
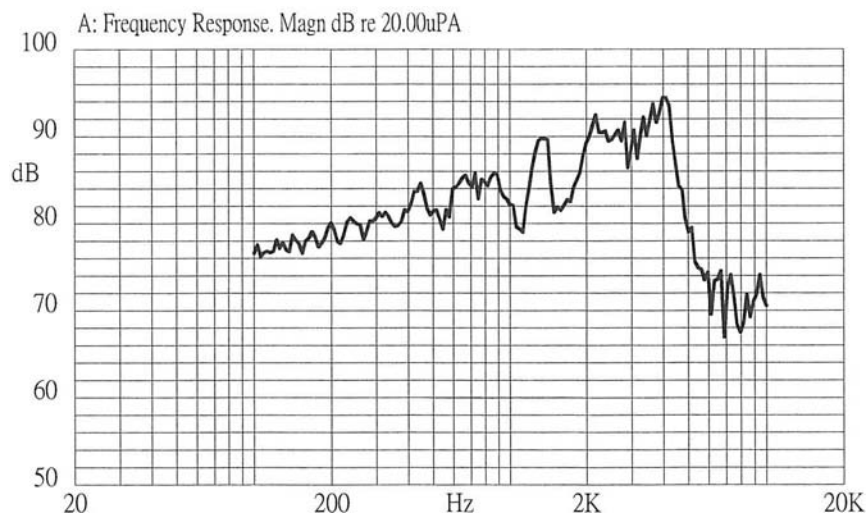
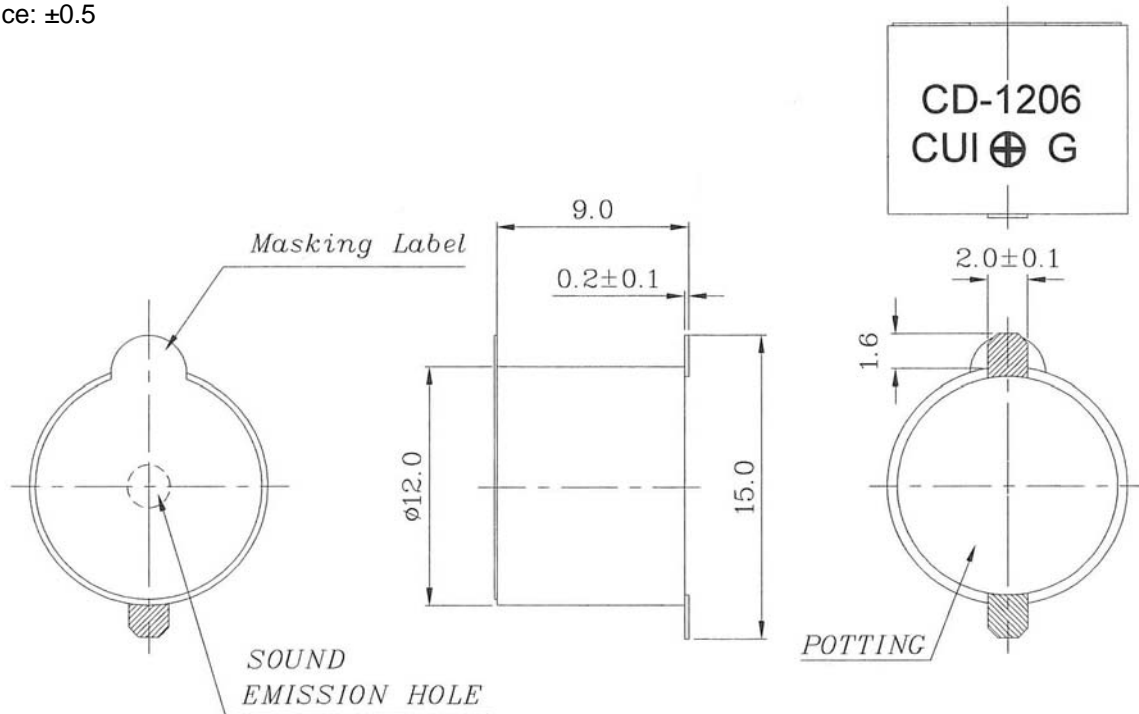
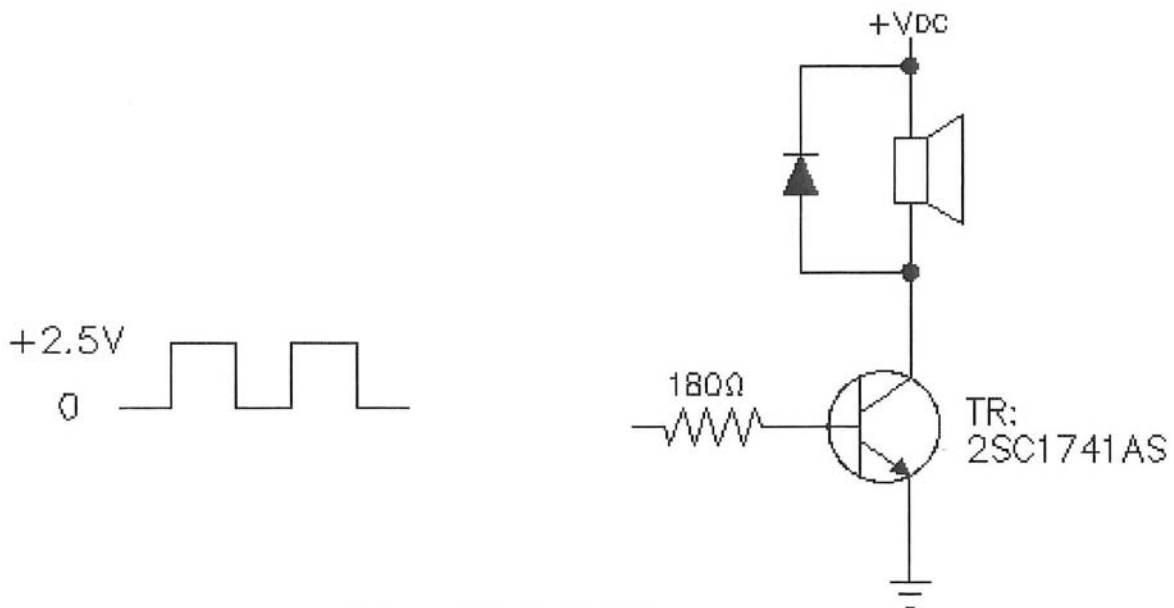



**Specifications**

Rated voltage	5 Vo-p	
Operating voltage	4.0 - 8.0 Vo-p	
Mean current	40 mA max.	
Coil resistance	47 ±7 Ω	Applying rated voltage, 2400 Hz square wave, ½ duty
Sound output	Min. 85 (Typical 94) dBA	Distance at 10cm (A-weight free air). Applying rated voltage of 2400 Hz, square wave, ½ duty.
Rated frequency	2,400 Hz	
Operating temperature	-30 ~ +70° C	
Storage temperature	-40 ~ +85° C	
Dimensions	ø12 x H9 mm	See attached drawing
Weight	1.6 g	
Material	PPS (Black)	
Terminal	SMD type (Au Plating)	See attached drawing
RoHS	yes	

**Frequency Response Curve**


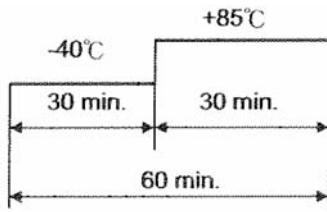
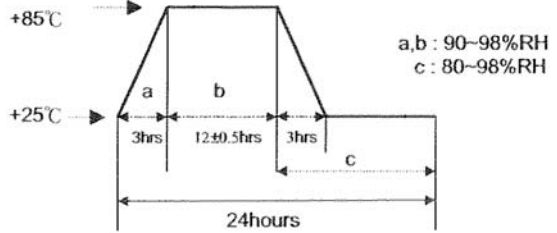
**Appearance Drawing**

 Tolerance:  $\pm 0.5$ 

**Measurement Method**


**Mechanical Characteristics**

Item	Test Condition	Evaluation Standard
Solderability	Lead terminals are immersed in a solder bath of $+270 \pm 5^{\circ}\text{C}$ for $3 \pm 1$ seconds.	95% min. of lead terminals should be covered with fresh solder.
Soldering Heat Resistance	Lead terminals are immersed in solder bath of $+260 \pm 5^{\circ}\text{C}$ for $3 \pm 1$ seconds.	No in interference in operation.
Terminal Mechanical Strength	Lead pads should be soldered onto the PC Board and then the force of 9.8 N (1.0 kg) should be applied behind the part for 10 seconds.	No damage or cutting off.
Vibration	The buzzer will be measured after applying a vibration amplitude of 1.5 mm with 10 to 55 Hz band of vibration frequency to each of the 3 perpendicular directions for 2 hours	After the test, the part should meet specifications without any damage to the appearance and the SPL should be within $\pm 10$ dBA of the initial measurement.
Drop Test	The part should be dropped from a height of 75 cm onto a 40 mm thick wooden board 3 times in 3 axis (X, Y, Z) for a total of 9 drops.	

**Environment Test**

Item	Test Condition	Evaluation Standard
High temp. test	The part will be subjected to $+85^{\circ}\text{C}$ for 96 hours.	
Low temp. test	The part will be subjected to $-40^{\circ}\text{C}$ for 96 hours	
Thermal shock	The part will be subjected to 10 cycles. One cycle will consist of: <div style="text-align: center;">  </div>	
Temp./Humidity cycle	The part shall be subjected to 10 cycles. One cycle should last 24 hours and will consist of: <div style="text-align: center;">  </div>	After the test, the part should meet specifications without any damage to the appearance or performance except SPL. After 4 hours at $25^{\circ}\text{C}$ , the SPL should be 80 dBA or more.

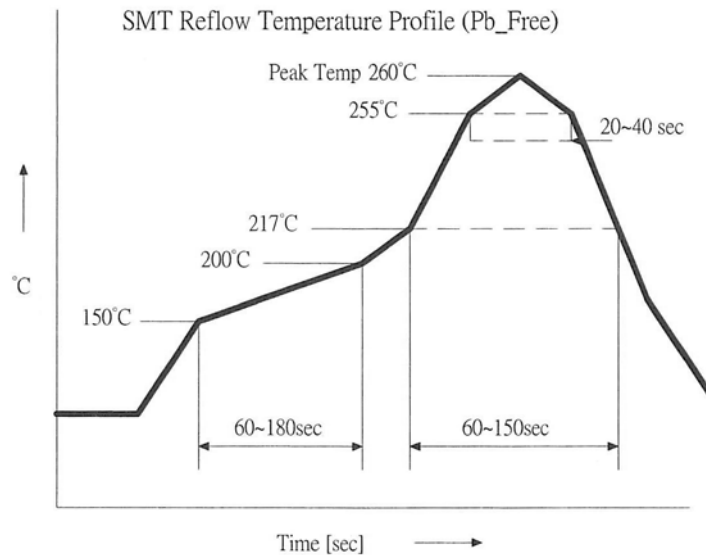
### Reliability Tests

Item	Test Condition	Evaluation Standard
Operating (Life Test)	1. Continuous life test: The part will be subjected to 72 hours at 55°C with 5 V, 2400 Hz applied.  2. Intermittent life test: A duty cycle of 1 minute on, 1 minute off, a minimum of 10,000 times at room temp. (+25 ±10°C) with 5 V, 2400 Hz applied.	After the test, the part should meet specifications without any damage to the appearance or performance except SPL. After 4 hours at 25°C, the SPL should be 80 dBA or more.

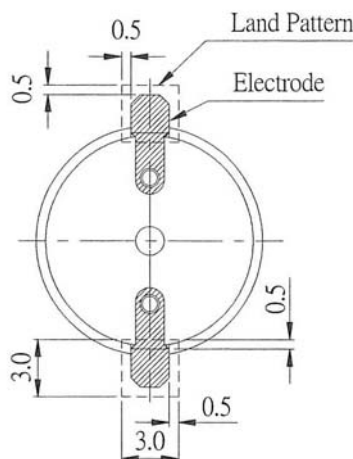
### Test Conditions

Standard Test Condition	a) Temperature: +5 ~ +35°C	b) Humidity: 45 - 85%	c) Pressure: 860 - 1060 mbar
Judgement Test Condition	a) Temperature: +25±2°C	b) Humidity: 60 - 70%	c) Pressure: 860 - 1060 mbar

### Recommended Temperature Profile for Reflow Oven

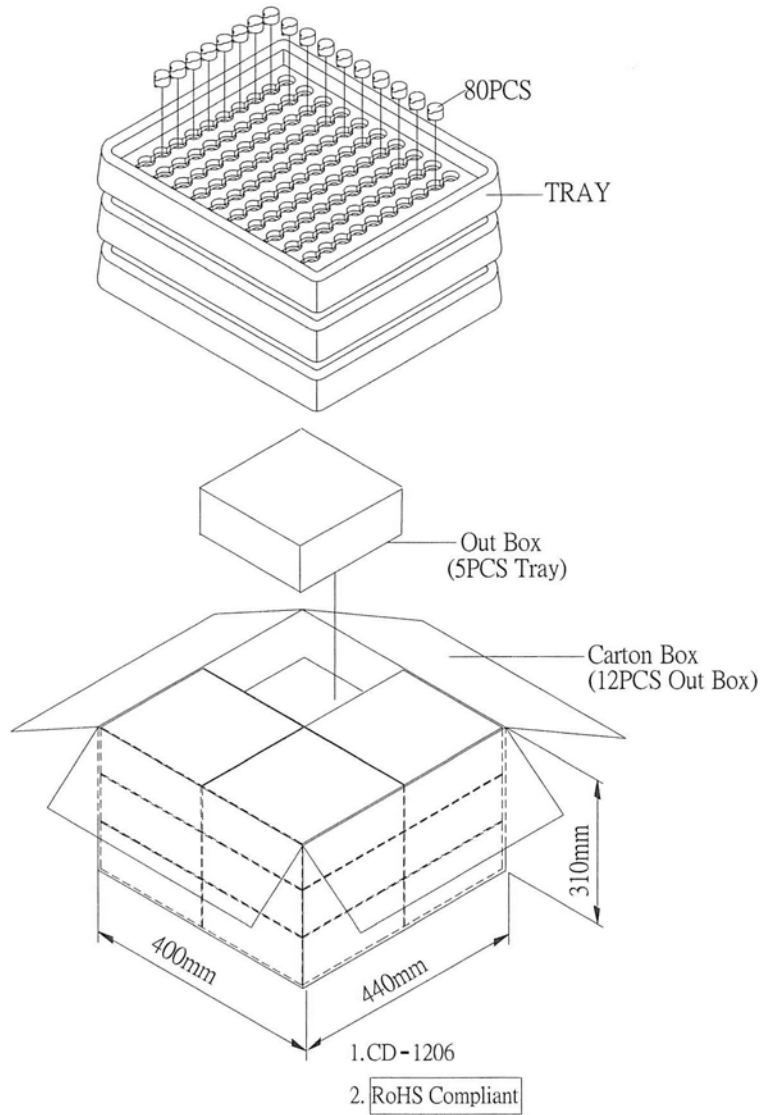


### Recommended Land Pattern





**Packaging**



TRAY	184mmx184mmx24mm	8x10PCS=80PCS
Out Box	200mmx190mmx100mm	5LAYERx80PCS=400PCS
Carton Box	440mmx400mmx310mm	400PCSx12=4800PCS