

2 INCH (50 MM) WIDE RANGE SPEAKER, SHIELDED

PART #: 93002

A football-shaped wide-range speaker with a shielded magnet—ideal for voice communications and signal/alarm systems like medical devices, gaming cabinets, and measurement hardware requiring a high-reliability audio solution. This 8 ohm, 2" driver includes a 0.8 Oz ferrite magnet, a paper composite cone, and a treated cloth surround.

- Wide range speaker
- 2 inch (50 mm) steel basket diameter
- 3 watts, 8 ohm, 83 dB SPL
- 0.8 Oz shielded ferrite magnet
- Paper cone, treated cloth surround

Oaktron by MISCO is a premium line of high-performance, ready-toship transducers and drivers for various applications, including high fidelity, arcade and casino games, automotive, aerospace, and many more. From elegantly simple to highly specialized designs for unique and demanding applications, an Oaktron loudspeaker perfectly suits your needs.

MISCO engineers use the world's most sophisticated loudspeaker measurement systems, including the Klippel Analyzer, to maximize and validate the speaker's design and the Klippel QC module to ensure perfect unit-to-unit consistency and reliability.



Primary Specifications

| Size, Nominal (inch & mm) | 2" (50 mm) |
|--------------------------------------|--------------|
| Rated Impedance (Ω) | 8 |
| Continuous Power (W) | 3 |
| Sensitivity (dB SPL) ¹ | 83 |
| Frequency Range (Hz) | 90 - 20, 000 |
| Resonant Frequency (Fs) (Hz) +/- 15% | 187 |





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More Specifications

| Application | Arcade Gaming, Casino Gaming, Medical, Voice Communications |
|---------------------------------|--|
| RoHS Compliant | Yes |
| DC Resistance (Re) (Ω) | 7.6 |
| Program Power (W) | 5 |
| Continuous Power (W) | 3 |
| | |

Small Signal Parameters

| Nominal Impedance (Z) (Ω) | 8 |
|---|-------|
| DC Resistance (Re) (Ω) | 7.6 |
| Voice Coil Inductance (Le) (mH) | 0.15 |
| Resonant Frequency (Fs) (Hz) +/- 15% | 187 |
| Mechanical Q Factor (Qms) | 3.93 |
| Electrical Q Factor (Qes) | 2.19 |
| Total Q Factor (Qts) | 1.41 |
| Moving Mass (Mms) (gm) | 0.93 |
| Suspension Compliance (Cms) (mm/N) | 0.59 |
| Mechanical Resistance (Rms) (kg/s) | 0.32 |
| Surface Area of Diaphragm (Sd) (cm²) | 12.57 |
| Compliance Equivalent Volume (Vas) (L) | 0.13 |
| Motor Force Factor (BL) (T•M) | 2.08 |
| Efficiency (η₀) (%) | 0.06 |
| Efficiency Bandwidth Product (EBP) (Fs/Qes) | 85.23 |

Material Descriptions

| Basket Type | Stamped Steel |
|--------------------------|-------------------|
| Terminal Size (mm) | 2.8 X 0.5 |
| Voice Coil Wire Material | Copper clad steel |
| Magnet Material | Ferrite |
| Magnet Weight (g) | 21.55 |
| Cone Body Material | Paper |
| Cone Surround Material | Treated cloth |
| Spider Material | Cotton |
| Dust Cap Material | Paper |
| Net Weight (kg) | 0.11 |





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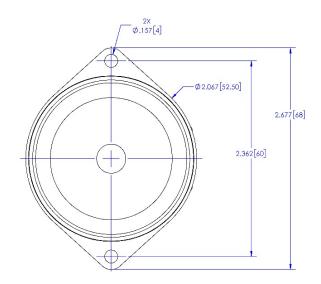


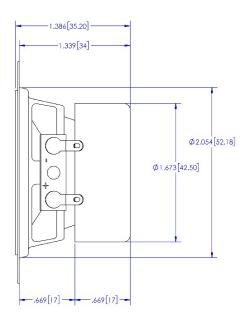


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OAKTRON

MODEL: 50-WB08-01

P/N: 93002

REV. A