OBO Pro.2	SPECIFICATIONS	MODEL NO OBO-45BP1
	PART NAME SMD-Electromagnetic Transducer	SHEET 1 OF 7

ALTERNATION HISTORY							
Marking	Date	ECN NO.	REV.	Description	Page	PREPARE BY	APPROVE BY
--	OCT.28,08	---	A	New document	9	王志偉	謝明福
※1	MAR.03,2010	*********	B	Increased sticker wash allowed	7	王志偉	謝明福

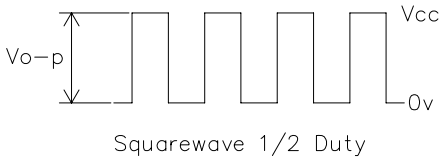
REV.	DATE	PREPARED BY	CHECKED BY	APPROVED BY
B	MAR.03,2010	王志偉	楊冉	謝明福

MODEL NO : OBO-45BP1

Features: Wash allowed. ※1

Conformity RoHS Directive(2002/95/EC) Requests.

1. General Specifications

	Items	Specification	Spec.
1.1	Rated Voltage	3.0 Vp-p	
1.2	Operating Voltage	2-4 Vp-p	
1.3	Resonant Frequency	2700Hz	
1.4	Sound Pressure Level	Min 85dB	Standard State,Standard Drive ciruit,Rate Voltage,Distance at 0.1m(A-weight)2700Hz Squarewave 1/2 Duty.
1.5	Average Current Consumption	Max 100mA	
1.6	Coil Resistance	16±3Ω	
1.7	Operating Temp. Range	-20℃~+70℃	
1.8	Storage Temp. Range	-30℃~+80℃	
1.9	Housing Material	PPS(Black)	
1.10	Weight	0.8g	

2. Standard State

2.1 Standard State

Ordinary Temperature	15℃ to 35℃
Ordinary Humidity	60% to 70%
Ordinary air pressure	860 to 1060hPa

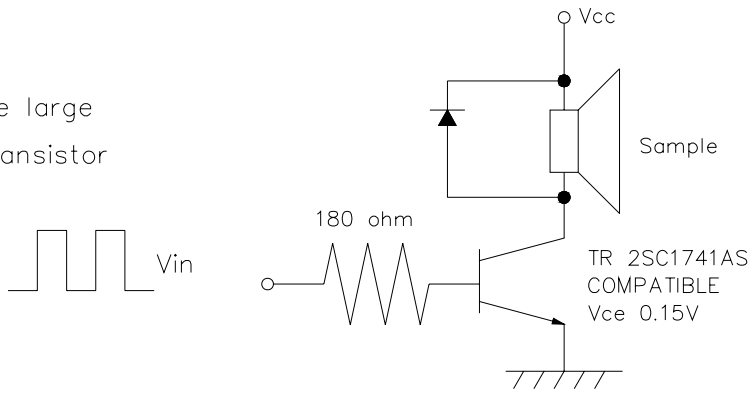
2.2 Basic State

Temperature	20±2℃
Humidity	60% to 70%
Ordinary air pressure	860 to 1060hPa

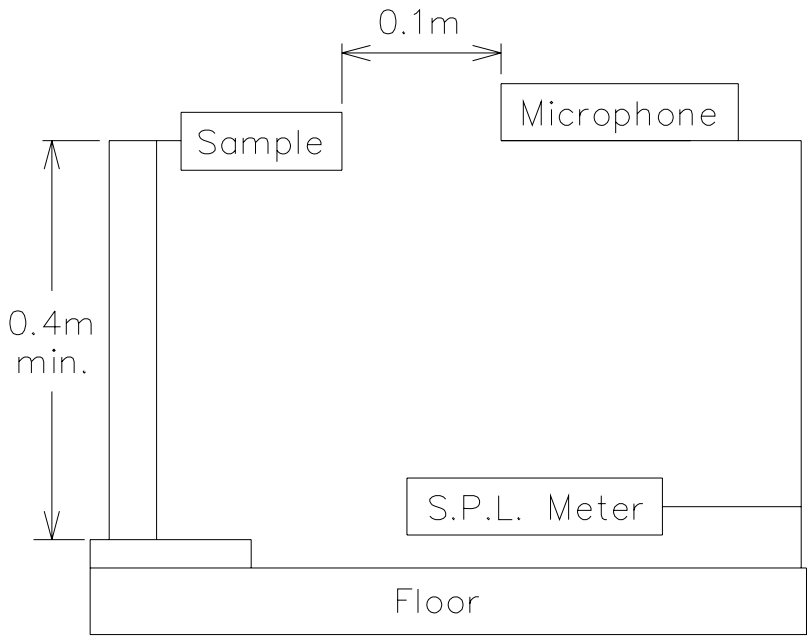
3. Test method

3.1 Standard Drive Circuit

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



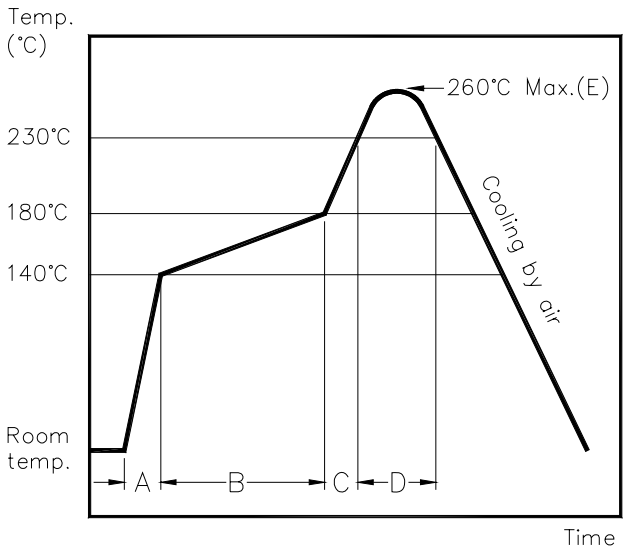
3.2 Standard Test Fixture



4. Soldering Condition

4.1 Reflow Soldering

Recommendable reflow soldering condition is as follows.



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

Note :

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

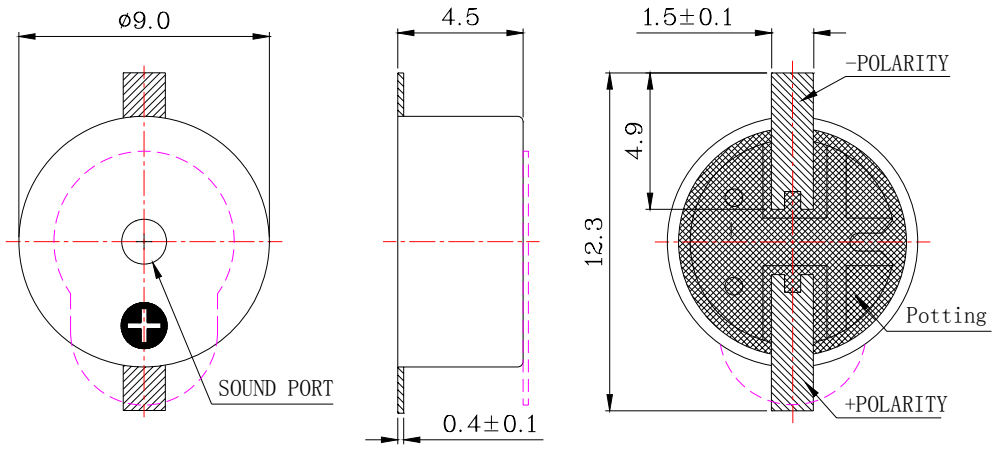
4.2 Hand Soldering

Soldering iron temperature 350℃ less than 5 second.

5. Mechanical Layout and Dimensions

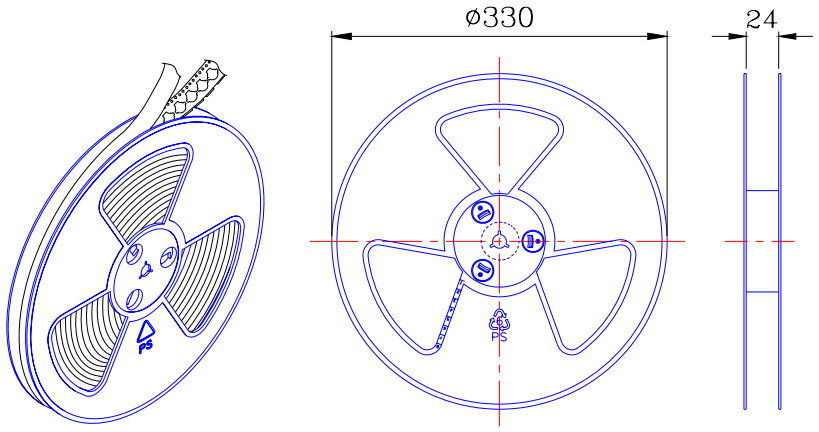
5.1 Dimensions ※1

Tolerance: ±0.5mm Uint: mm

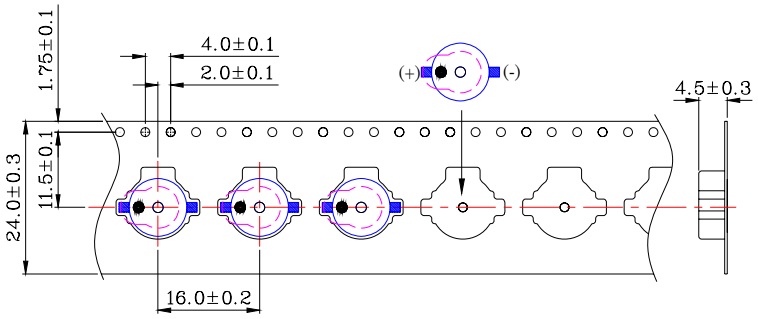


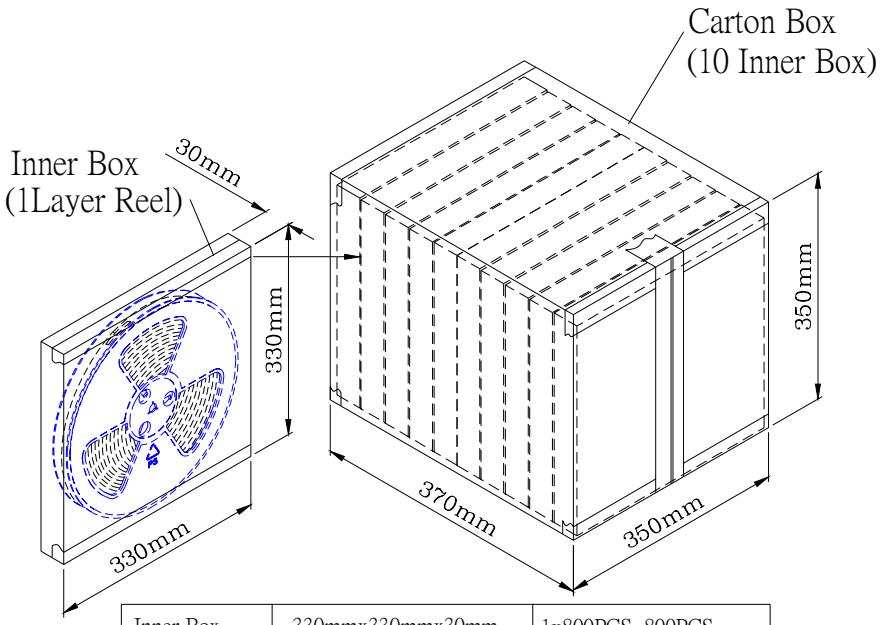
Wash allowed ※1

6. Packing



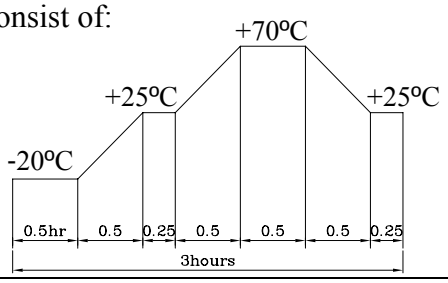
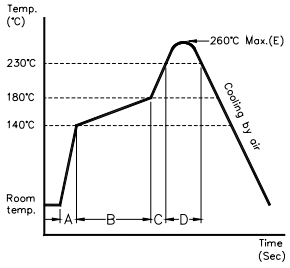
1 Reel : 800PCS





Inner Box	330mmx330mmx30mm	1x800PCS=800PCS
Carton Box	350mmx350mmx370mm	10x800PCS=8,000PCS

7. Reliability test:

NO.	Items	Test Conditions	Evaluation Critera
1	High Temp.Storage	The part shall be capable of withstanding a storage Temperature of 80±2ºC for 96 hours.	After the test the Part Shall meet specifications without any Degradation in Appearance and Performance Except SPL. SPL shall be 7dB Or more.
2	Low Temp.Storage	The part shall be capable of withstanding a storage Temperature of -30±2ºC for 96 hours.	
3	Thermal Shock	The part shall be subjected to 5 cycle. One cycle Shall consist of: 	
4	Humidity Test	Temperature : +40℃±2℃ Relative Humidity : 90% ~ 95% Duration : 96 Hours Duration of recovery : 2 Hours	
5	Vibration	10-55Hz, Sinewave Sweep 15 min. X.Y.Z 3 Direction 2 hour each, total 6 hours.	
6	Drop test	Drop on hard wood board of 4cm. thick, any direction,10 times, at the height of 75cm	
7	Solderability Test	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +300±5ºC for 3±1 seconds . 90% min. lead terminals shall be wet with solder(Except the edge of terminals).	
8	Terminal Strength Pulling Test	The force of 9.8N(1.0kg) is applied to each terminal in axial direction for10 seconds. No visible damage and cutting off.	
9	Reflow		a. No abnormality Should be found After the test b. Good soldering to meet soldering requirements

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.