MODEL #: 305-SW04D-01

**12 INCH (305 MM) 4 OHM, DUAL MAGNET SUBWOOFER**

PART #: 93059

The 93059 12” subwoofer has a high-controlled suspension, a high tensile-strength spider, and 2” voice coil to ensure impressive bass performance and high-power handling in vented enclosures. A black steel frame, polypropylene cone, rubber surround, and dual ferrite magnet give this driver a professional look to match its design, while still outputting reliable and smooth bass to fit your listening needs.

- Subwoofer
- 12” (533 mm) basket diameter
- 150 watts, 4 ohms, 89 dB SPL
- 2" copper voice coil, Kapton former
- Dual ferrite magnet, stamped-steel basket
- 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)** | 12" (305 mm) |
| **Rated Impedance (Ω)** | 4 |
| **Continuous Power (W)** | 150 |
| **Sensitivity (dB SPL) [1]** | 89 |
| **Frequency Range (Hz)** | 20 - 200 |
| **Resonant Frequency (Fs) (Hz) +/- 15%** | 20 |


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## More Specifications

| | |
|---|---|
| **Application** | Auto / Motorcycle, High-End Audio and Home Theater |
| **RoHS Compliant** | Yes |
| **DC Resistance (Re) (Ω)** | 4.1 |
| **Program Power (W)** | 300 |
| **Continuous Power (W)** | 150 |

## Small Signal Parameters

| | |
|---|---|
| **Nominal Impedance (Z) (Ω)** | 4 |
| **DC Resistance (Re) (Ω)** | 4.1 |
| **Voice Coil Inductance (Le) (mH)** | 2.87 |
| **Resonant Frequency (Fs) (Hz) +/- 15%** | 20 |
| **Mechanical Q Factor (Qms)** | 5.91 |
| **Electrical Q Factor (Qes)** | 0.22 |
| **Total Q Factor (Qts)** | 0.21 |
| **Moving Mass (Mms) (gm)** | 106.7 |
| **Suspension Compliance (Cms) (mm/N)** | 0.58 |
| **Mechanical Resistance (Rms) (kg/s)** | 2.3 |
| **Surface Area of Diaphragm (Sd) ($cm^2$)** | 547.4 |
| **Compliance Equivalent Volume (Vas) (L)** | 245.15 |
| **Maximum Linear Excursion (Xmax) (mm)** | 5.1 |
| **Coil Winding Height (mm)** | 19.8 |
| **Magnetic Gap Height (mm)** | 9.5 |
| **Motor Force Factor (BL) (T•M)** | 15.0 |
| **Efficiency ($\eta_0$) (%)** | 0.90 |

## Material Descriptions

| | |
|---|---|
| **Basket Type** | Stamped steel |
| **Terminal Size (mm)** | 4.7 x 0.5 mm |
| **Voice Coil Diameter (mm)** | 51.31 |
| **Voice Coil Wire Material** | High temperature copper |
| **Voice Coil Former Material** | Kapton |
| **Magnet Material** | Ferrite |
| **Magnet Weight (g)** | 2154.6 |
| **Cone Body Material** | Polypropylene |
| **Cone Surround Material** | Rubber |


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| | |
|---|---|
| **Dust Cap Material** | Polypropylene |
| **Net Weight (kg)** | 5.14 |








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