

The 93009 midbass driver delivers robust sound to a variety of audio systems and applications. Use this speaker in high-power systems with compact enclosures for the best results.

- Midbass speaker
- 3.3" (83 mm) basket diameter
- 20 watt, 8 ohm, 84 dB SPL
- 0.8" aluminum voice coil, polyimide film former
- Neodymium magnet, stamped steel basket
- Polypropylene cone, rubber surround

MISCO engineers test and analyze the performance of these speakers using the world's most sophisticated loudspeaker measurement systems including the Klippel Analyzer and the Klippel QC, which are used to validate final design.

Oaktron by MISCO is the premium line of high performance, ready-to-ship transducers for a wide variety of applications including high fidelity, musical instrument, automotive and many more. From elegantly simple to highly specialized designs for unique and demanding applications, there is an Oaktron loudspeaker perfectly suited for your needs.



#### Primary Specifications

|  |              |
|--|--------------|
| <b>Size, Nominal (inch &amp; mm)</b>         | 3" (77 mm)   |
| <b>Rated Impedance (<math>\Omega</math>)</b> | 8            |
| <b>Continuous Power (W)</b>                  | 20           |
| <b>Sensitivity (dB SPL) <sup>1</sup></b>     | 84           |
| <b>Frequency Range (Hz)</b>                  | 125 - 20,000 |
| <b>Resonant Frequency (Fs) (Hz) +/- 15%</b>  | 155          |

### More Specifications

|   |   |
|---|---|
| <b>Application</b>                              | Casino Gaming, Home Audio, Outdoor ,<br>Pro Sound |
| <b>RoHS Compliant</b>                           | Yes   |
| <b>DC Resistance (Re) (<math>\Omega</math>)</b> | 6.1   |
| <b>Program Power (W)</b>                        | 40  |
| <b>Continuous Power (W)</b>                     | 20  |

### Small Signal Parameters

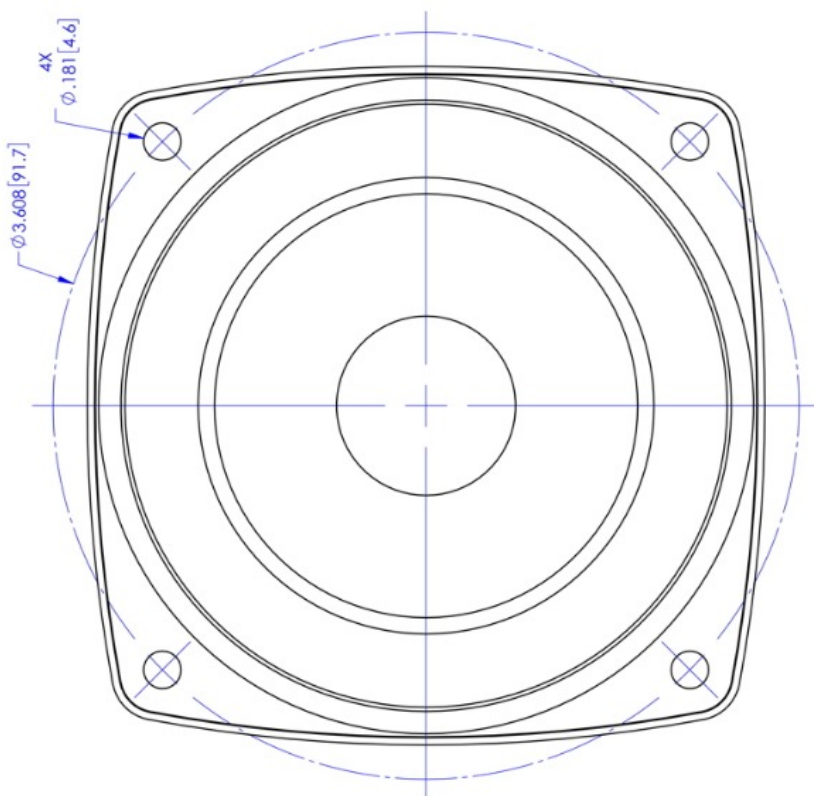
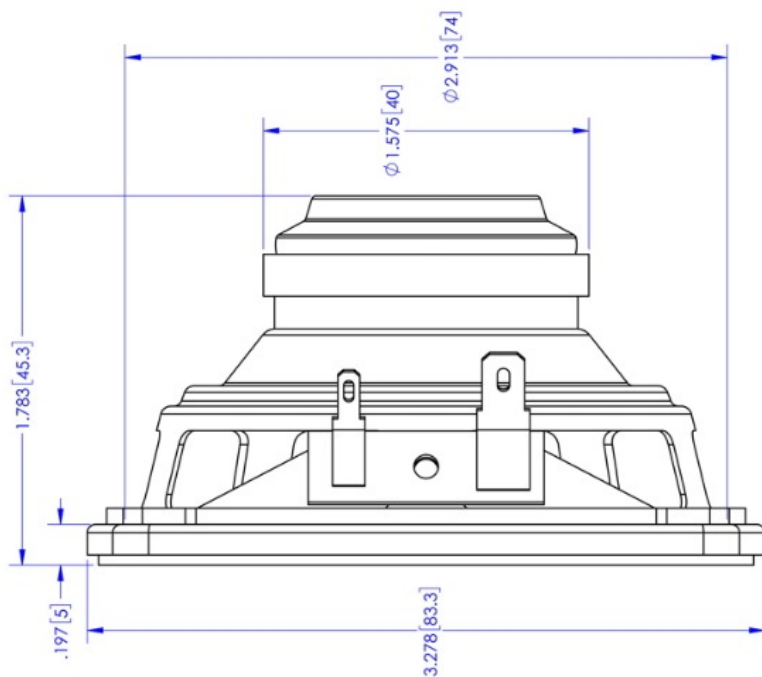
|  |      |
|--|------|
| <b>Nominal Impedance (Z) (<math>\Omega</math>)</b>     | 8    |
| <b>DC Resistance (Re) (<math>\Omega</math>)</b>        | 6.1  |
| <b>Voice Coil Inductance (Le) (mH)</b>                 | 0.18 |
| <b>Resonant Frequency (Fs) (Hz) +/- 15%</b>            | 155  |
| <b>Mechanical Q Factor (Qms)</b>                       | 4.69 |
| <b>Electrical Q Factor (Qes)</b>                       | 1.73 |
| <b>Total Q Factor (Qts)</b>                            | 1.26 |
| <b>Moving Mass (Mms) (gm)</b>                          | 3.5  |
| <b>Suspension Compliance (Cms) (mm/N)</b>              | 0.28 |
| <b>Mechanical Resistance (Rms) (kg/s)</b>              | 0.76 |
| <b>Surface Area of Diaphragm (Sd) (cm<sup>2</sup>)</b> | 33.2 |
| <b>Compliance Equivalent Volume (Vas) (L)</b>          | 0.44 |
| <b>Maximum Linear Excursion (Xmax) (mm)</b>            | 2.5  |
| <b>Coil Winding Height (mm)</b>                        | 8.9  |
| <b>Magnetic Gap Height (mm)</b>                        | 4.0  |
| <b>Motor Force Factor (BL) (T•M)</b>                   | 3.5  |
| <b>Efficiency (<math>\eta_0</math>) (%)</b>            | 0.10 |
| <b>Efficiency Bandwidth Product (EBP) (Fs/Qes)</b>     | 92.1 |

### Material Descriptions

|                                   |   |
|-----------------------------------|---|
| <b>Basket Type</b>                | Stamped steel with black powder<br>coat |
| <b>Terminal Size (mm)</b>         | 5.7 x 0.5 mm, 3.2 x 0.5 mm              |
| <b>Voice Coil Diameter (mm)</b>   | 19.1                                    |
| <b>Voice Coil Wire Material</b>   | Aluminum                                |
| <b>Voice Coil Former Material</b> | Polyimide film (Kapton)                 |
| <b>Magnet Material</b>            | Neodymium                               |
| <b>Magnet Weight (g)</b>          | 30                                      |
| <b>Cone Body Material</b>         | Polypropylene                           |

|                               |               |
|-------------------------------|---------------|
| <b>Cone Surround Material</b> | Molded rubber |
| <b>Spider Material</b>        | Cloth         |
| <b>Dust Cap Material</b>      | Polypropylene |
| <b>Net Weight (kg)</b>        | 0.17          |





MODEL: 83-WB08-01 P/N: 93009

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