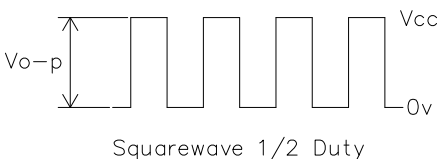


MODEL NO : 1003R-A2

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

1. General Specifications

	Items	Specification	Conditions.
1.1	Rated Voltage	3.0 Vo-p	 <p>Squarewave 1/2 Duty</p>
1.2	Operating Voltage	2-4 Vo-p	
1.3	Resonant Frequency	2730Hz	
1.4	Sound Pressure Level	Min 85dB	Standard State, Standard Drive circuit, Rate Voltage, Distance at 0.1m(A-weight)2700Hz Square wave 1/2 Duty.
1.5	Average Current Consumption	Max 70mA	
1.6	Coil Resistance	25±3Ω	
1.7	Operating Temp. Range	-20°C ~+60°C	SPL ≥ 80dB at "1.4"
1.8	Storage Temp. Range	-40°C ~+85°C	
1.9	Housing Material	Noryl	
1.10	Weight	1g	

2. Standard test Conditions

2.1 Standard State

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

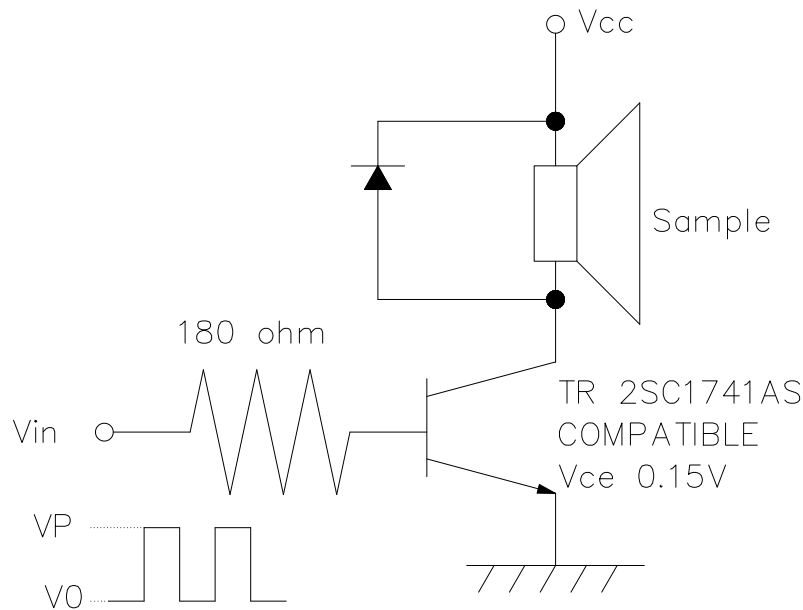
In case of doubtful judgment, the test is re-performed under Basic State.

2.2 Basic State

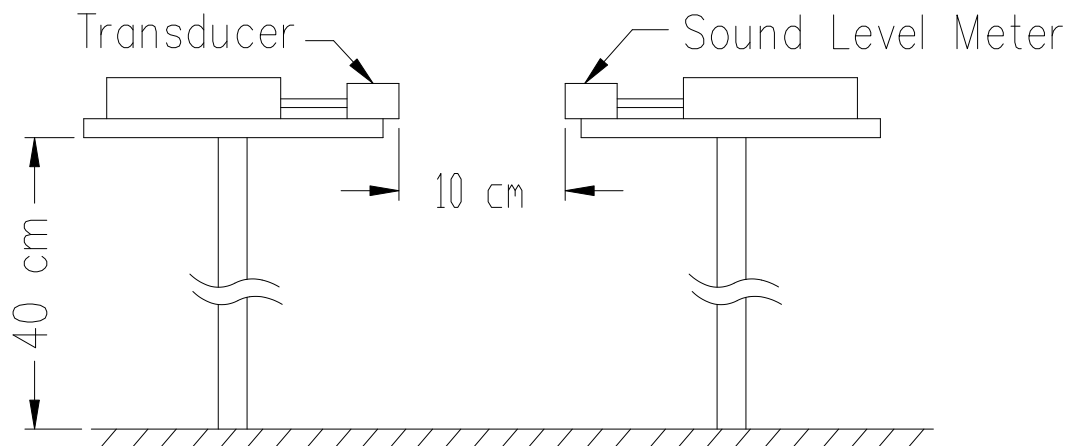
Temperature	20±2°C
Humidity	60% to 70%
Ordinary air pressure	860 to 1060hPa

3. Test method:

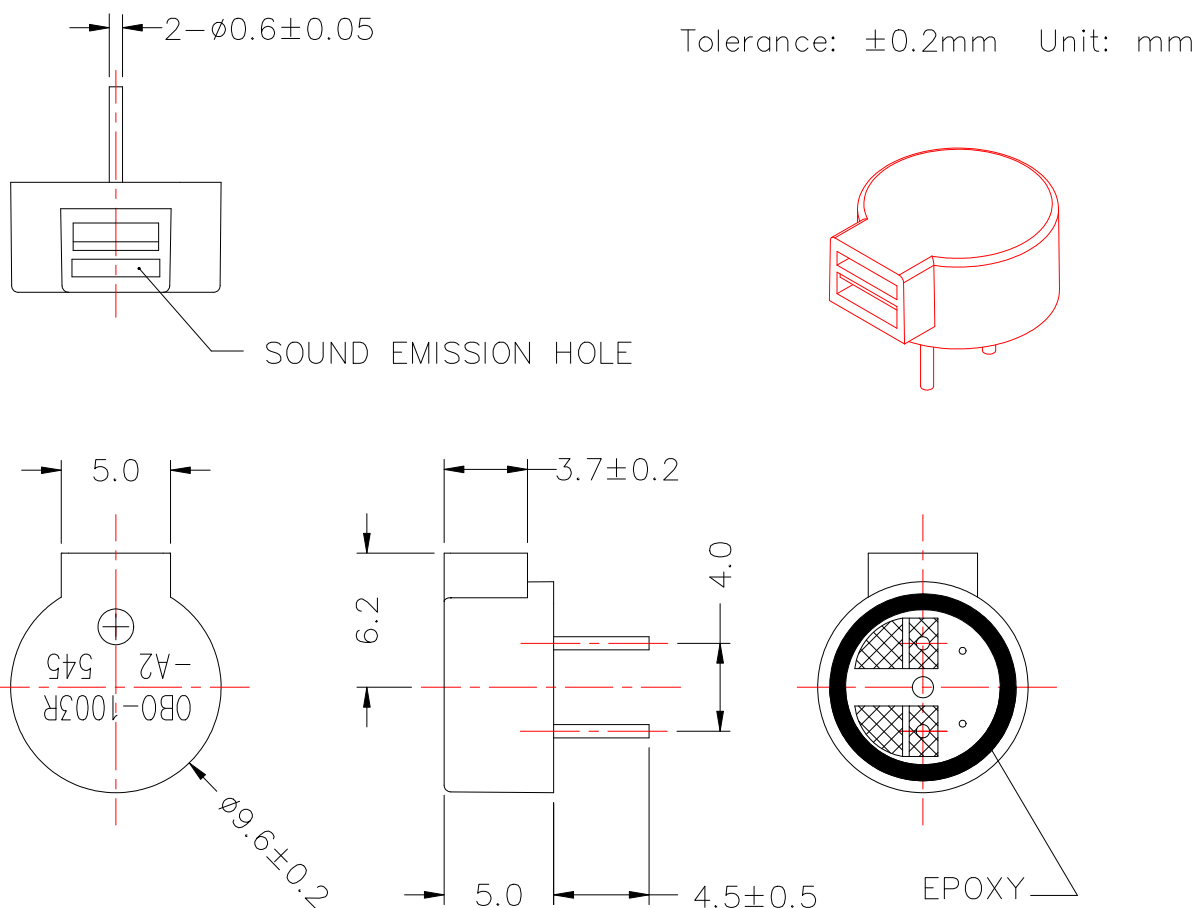
3.1 Standard Drive Circuit



3.2 Standard Test Fixture



4. Mechanical Layout and Dimensions:



Note : Meaning of Stamp Mark

545: Production Lot No.

5 : Year 2005 (last 5 figures of the year)

45 : week (01 ~ 55)

1003R-A2 : Model No.

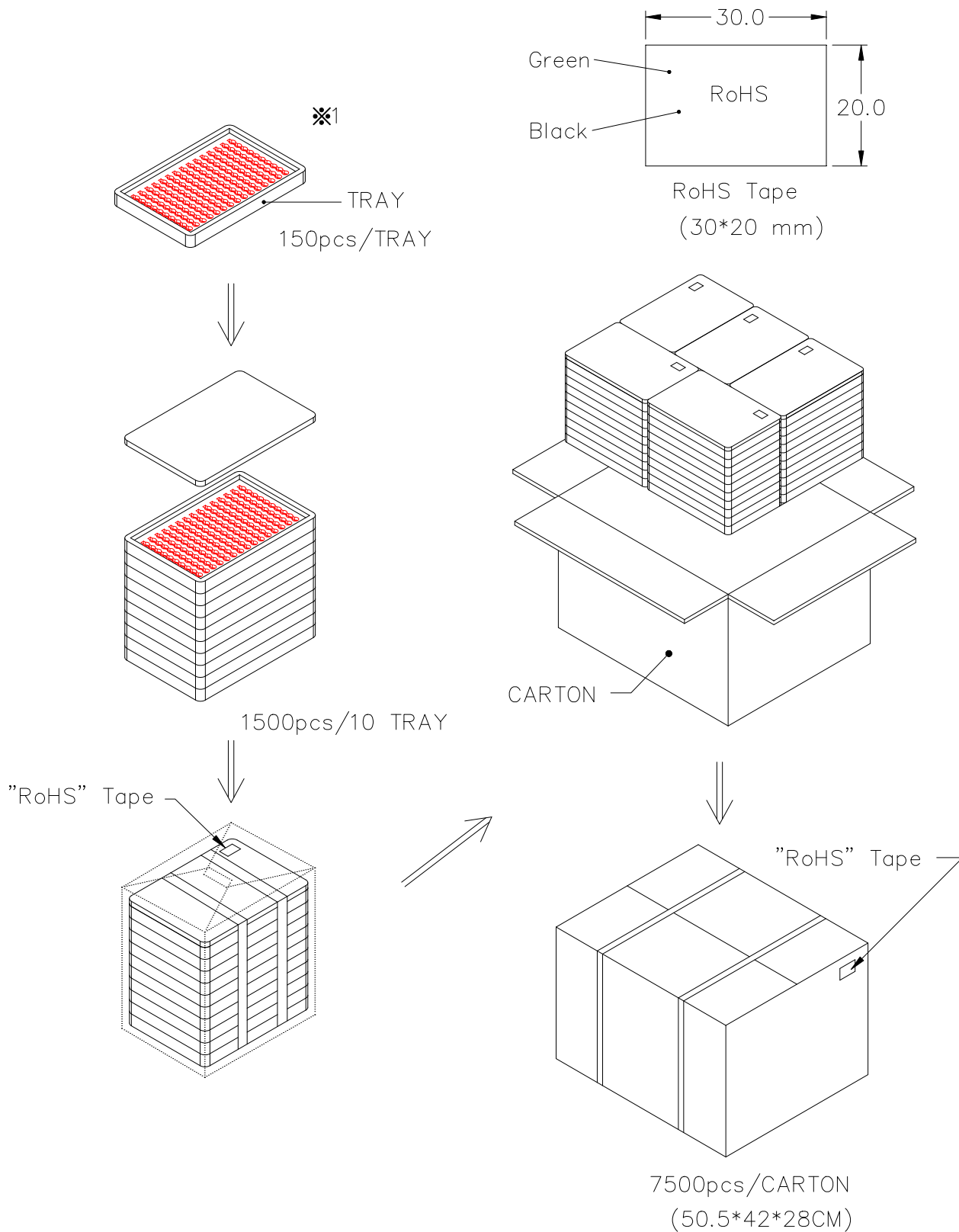
⊕ : Polarity identification mark

5 . Soldering Condition ※2

5.1 Hand Soldering

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

※2
6 . Packing Information :



※2

7 . Reliability test

No	Items	Test Conditions	Evaluation Criteria
1	High Temp. Storage	Storage in $+85\pm 2^{\circ}\text{C}$ test box for 240 hours, then expose to the room temperature for 2 hours without applying power.	After test The value of frequency /current/SPL should be meet specifications
2	Low Temp. Storage	Storage in $-40\pm 2^{\circ}\text{C}$ test box for 240 hours, then expose to the room temperature for 2 hours without applying power.	
3	Temperature cycle test	Make this test for 5 cycle without applying power, then expose to the room temperature for 2 hours. 	
4	Humidity test	Storage in $+40\pm 2^{\circ}\text{C}$ 90–95%RH test box for 48 hours, then expose to the room temperature for 2 hours without applying power.	
5	Vibration test	10 – 100 – 10Hz, Sinewave, Sweep 15 min. X,Y,Z 3 Direction 2 hours each, Total 6 hours.	
6	Drop test	Drop from the height of 100cm to the surface of 10mm thick woodenboard. three directions(x,y,z).	

No	Items	Test Conditions	Evaluation Criteria
7	Ordinary Temp. Operating Test	The part shall be subjected to 240 hours at $25\pm 10^{\circ}\text{C}$. Input 3.0Vp-p Squarewave 1/2duty 2730Hz	
8	High Temp. Operating Test	The part shall be subjected to 240 hours at $+60^{\circ}\text{C}$. Input 3.0Vp-p Squarewave 1/2duty 2730Hz	
9	Low Temp. Operating Test	The part shall be subjected to 240 hours at -20°C . Input 3.0Vp-p Squarewave 1/2duty 2730Hz	

Notes

As this product is not protected from foreign material entering, please make sure 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.