand Soldering ※1

Soldering iron temperature 380°C less than 3 second.

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6 · Reliability test :

No	Items	Test Conditions	Evaluation Criteria
1	High Temp. Storage	The part shall be capable of withstanding a storage temperature of +85°C for 96 hours.	After the test the part shall meet specifications without any degradation in appearance and performance except SPL. SPL shall be 80dB or more.
2	Low Temp. Storage	The part shall be capable of withstanding a storage temperature of -40°C for 96 hours.	
3	Thermal Shock	The part shall be subjected to 50 cycle. One cycle shall consist of : transfer time : 10 minutes 	
4	Humidity Test	The part shall be subjected to +60±2°C, 90~95% RH for 96 hours, and expose to room temperature for 6 hours.	
5	Vibration	10 - 55 - 10Hz, Sinewave , Sweep 15 min. X,Y,Z 3 Direction 2 hours each, Total 6 hours.	
6	Drop Test	Drop on a hard wood board of 5cm thick, any directions, 10 times, at the height of 100cm.	

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No	Items	Test Conditions	Evaluation Criteria
7	Ordinary Temp. life	The part shall be subjected to 96 hours at 25±10°C. Input 3.0Vo-p Square wave 1/2duty 2730Hz	
8	High Temp. life	The part shall be subjected to 96 hours at +70±2°C. Input 3.0Vo-p Square wave 1/2duty 2730Hz	
9	Low Temp. life	The part shall be subjected to 96 hours at -30±2°C. Input 3.0Vo-p Square wave 1/2duty 2730Hz	
10	Reflow ※1		<p>a. No abnormality should be found after the test</p> <p>b. Good soldering to meet soldering requirements</p>

Notes

As this product is not protected from foreign material entering, please make sure that that any foreign materials (e.g. magnetic powder, washing solvent, flux, corrosive gas) do not enter this product in your production processes. The functional degradation (e.g. SPL down) may occur if foreign material enter it.

OBO Pro.2

SPECIFICATIONS

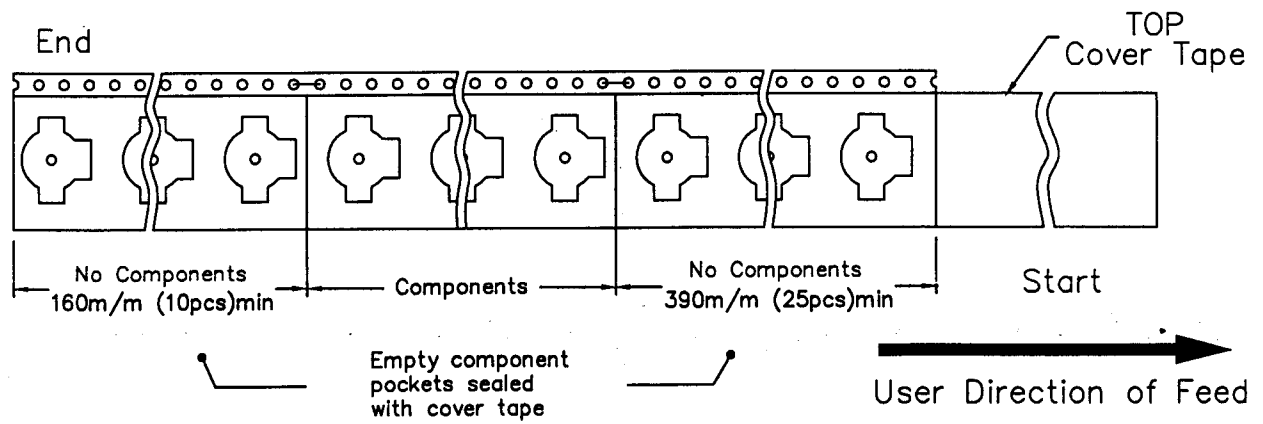
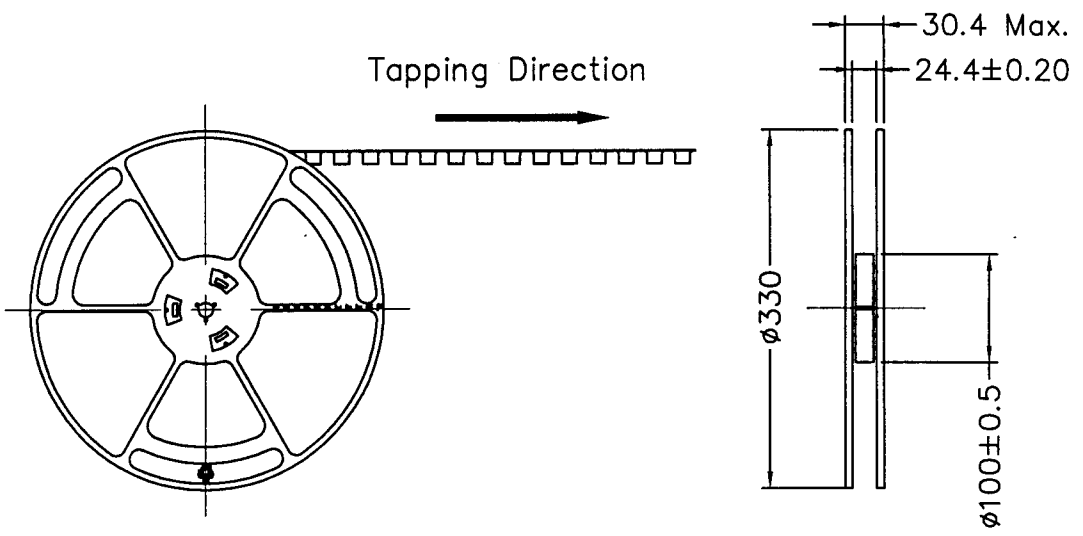
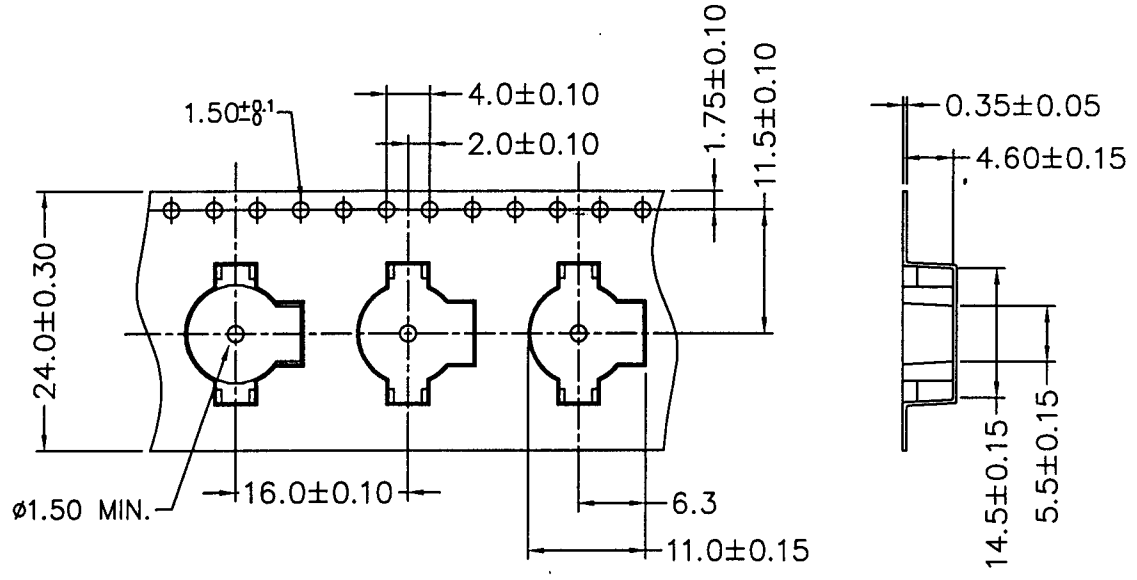
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7、Packing Information :

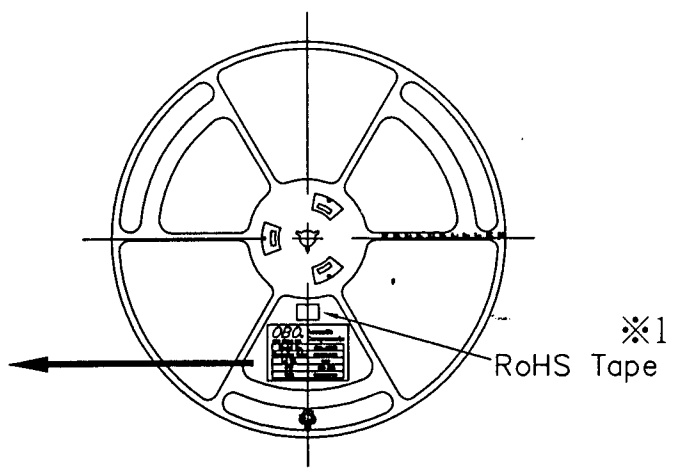
Unit: mm Tolerance: ± 0.2



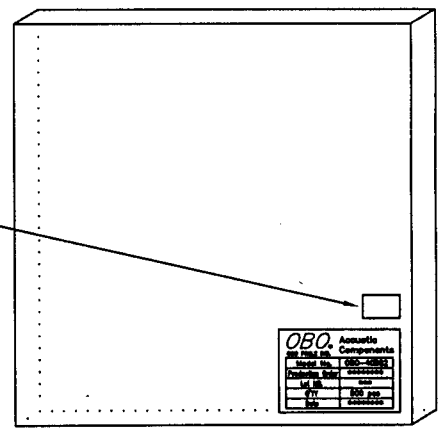
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Label content

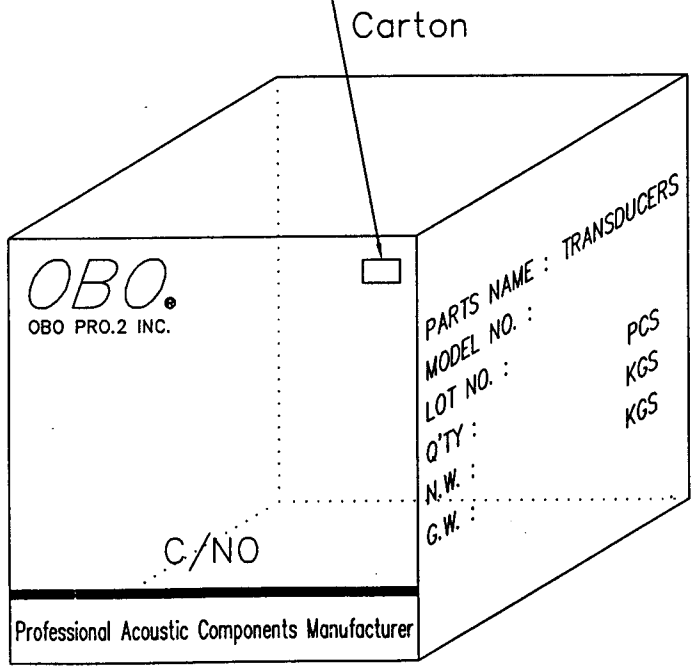
OBO Acoustic Components OBO PRO.2 INC.	
Model No.	OBO-40BS2
Production Order	*****
Lot NO.	***
Q'TY	900 pcs
Date	*****



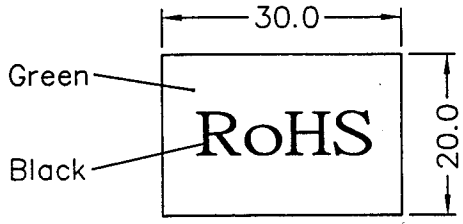
Inside box



1 Reel / Inside box
(33.6cm*3.8cm*34.2cm)



10 Inside box (9000pcs)
/ Carton (34.8cm*40.0cm*36.0cm)



RoHS Tape
(30*20 mm)