

From voice communication systems, to kiosks, to gaming applications, the 93012 wide range speaker fits in and gets to work, all at an affordable cost. A high-energy neodymium ring magnet paired with a polypropylene cone, a rugged steel frame, and quick connect terminals allow for plug-in connectivity, creating sound that your listeners can rely on. If you're looking for a versatile, rectangular driver to fill a variety of applications indoors and outdoors, then try out the 93012.

- Wide range speaker
- 1.6" x 2.8" (41 mm x 71 mm) basket diameter
- 3 watts, 8 ohms, 83 dB SPL
- 0.5" copper voice coil, Kapton former
- Neodymium magnet, stamped steel frame
- Polypropylene cone, rubber surround

Oaktron by MISCO is a premium line of high performance, ready-to-ship transducers and drivers for a wide variety of 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, there is an Oaktron loudspeaker perfectly suited for 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, as well as the Klippel QC module to ensure perfect unit to unit consistency and reliability.



Primary Specifications

Size, Nominal (inch & mm)	1" Oval (25 mm)
Rated Impedance (Ω)	8
Continuous Power (W)	3
Sensitivity (dB SPL) ¹	83
Frequency Range (Hz)	150 - 19, 000
Resonant Frequency (Fs) (Hz) +/- 15%	211

More Specifications

Application	Arcade Gaming, Casino Gaming, Drive-Thru / Kiosk, Outdoor , Voice Communications
RoHS Compliant	Yes
DC Resistance (Re) (Ω)	7.5
Program Power (W)	5
Continuous Power (W)	3

Small Signal Parameters

Nominal Impedance (Z) (Ω)	8
DC Resistance (Re) (Ω)	7.5
Voice Coil Inductance (Le) (mH)	0.09
Resonant Frequency (Fs) (Hz) +/- 15%	211
Mechanical Q Factor (Qms)	3.78
Electrical Q Factor (Qes)	1.35
Total Q Factor (Qts)	0.99
Moving Mass (Mms) (gm)	1.2
Suspension Compliance (Cms) (mm/N)	0.49
Mechanical Resistance (Rms) (kg/s)	0.41
Surface Area of Diaphragm (Sd) (cm²)	18.3
Compliance Equivalent Volume (Vas) (L)	0.23
Maximum Linear Excursion (Xmax) (mm)	0.5
Coil Winding Height (mm)	2.9
Magnetic Gap Height (mm)	2
Motor Force Factor (BL) (T•M)	2.9
Efficiency (η_0) (%)	0.16
Efficiency Bandwidth Product (EBP) (Fs/Qes)	156.8

Material Descriptions

Basket Type	Stamped steel
Terminal Size (mm)	2.8 mm x 0.5 mm
Voice Coil Diameter (mm)	12.95
Voice Coil Wire Material	High temperature copper
Voice Coil Former Material	Kapton
Magnet Material	Neodymium
Cone Body Material	Polypropylene
Cone Surround Material	Natural rubber

Spider Material	Cotton
Dust Cap Material	Polypropylene
Net Weight (kg)	0.15



Frequency & Impedance Response



