



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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**Part No: CDMG15008-03A**

**Date: 12/06/2006**

**Unit: mm**

**Description: micro dynamic speaker**

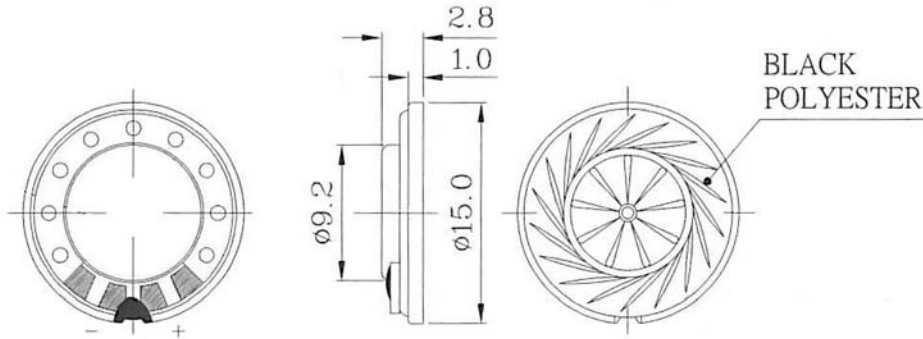
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### Specifications

Dimensions	ø15.0 x 2.8 mm		
Impedance	8 Ohm ± 15%	at	1.5 KHz 1 V
Resonant frequency	900 Hz ± 20%	at	1 V
Sound pressure level	92 dB/w ± 3 dB	0.3 w 10 cm at 1.0K, 1.2K, 1.5K, 2.0K Hz	
	88 dB/w ± 3 dB	0.1 w 0.1m at 1.0K, 1.2K, 1.5K, 2.0K Hz	
Response	Fo Hz ~ 20 KHz max.		
Distortion	10% max.	at 1.5 KHz 0.3W	
Input power	Nominal 0.3 W	Handling capacity	0.5 W
Operation	must be normal at program source 0.3 W		
Buzz, rattle, etc.	must be normal at sine wave 1.55 V		
Operating temp.	-20 ~ +85°C		
Weight	1.2 g		
Material	Metal		
RoHS	yes		

### Mechanical Drawing

Tolerance: ±0.2



The mylar will not exceed the metal frame when input is at the maximum power of 0.5W.





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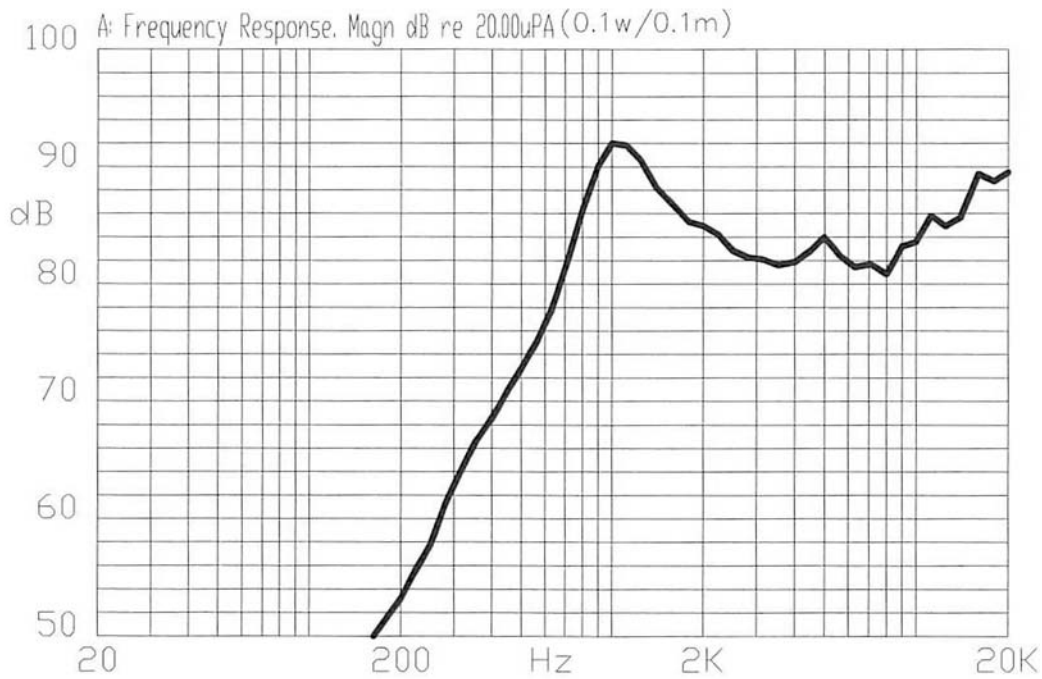
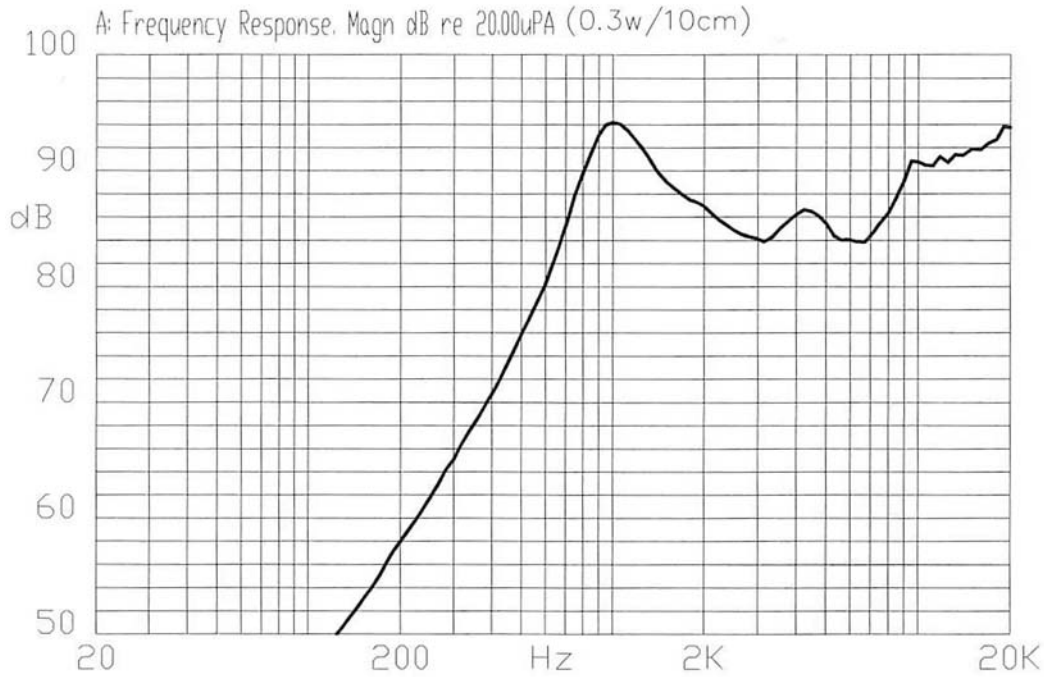
Description: micro dynamic speaker

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### Frequency Response Curve





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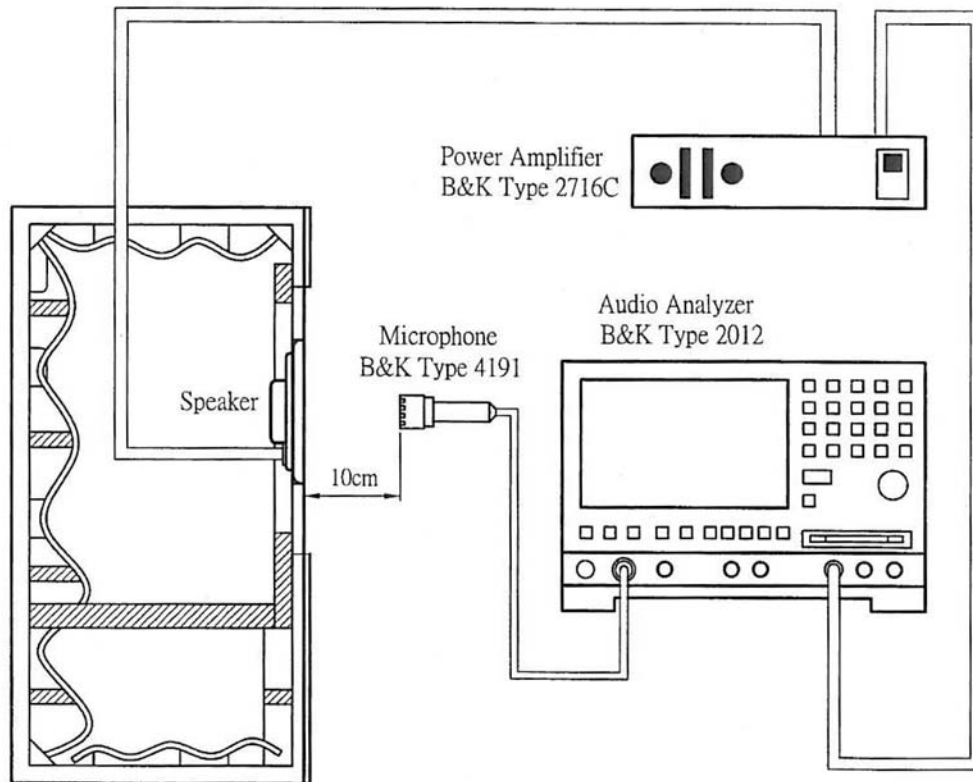
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### Measurement Circuit



JIS C5531  
940mm x 640mm x 1240mm



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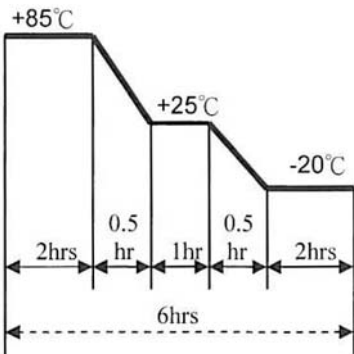
**Description: micro dynamic speaker**

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**Mechanical Characteristics**

Item	Test Condition	Evaluation Standard
Solderability (Connector Excepted)	Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in solder bath of +270 ±5°C for 3 ±0.5 seconds.	90% min. stripped wires will be wet with solder. (Except the edge of the terminal.)
Lead Wire Pull Strength	The pull force should be applied to double lead wire: Horizontal 3.0N (0.306kg) for 30 seconds Vertical 2.0N (0.204kg) for 30 seconds	No damage or cutting off.
Vibration	The speaker should 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.	No obstacle will be harmful to normal operation; damage, cracks, rust, and distortions.
Drop Test	The part will be dropped, contained inside a normal box, from a height of 75 cm onto a 40 mm thick wooden board 10 times.	Should not be audible at 1.55 V sine wave between Fo ~ 20 KHz.

**Environment Test**

Item	Test Condition	Evaluation Standard
High temp. test	After being placed in a chamber at 85°C for 8 hours.	The speaker will be measured after being placed at +25°C for 6 hours. No obstacle will be harmful to normal operation; damage, cracks, rust, and distortions. Should not be audible at 1.55 V sine wave between Fo ~ 20 KHz. The SPL should be within ±3dB when compared to the initial measurements.
Low temp. test	After being placed in a chamber at -20°C for 96 hours.	
Humidity test	After being placed in a chamber at +60°C and 90% relative humidity for 240 hours.	
Temp. cycle test	The part shall be subjected to 5 cycles. One cycle will consist of:  	



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**Date: 12/06/2006**

**Unit: mm**

**Description: micro dynamic speaker**

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## Reliability Test

Item	Test Condition	Evaluation Standard
Load Test	0.3 W white noise, applied for 24 hours, at room temperature.	The speaker will be measured after being placed at +25°C for 1 hours. No obstacle will be harmful to normal operation; damage, cracks, rust, and distortions. Should not be audible at 1.55 V sine wave between Fo ~ 20 KHz. The SPL should be within ±3dB when compared to the initial measurements.

## 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

## Packaging

