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| The 2¾” transducers FR070WA03 (4 ohm) and FR070WA04 (8 ohm) were designed especially for high quality multimedia and lifestyle speakers, where sound reproduction without compromises is required. |
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|  | [Frequency resp.](http://www.wavecor.com/html/fr070wa03_04.html#Freq.resp)[Specifications](http://www.wavecor.com/html/fr070wa03_04.html#Specs)[Dimensions](http://www.wavecor.com/html/fr070wa03_04.html#Dims)[Ordering info](http://www.wavecor.com/html/fr070wa03_04.html) |  |
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|  | **FEATURES** |  |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif |  |
|  | Wavecor FR070WA03 |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif | http://www.wavecor.com/assets/images/autogen/clearpixel.gif |
|  | * True full-range design with on-axis output to beyond 25kHz
* Copper cap on center pole to reduce voice coil inductance and to minimize variations in voice coil inductance as a function of voice coil position
* Black anodized alu cone for better heat transfer
* Optimized off-axis response
* Vented polymer chassis for lower air flow speed reducing audible distortion
* Vented voice coil former for reduced distortion and compression
* Heavy-duty black fiber glass voice coil bobbin to reduce mechanical losses resulting in better dynamic performance and low-level details
* Large motor with 22 mm voice coil diameter for better control and power handling
* Low-loss suspension (high Qm) for better reproduction of details and dynamics
* Black motor parts for better heat transfer to the surrounding air
* Conex spider for better durability under extreme conditions
* Gold plated terminals to ensure long-term trouble free connection
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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif | http://www.wavecor.com/assets/images/autogen/clearpixel.gif |
|  | **FREQUENCY RESPONSE** |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif | http://www.wavecor.com/assets/images/autogen/clearpixel.gif |
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| FR070WA03-SPL-&-IMP-respons |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif | http://www.wavecor.com/assets/images/autogen/clearpixel.gif |
|  | Measuring conditions, SPLDriver mounting: Flush in infinite     baffle, back side open  (no cabinet)Microphone distance: 1.0 mInput level: 2.83 VRMSSmoothing: 1/6 oct. |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif | http://www.wavecor.com/assets/images/autogen/clearpixel.gif |
|  | Measuring conditions, impedanceDriver mounting: Free air, no baffle,     back side open (no cabinet)Input signal: Semi-current-drive,      nominal current 2 mASmoothing: None |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif | http://www.wavecor.com/assets/images/autogen/clearpixel.gif |
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| FR070WA04-SPL-&-IMP-respons |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif | http://www.wavecor.com/assets/images/autogen/clearpixel.gif |
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|  | Measuring conditions, impedanceDriver mounting: Free air, no baffle,     back side open (no cabinet)Input signal: Semi-current-drive,      nominal current 2 mASmoothing: None |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif | http://www.wavecor.com/assets/images/autogen/clearpixel.gif |
|  | **NOMINAL SPECIFICATIONS** |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif |  |
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| **Notes** | **Parameter** | **FR070WA03** | **FR070WA04** | **Unit** |
| **Before burn-in** | **After burn-in** | **Before burn-in** | **After burn-in** |
|   | Nominal size | 2¾ | 2¾ | [inch.] |
|   | Nominal impedance | 4 | 8 | [ohm] |
|   | Recommended max. upper frequency limit | full range | full range | [kHz] |
| *1, 5* | Sensitivity, 2.83V/1m (average SPL in range 400 - 1,000 Hz) | 86 | 83 | [dB] |
| *2* | Power handling, short term, IEC 268-5, no additional filtering |   |   | [W] |
| *2* | Power handling, long term, IEC 268-5, no additional filtering |   |   | [W] |
| *2* | Power handling, continuous, IEC 268-5, no additional filtering | 10 | 10 | [W] |
|   | Effective radiating area, Sd | 21 | 21 | [sq.cm] |
| *3, 5, 7* | Resonance frequency (free air, no baffle), Fs | 121 | 114 | 124 | 117 | [Hz] |
|   | Moving mass, incl. air (free air, no baffle), Mms | 2.0 | 1.9 | [g] |
| *3* | Force factor, Bxl | 2.3 | 2.9 | [N/A] |
| *3, 5, 7* | Suspension compliance, Cms | 0.87 | 0.97 | 0.87 | 0.97 | [mm/N] |
| *3, 5, 7* | Equivalent air volume, Vas | 0.54 | 0.61 | 0.54 | 0.61 | [lit.] |
| *3, 5, 7* | Mechanical resistance, Rms | 0.11 | 0.11 | 0.11 | 0.11 | [Ns/m] |
| *3, 5, 7* | Mechanical Q, Qms | 13.8 | 13.1 | 13.4 | 12.7 | [-] |
| *3, 5, 7* | Electrical Q, Qes | 0.99 | 0.94 | 1.13 | 1.07 | [-] |
| *3, 5, 7* | Total Q, Qts | 0.92 | 0.87 | 1.04 | 0.98 | [-] |
| *4* | Voice coil resistance, RDC | 3.45 | 6.4 | [ohm] |
| *6* | Voice coil inductance, Le (measured at 10 kHz) | 71 | 110 | [μH] |
|   | Voice coil inside diameter | 22 | 22 | [mm] |
|   | Voice coil winding height | 7 | 7 | [mm] |
|   | Air gap height | 3 | 3 | [mm] |
|   | Magnet weight | 115 | 115 | [g] |
|   | Total unit net weight excl. packaging | 0.29 | 0.29 | [kg] |
| *3, 6* | Krm |   |   | [mohm] |
| *3, 6* | Erm |   |   | [-] |
| *3, 6* | Kxm |   |   | [mH] |
| *3, 6* | Exm |   |   | [-] |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif |  |
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| *Note 1* | *Measured in infinite baffle.* |
| *Note 2* | *Tested in free air (no cabinet).* |
| *Note 3* | *Measured using a semi-constant current source, nominal level 2 mA.* |
| *Note 4* | *Measured at 20 deg. C* |
| *Note 5* | *Measured at 25 deg. C* |
| *Note 6* | *It is generally a rough simplification to assume that loudspeaker transducer voice coils exhibit the characteristics of an inductor. Instead it is a far more accurate approach to use the more advanced model often referred to as the “Wright empirical model”, also used in LEAP-4 as the TSL model (www.linearx.com), involving parameters Krm, Erm, Kxm, and Exm. This more accurate transducer model is described in a technical paper (PDF)* [*here*](http://www.wavecor.com/Transducer_equivalent_circuit.pdf)*.* |
| *Note 7* | *After-burn-in specifications are measured at least 12 hours after exiting the transducer by a 20 Hz sine wave for 2 hours at level 2.83/4.0 VRMS (4/8 ohm version). Unit are not burned in before shipping.* |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif | http://www.wavecor.com/assets/images/autogen/clearpixel.gif |
|  | **OUTLINE DRAWING AND NOMINAL DIMENSIONS (mm)** |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif |  |
|  | FR070WA01/02 outline drawing |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif | FR070WA03_04-outline-drawing1 |

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|  | **TERMINAL NOMINAL DIMENSIONS (mm)** |  |
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|  | FR070WA03_04-terminals |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif | http://www.wavecor.com/assets/images/autogen/clearpixel.gif |
|  | **Terminal plating: GoldThickness, both terminals: 0.5 mm** |

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| http://www.wavecor.com/assets/images/autogen/clearpixel.gif | http://www.wavecor.com/assets/images/autogen/clearpixel.gif |