

OBO Pro.2	SPECIFICATIONS	MODEL NO. OBO-0903S-A2
	PART NAME SMD-Electromagnetic Transducer	SHEET 1 OF 8

ALTERNATION HISTORY

Marking	Date	ECN NO.	REV.	Description	Page	PREPARE BY	APPROVE BY
※2	DEC,24'04	0412004	I	Pb-free Soldering	8	李保祿	DARREN
※3	MAY,10'06	0605002	J	Conformity RoHS Directive (2002/95/EC) Requests.	8	馮仁世	葉可致

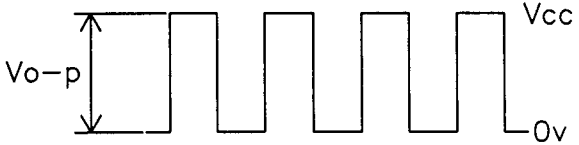
REV.	DATE	PREPARED BY	CHECKED BY	APPROVED BY
J	MAY,10,2006	LULU	葉可致	葉可致

OBO Pro.2	SPECIFICATIONS	MODEL NO. OBO-0903S-A2
	PART NAME SMD-Electromagnetic Transducer	SHEET 2 OF 8

MODEL NO : OBO-0903S-A2

Features : Conformity RoHS Directive (2002/95/EC) Requests. ※2 ※3

1 、 General Specifications :

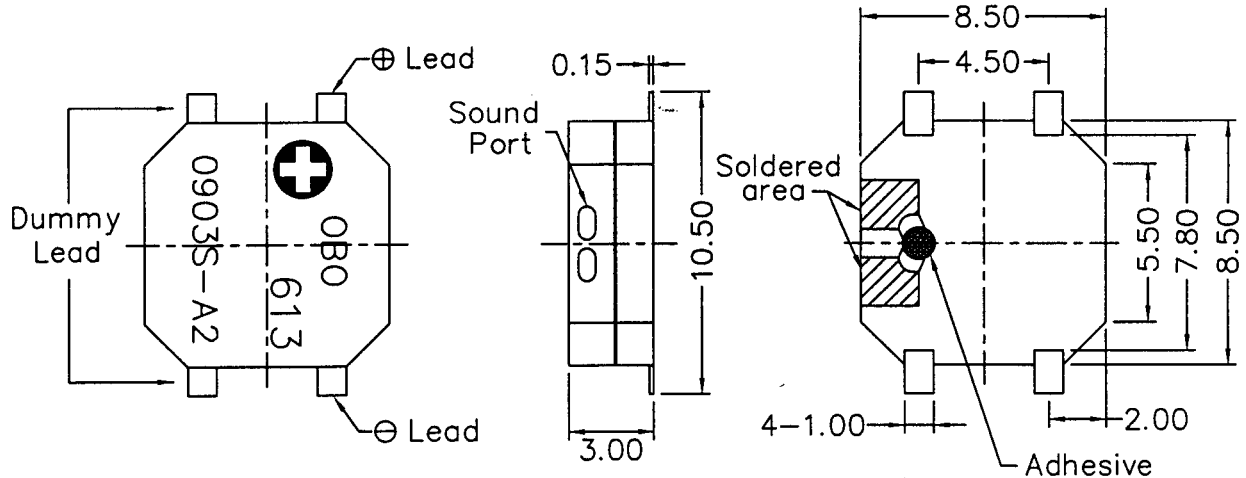
	Items	Specification	Conditions
1.1	Rated Voltage	3.0 Vo-p	 <p>Squarewave 1/2 Duty</p>
1.2	Operating Voltage	2-5 Vo-p	
1.3	Resonant Frequency	2700Hz	
1.4	Sound Pressure Level	87dB min.	Standard State, Standard Drive circuit, Rated Voltage, Distance at 0.1m(A-weight) 2700Hz Squarewave 1/2 Duty.
1.5	Average Current Consumption	100mA max.	
1.6	Coil Resistance	16±4Ω	
1.7	Operating Temp. Range	-30° C~+70° C	SPL ≥ 80dB at "1.4"
1.8	Storage Temp. Range	-40° C~+85° C	
1.9	Housing Material	LCP	
1.10	Weight	0.5g	

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2、Mechanical Layout and Dimensions :

2.1 Dimensions

Tolerance: $\pm 0.5\text{mm}$ Unit: mm



Note :

Meaning of Stamp Mark

613 : Production Lot No.

6 : Year 2006 (last 1 figures of the year)

13 : week (01~55)

0903S-A2 : Model No.

⊕ : 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

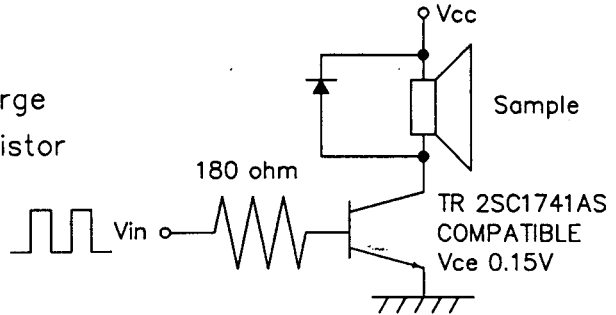
Temperature	20 \pm 2°C
Humidity	60% to 70%
Ordinary air pressure	860 to 1060hPa

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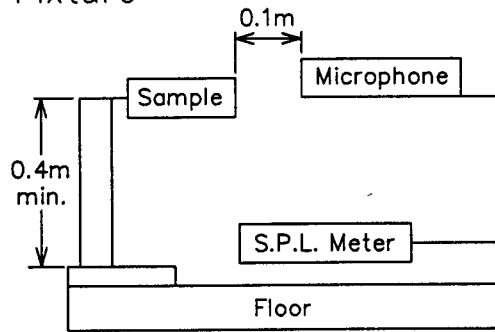
4、Test method :

4.1 Standard Drive Circuit

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



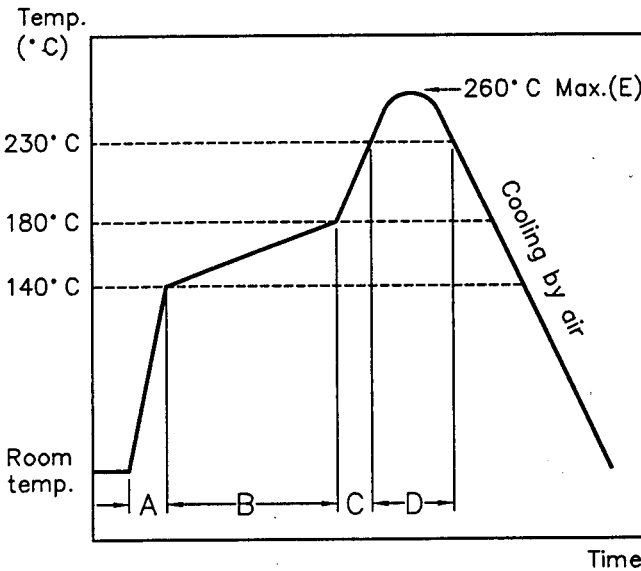
4.2 Standard Test Fixture



5、Soldering Condition :

5.1 Reflow Soldering ※2

Recommendable reflow soldering condition is as follows.



NO.	Items	Condition	Unit
A	Temp. rise gradient	1 ~ 4	°C/sec
	Heating time	50~150	sec
B	Heating temperature	140~180	°C
	Temp. rise gradient	1 ~ 4	°C/sec
C	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 ※2

Soldering iron temperature 380°C less than 3 second.

OBO Pro.2

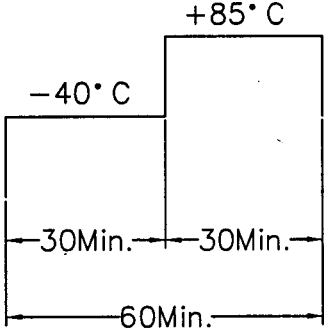
SPECIFICATIONS

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OBO-0903S-A2

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SMD-Electromagnetic Transducer

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6 · Reliability test :

NO.	Items	Test Conditions	Evaluation Criteria
6.1	High Temp. Storage	The part shall be capable of withstanding a storage temperature of +85° C for 240 hours.	After the test the part shall meet specifications without any degradation in appearance and performance except SPL. SPL shall be 80dB or more.
6.2	Low Temp. Storage	The part shall be capable of withstanding a storage temperature of -40° C for 240 hours.	
6.3	Thermal Shock	The part shall be subjected to 50 cycle. One cycle shall consist of : transfer time : 10 minutes 	
6.4	Humidity Test	The part shall be subjected to +60° C, 90% RH for 240 hours, and expose to room temperature for 6 hours.	
6.5	Vibration	10 – 55 – 10Hz, Sinewave Sweep 15 min. X,Y,Z 3 Direction 2 hours each, Total 6 hours.	
6.6	Drop test	Drop on hard wood board of 5cm. thick, any direction, 10 times, at the height of 100cm	

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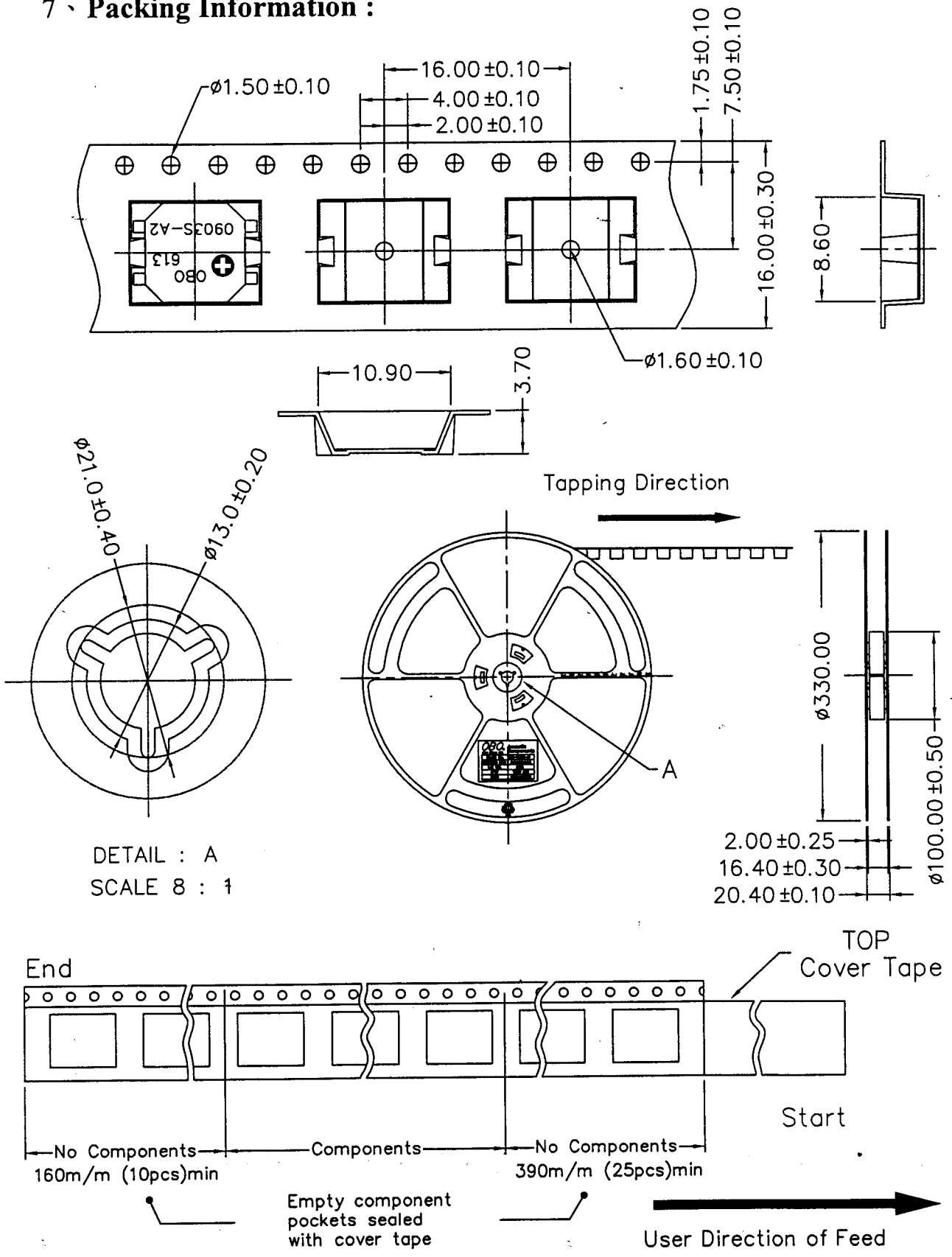
NO.	Items	Test Conditions	Evaluation Criteria
6.7	Ordinary Temp. life	The part shall be subjected to 240 hours at $25 \pm 10^{\circ}\text{C}$. Input 5.0Vp-p Squarewave 1/2duty 2700Hz	
6.8	High Temp. life	The part shall be subjected to 240 hours at $+85^{\circ}\text{C}$. Input 5.0Vp-p Squarewave 1/2duty 2700Hz	
6.9	Low Temp. life	The part shall be subjected to 240 hours at -30°C . Input 5.0Vp-p Squarewave 1/2duty 2700Hz	
6.10	※2 Reflow		<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.

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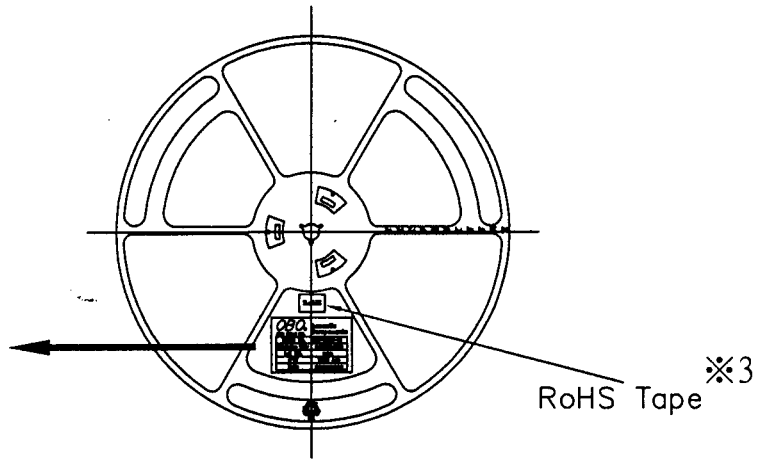
7、Packing Information :



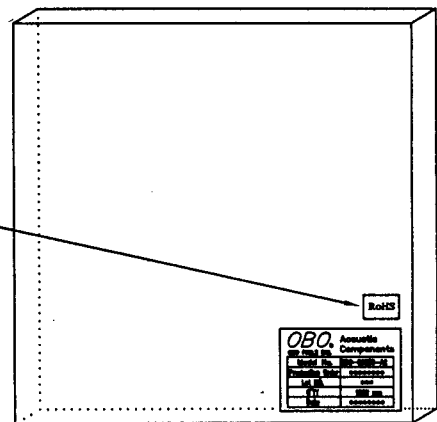
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Label content

OBO Acoustic Components OBO PRO.2 INC.	
Model No.	OBO-0903S-A2
Production Order	*****
Lot NO.	***
Q'TY	1200 pcs
Date	*****



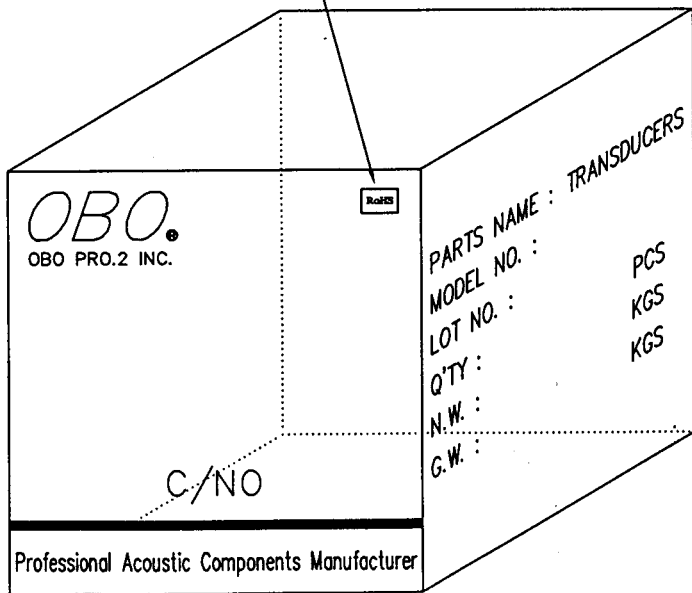
Inside box



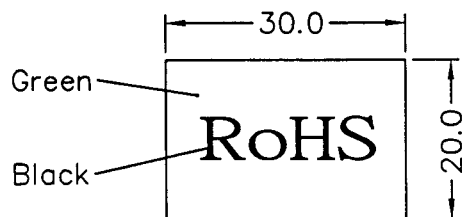
1 Reel / Inside box
(33.3*2.4*33.5)

RoHS Tape ※3

Carton



10 Inside box (12000pcs)
/ Carton (34.5*26.5*35.3)



RoHS Tape ※3
(30*20 mm)