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# Component Specification

Product : Piezo Buzzer  
Part Number : CA-P090919A-034065  
Drawing No : DRW11057A

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## 1) General


This product specification is applied to our standard the magnetic transducer in SMD package. Please contact us for customer specific solutions.

## 2) Electrical & Acoustical Specifications

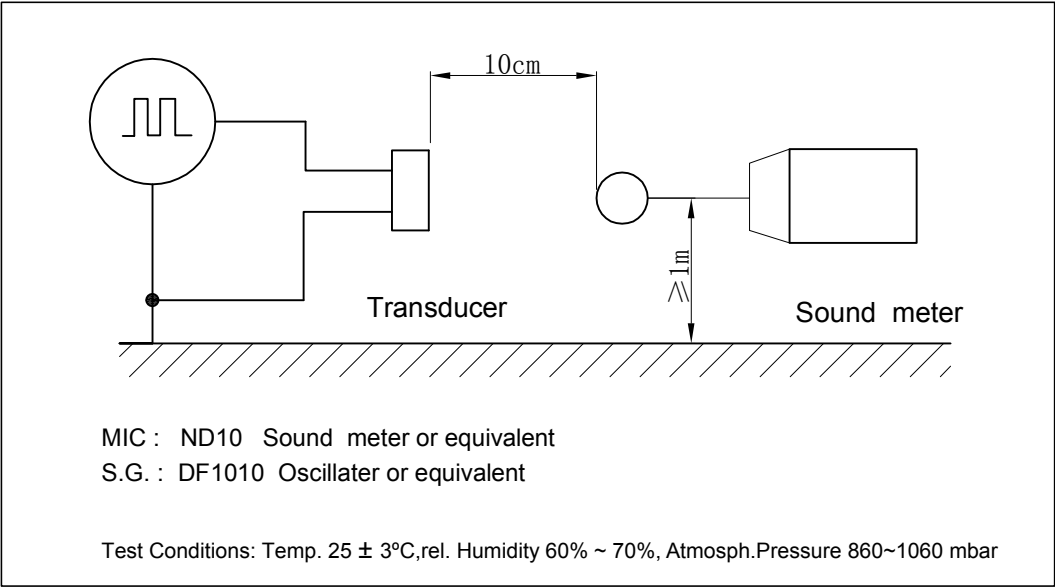
	Type	Specification
1	Rated Voltage ( Square Wave )	3 (5)* V <sub>p-p</sub>
2	Operating Voltage	1-25 V <sub>p-p</sub>
3	Rated Current ( Max )	1 mA
4	Resonance Frequency	4000 Hz
5	Min. Sound Pressure Level	65 ( 73 )* dB
6	Capacitance at 120Hz	12000 ± 30%
7	Operating Temperature Range	-30+70°C
8	Store Temperature Range	-40+85°C
9	Weight	0.2g
10	Dimension	9.0x9.0 mm
11	Housing Material	LCP
12	Connection	SMD

\* Value Applying at Rated Voltage ( resonance frequency )  
The increase of rated voltage to 5 V<sub>pp</sub> leads to aprox. 73dB SPL.

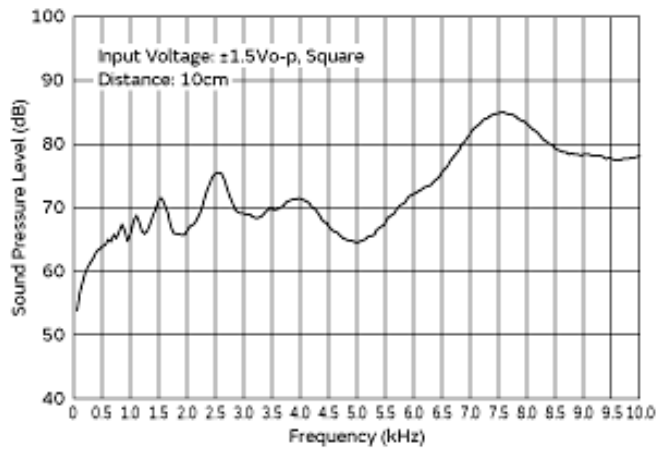
1 . 0	15/09/01	Production release	L. Hua	T. Feng	G. Schubert
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3) Test Circuit



4. Frequency Response Curve

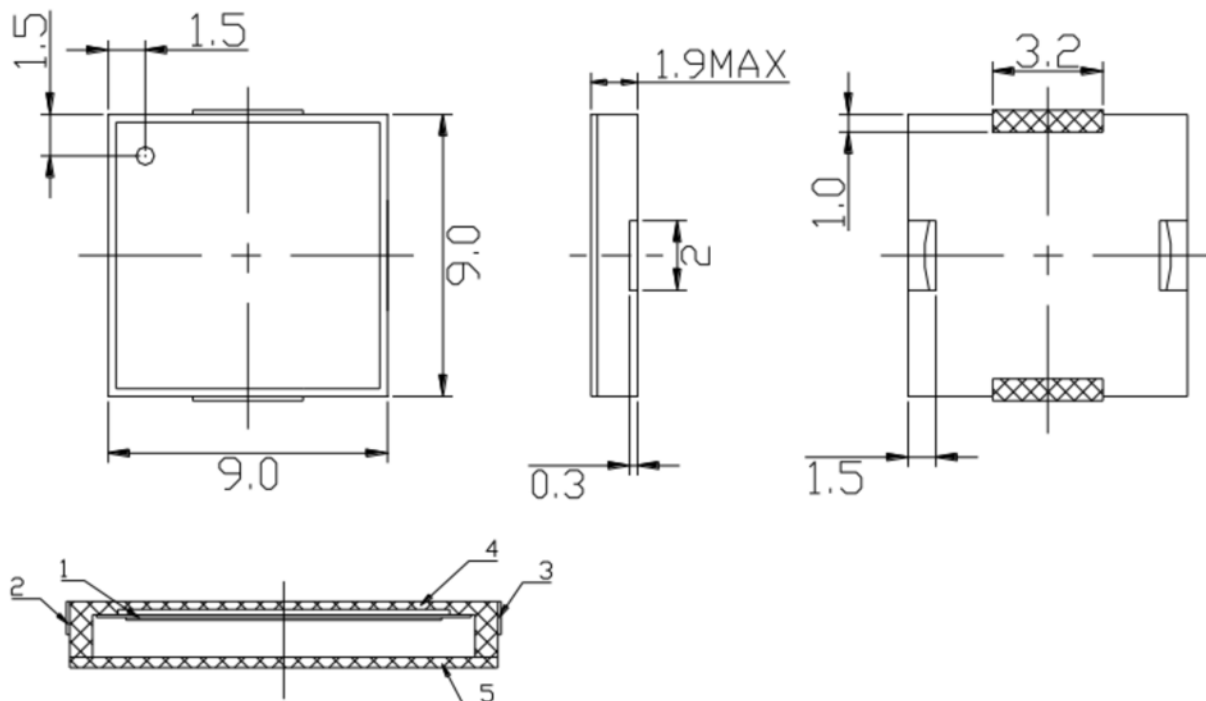


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## 5) Dimensions & Structure


Unless otherwise specified, tolerance:  $\pm 0.5$  (unit:mm)



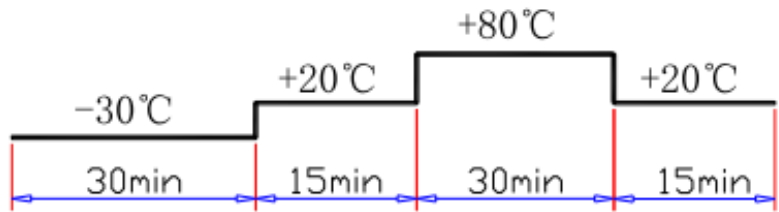
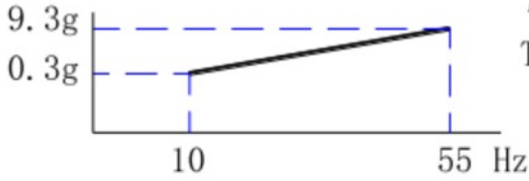
- 1) All parts meet ROHS.  
2) Reflow solder allowed and wash not allowed.

5	Cover	1	LCP
4	Housing	1	LCP
3	Pin	1	Brass (Dsn)
2	Pin	1	Brass (Dsn)
1	Piezo element	1	Nickel
No.	Part Name	QTY	Material


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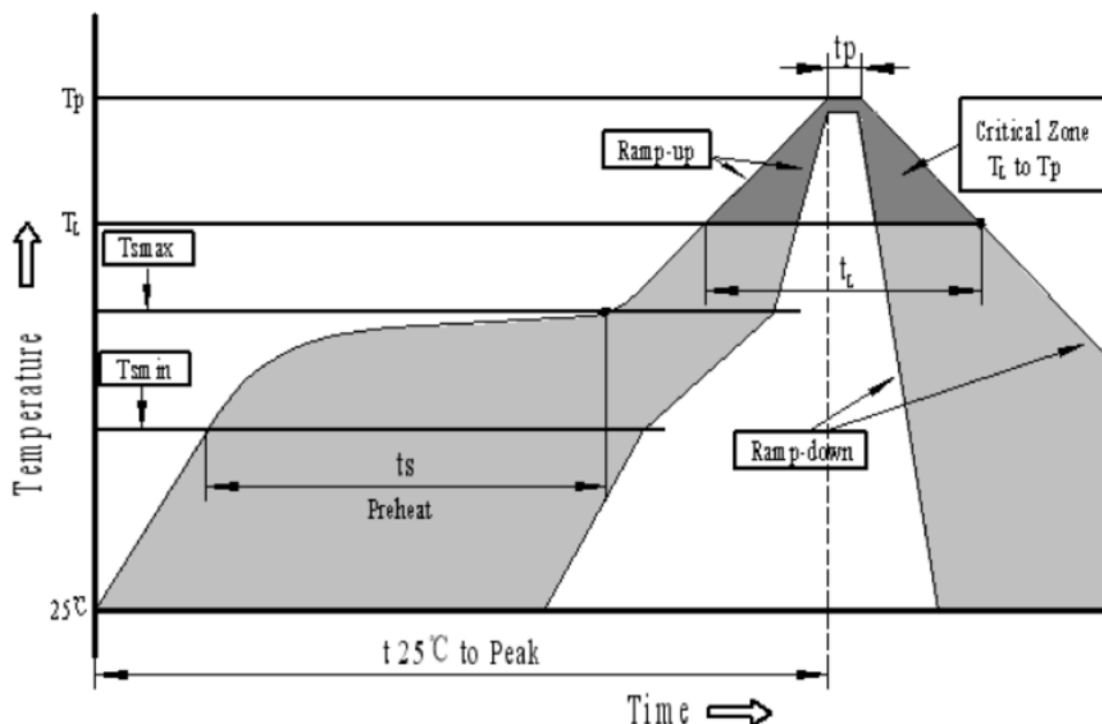
## 6) Reliability Test

No	Items	Specification
1	Storage in High temp.	Storage in $+85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ test box for 240 hours, then expose to the room temperature for 2 hours without applying power.
2	Storage in Lower temp.	Storage in $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ test box for 240 hours then expose to the room temperature for 2 hours without applying power.
3	Storage in Humidity	Storage in $+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 90-95%RH test box for 96 hours, then expose to the room temperature for 2 hours without applying power.
4	Temperature Cycle	<p>Make this test for 5 cycle without applying power ,then expose to the room temperature for 2 hours.</p> 
5	Vibration Test	<p>Make this test for the directions of X,Y,Z for 2 hours each ( total 6 hours)</p>  <p>Amplitude: 1.5mm Time : 1min/axis</p>
6	Drop test	Free drop a unit from the height 100cm to the surface of 10mm thich board, three directions ( X,Y,Z )
7	Solderability test	Soldering temp.: $260 \pm 5^{\circ}\text{C}$ Heat applying time: $3 \pm 0.5\text{sec.}$
<p><b>PASS CRITERION:</b> After these tests, the change of S.P.L. Shall be within <math>\pm 5\text{dB}</math></p>		

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## 7. Reflow Soldering

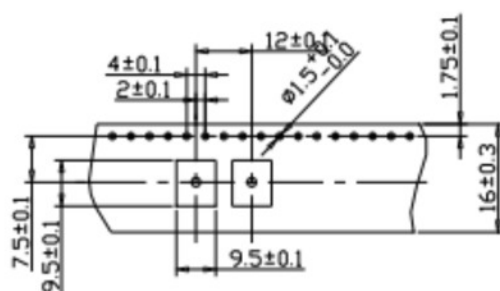


Profile Feature	Pb-Free Assembly
Average-up rate (TL to TP )	3°C/second max.
Preheat	
- Temperature Min. (T <sub>smin</sub> )	150°C
- Temperature Min. (T <sub>smax</sub> )	180°C
- Temperature Min. (t <sub>s</sub> )	60120 seconds
T <sub>smax</sub> to TL	
- Ramp-up Rate	3 seconds max.
Time maintained above:	
-Temperature (TL)	230°C
- Time (TL)	40 seconds max.
Peak temperature ( T <sub>p</sub> )	260°C+0/-5°C
Time within 5°C of actual Peak temperature (t <sub>p</sub> )	3 seconds max.
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	4.5 minutes max.

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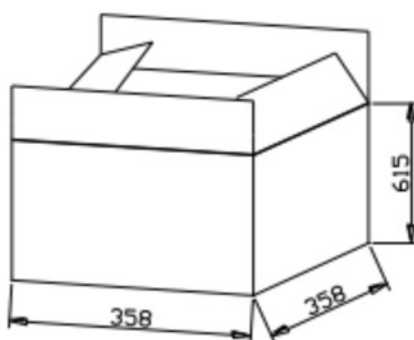
## 8) Packing



2000PCS/SP00L




5SP00L/BOX



2SMALL BOX/BIG BOX  
20000PCS/BIG BOX

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9) Revision

Rev. No	Date	Page	Description	Sign
10	15/09/01	all	Production release	Wang.Xue

1 . 0	15/09/01	Production release	L. Hua	T. Feng	G. Schubert
Revision	Date	Notes	Drawn by	Checked by	Approved by