

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

<b>Size, Nominal (inch &amp; mm)</b>	1" Oval (25 mm)
<b>Rated Impedance (<math>\Omega</math>)</b>	8
<b>Continuous Power (W)</b>	3
<b>Sensitivity (dB SPL) <sup>1</sup></b>	83
<b>Frequency Range (Hz)</b>	150 - 19,000
<b>Resonant Frequency (Fs) (Hz) +/- 15%</b>	211

### More Specifications

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

### Small Signal Parameters

<b>Nominal Impedance (Z) (<math>\Omega</math>)</b>	8
<b>DC Resistance (Re) (<math>\Omega</math>)</b>	7.5
<b>Voice Coil Inductance (Le) (mH)</b>	0.09
<b>Resonant Frequency (Fs) (Hz) +/- 15%</b>	211
<b>Mechanical Q Factor (Qms)</b>	3.78
<b>Electrical Q Factor (Qes)</b>	1.35
<b>Total Q Factor (Qts)</b>	0.99
<b>Moving Mass (Mms) (gm)</b>	1.2
<b>Suspension Compliance (Cms) (mm/N)</b>	0.49
<b>Mechanical Resistance (Rms) (kg/s)</b>	0.41
<b>Surface Area of Diaphragm (Sd) (cm<sup>2</sup>)</b>	18.3
<b>Compliance Equivalent Volume (Vas) (L)</b>	0.23
<b>Maximum Linear Excursion (Xmax) (mm)</b>	0.5
<b>Coil Winding Height (mm)</b>	2.9
<b>Magnetic Gap Height (mm)</b>	2
<b>Motor Force Factor (BL) (T•M)</b>	2.9
<b>Efficiency (<math>\eta_0</math>) (%)</b>	0.16
<b>Efficiency Bandwidth Product (EBP) (Fs/Qes)</b>	156.8

### Material Descriptions

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

<b>Spider Material</b>	Cotton
<b>Dust Cap Material</b>	Polypropylene
<b>Net Weight (kg)</b>	0.15



