



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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SPECIFICATION FOR APPROVAL

Description : Micro Dynamic Speaker
Part No. : CDMG15008-03
Customer's Model No. : _____
Specification No. : PKD-2210
Number Of The Edition : 1.2

| CUSTOMER'S APPROVED SIGNATURE | | |
|-------------------------------|--|--|
| | | |



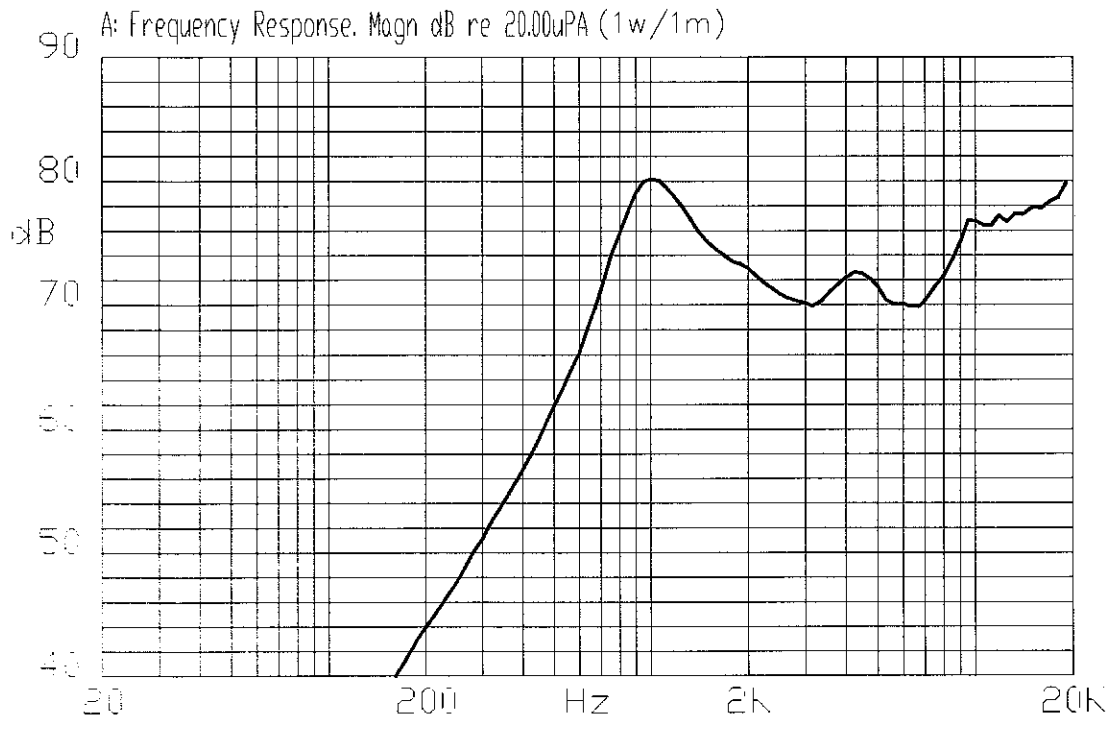
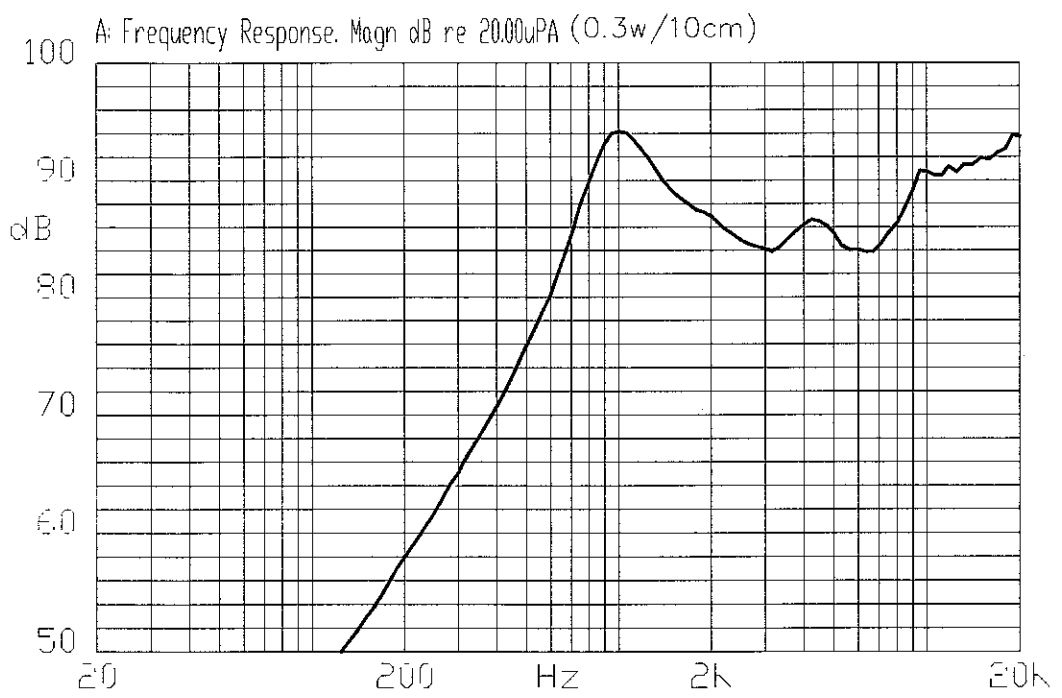
A. SCOPE

This specification applies speaker, CDMG15008-03

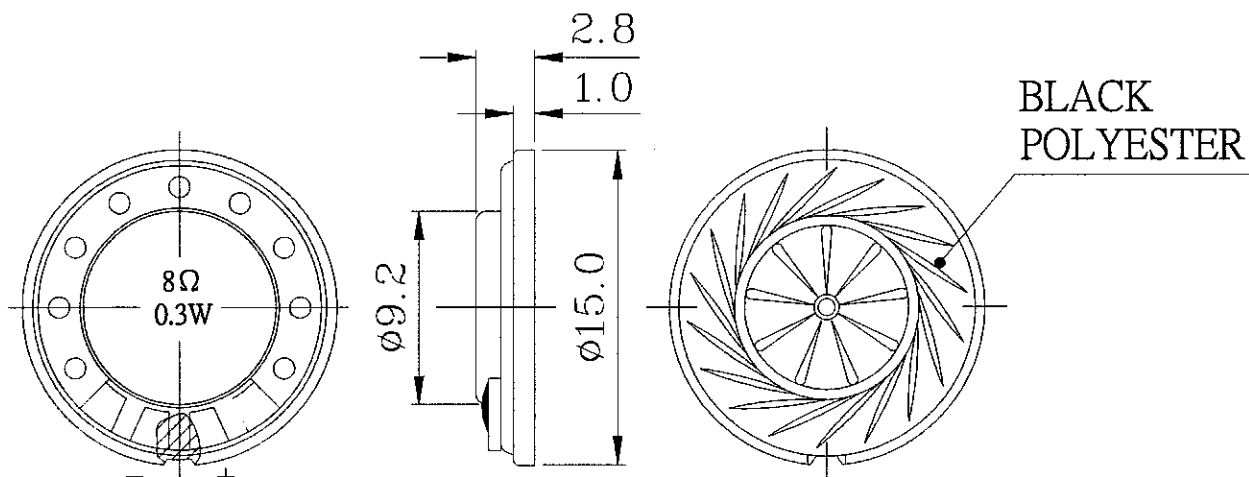
B. SPECIFICATION

| No. | Item | Symbol | Unit | Specification | Condition |
|-----|-------------------------------------|----------|-------|--|--|
| 1 | Dimension | | mm | ϕ 15.0 x 2.8 | |
| 2 | Power Rating | | W | Rated. 0.3 / MAX. 0.5 | |
| 3 | Impedance | Ω | ohm | $8 \pm 15\%$ | At 1.2kHz 1.0V |
| 4 | Resonance Frequency | Fo | Hz | $900 \pm 20\%$ | At 1.0V |
| 5 | Output S.P.L. | | dB | $91 \pm 3\text{dB}(0.3\text{w}/10\text{cm})$ $77 \pm 3\text{dB}(1\text{w}/1\text{m})$ | At 1.0k,1.2k,1.5k,2.0kHz (Average figures) |
| 6 | Frequency Rang | | Hz | Fo--20K | |
| 7 | Distortion | | % | 10% Max. | At 1.2kHz , 0.3W |
| 8 | Voice Coil | | mm | ----- | |
| 9 | Magnet | | mm | | |
| 10 | Flux Density | | Gauss | ----- | |
| 11 | Operating temp. | | °C | - 20 ~ +85 | |
| 12 | Buzz & Rattle | | | | Not be audible at 1.55V sine wave between Fo ~ 20KHz |
| 13 | Weight | | g | 1.2 | |
| 14 | Material | | | Metal | |
| 15 | Environmental Protection Regulation | | | ROHS | |

C. TYPICAL FREQUENCY RESPONSE CURVE



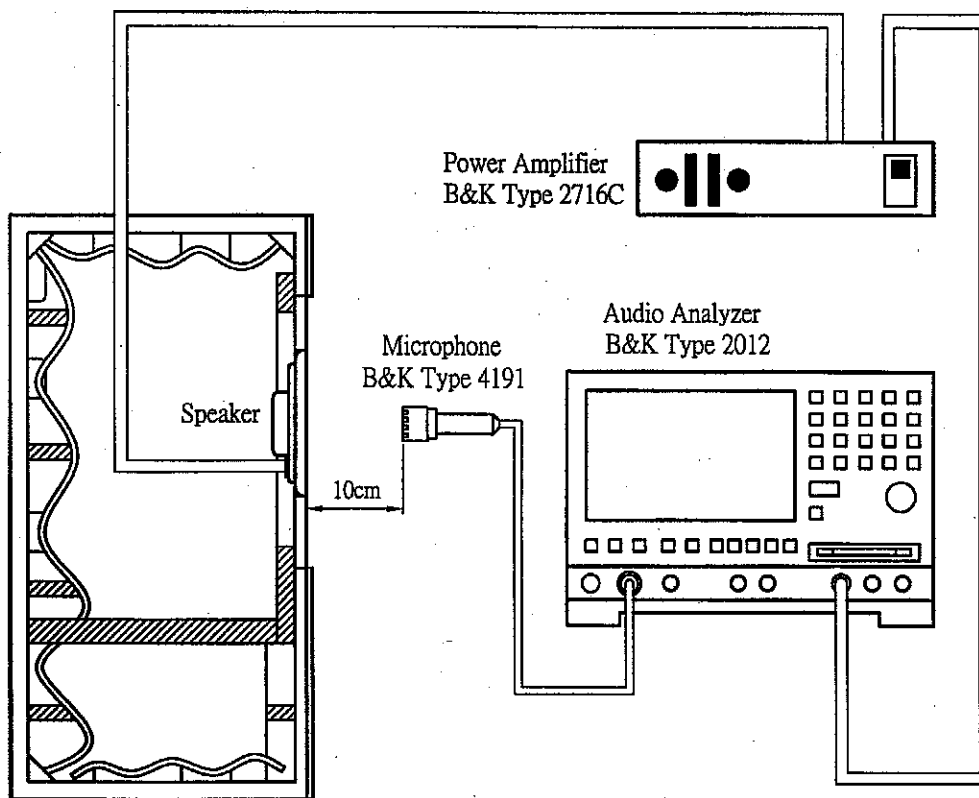
D. APPEARANCE DRAWING



Tol : ± 0.2

Unit: mm

E. MEASUREMENT CIRCUIT



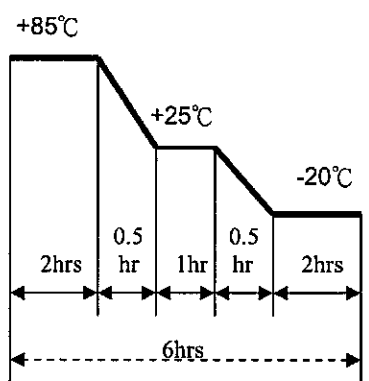
JIS C5531

940mm x 640mm x 1240mm

F. MECHANICAL CHARACTERISTICS

| No. | Item | Test condition | Evaluation standard |
|-----|-------------------|--|---|
| 1 | Terminal strength | Applied 1.0kg load to the terminal for 30 sec. | No damage and cutting off. |
| 2 | Vibration Test | Speaker shall be measured after being applied vibration of amplitude of 1.52mm with 10 to 55Hz band of vibration frequency to each of 3 per-pendicular directions for 2 hours. | No obstacle to be harmful to normal operation; damages, cracks, rusts and distortions. Should not be audible at 1.55V sine wave between Fo ~ 20KHz |
| 3 | Drop Test | Drop the speakers contained in normal box onto the board 40mm thick 10 times from the height of 75cm | |

G. ENVIRONMENTAL TEST

| No. | Item | Test conditions | Evaluation standard |
|-----|------------------|---|--|
| 1 | High temp. Test | After being placed in a chamber at +85°C for 8 hours | Being placed for 6 hours at +25°C, speaker shall be measured. No obstacle to be harmful to normal operation; damages, cracks, rusts, etc. Should not be audible at 1.55V sine wave between Fo ~ 20KHz. Fo should meet initial one. S.P.L. deviation of unit should be within ±3dB |
| 2 | Low temp. Test | After being placed in a chamber at -20°C for 96 hours. | |
| 3 | Humidity test | After being placed in a chamber at +60°C and 90% RH relative humidity for 240 hours. | |
| 4 | Temp. cycle test | The part shall be subjected to 5 cycles. One cycle shall consist of:  | |

H. RELIABILITY TEST

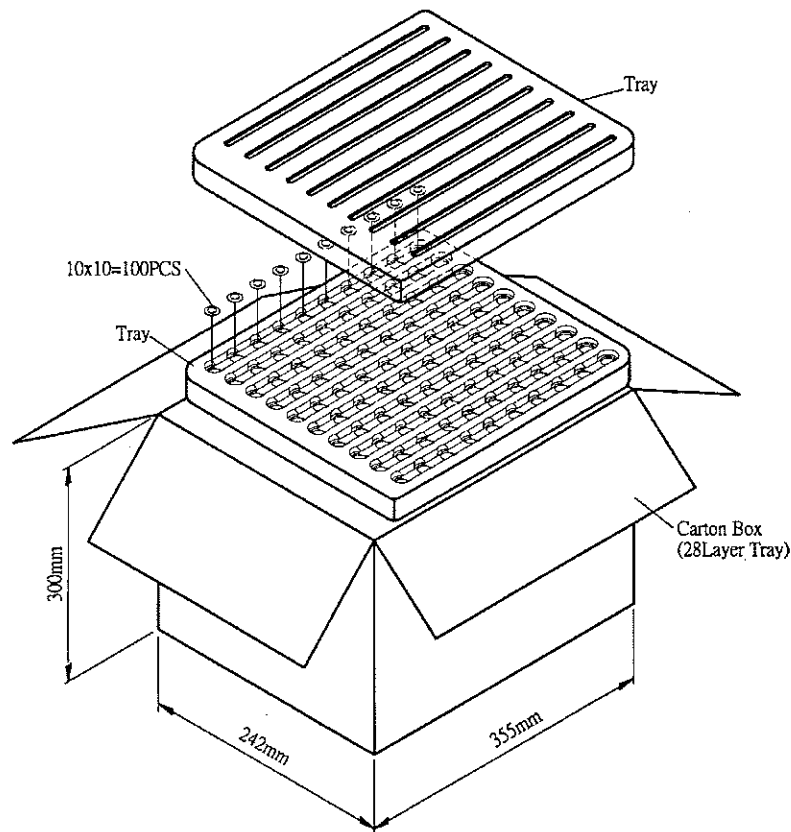
| No. | Item | Test conditions | Evaluation standard |
|-----|-----------|--|---|
| 1 | Load test | 0.3W white noise is applied for 24 hours | No obstacle to be harmful to normal operation; damages, cracks, rusts, etc. Should not be audible at 1.55V sine wave between $F_o \sim 20\text{KHz}$. F_o should meet initial one. S.P.L. deviation of unit should be within $\pm 3\text{dB}$ |

TEST CONDITION.

Standard Test Condition : a) Temperature : $+5 \sim +35^\circ\text{C}$ b) Humidity : 45-85% c) Pressure : 860-1060mbar

Judgement Test Condition a) Temperature : $+25 \pm 2^\circ\text{C}$ b) Humidity : 60-70% c) Pressure : 860-1060mbar

I. PACKING STANDARD



| | | |
|------------|-------------------|-------------------|
| Tray | 345mmx235mmx20mm | 1x100PCS=100PCS |
| Carton Box | 355mmx242mmx300mm | 100PCSx28=2800PCS |