

# SPECIFICATIONS

## WF182BD03/04 7" die cast, paper cone mid/woofers, 4/8 ohm



The 7" transducers WF182BD03 (4 ohm) and WF182BD04 (8 ohm) were designed as high performance bass and midrange units for monitors and high-end hi-fi speakers. They offer outstanding deep bass performance and dynamic and detailed midrange.

### FEATURES

- Balanced Drive motor structure for optimal drive force symmetry resulting in largely reduced even order harmonic distortion
- 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 coated semi-air-dried paper cone
- Rigid die cast alu chassis with extensive venting for lower air flow speed reducing audible distortion
- Vented voice coil former for reduced distortion and compression
- Vented center pole with dual flares for reduced noise level at large cone excursions
- Heavy-duty black fiber glass voice coil former to reduce mechanical losses resulting in better dynamic performance and low-level details
- Large motor with 1½" voice coil diameter for better control and power handling
- Built-in alu field-stabilizing ring for reduced distortion at high levels
- 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



### NOMINAL SPECIFICATIONS

Notes	Parameter	WF182BD03		WF182BD04		Unit
		Before burn-in	After burn-in	Before burn-in	After burn-in	
	Nominal size	7		7		[inch.]
	Nominal impedance	4		8		[ohm]
	Recommended max. upper frequency limit	2.5		2.5		[kHz]
1	Sensitivity, 2.83V/1m (average SPL in range 200 - 1,000 Hz)	91		88		[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	80		80		[W]
	Effective radiating area, S <sub>d</sub>	131		131		[cm <sup>2</sup> ]
3, 6	Resonance frequency (free air, no baffle), F <sub>s</sub>	39	33.8	40	33.4	[Hz]
	Moving mass, incl. air (free air, no baffle), M <sub>ms</sub>	16.7		16.1		[g]
3	Force factor, B <sub>xl</sub>	6.75		8.5		[N/A]
3, 6	Suspension compliance, C <sub>ms</sub>	1.0	1.33	1.0	1.33	[mm/N]
3, 6	Equivalent air volume, V <sub>as</sub>	24.4	32.4	24.4	32.4	[lit.]
3, 6	Mechanical resistance, R <sub>ms</sub>	0.37	0.43	0.37	0.43	[Ns/m]
3, 6	Mechanical Q, Q <sub>ms</sub>	11	8.2	10.9	8.1	[-]
3, 6	Electrical Q, Q <sub>es</sub>	0.30	0.26	0.35	0.30	[-]
3, 6	Total Q, Q <sub>ts</sub>	0.29	0.25	0.34	0.29	[-]
4	Voice coil resistance, R <sub>DC</sub>	3.3		6.3		[ohm]
5	Voice coil inductance, L <sub>e</sub> (measured at 10 kHz)	0.088		0.14		[mH]
	Voice coil inside diameter	39		39		[mm]
	Voice coil winding height	16		16		[mm]
	Air gap height	5		5		[mm]
	Magnet weight	885		885		[g]
	Total unit net weight excl. packaging	2.3		2.3		[kg]
3, 5	K <sub>rm</sub>	33		54		[mohm]
3, 5	E <sub>rm</sub>	0.42		0.40		[-]
3, 5	K <sub>xm</sub>	157		347		[mH]
3, 5	E <sub>xm</sub>	0.19		0.14		[-]

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.

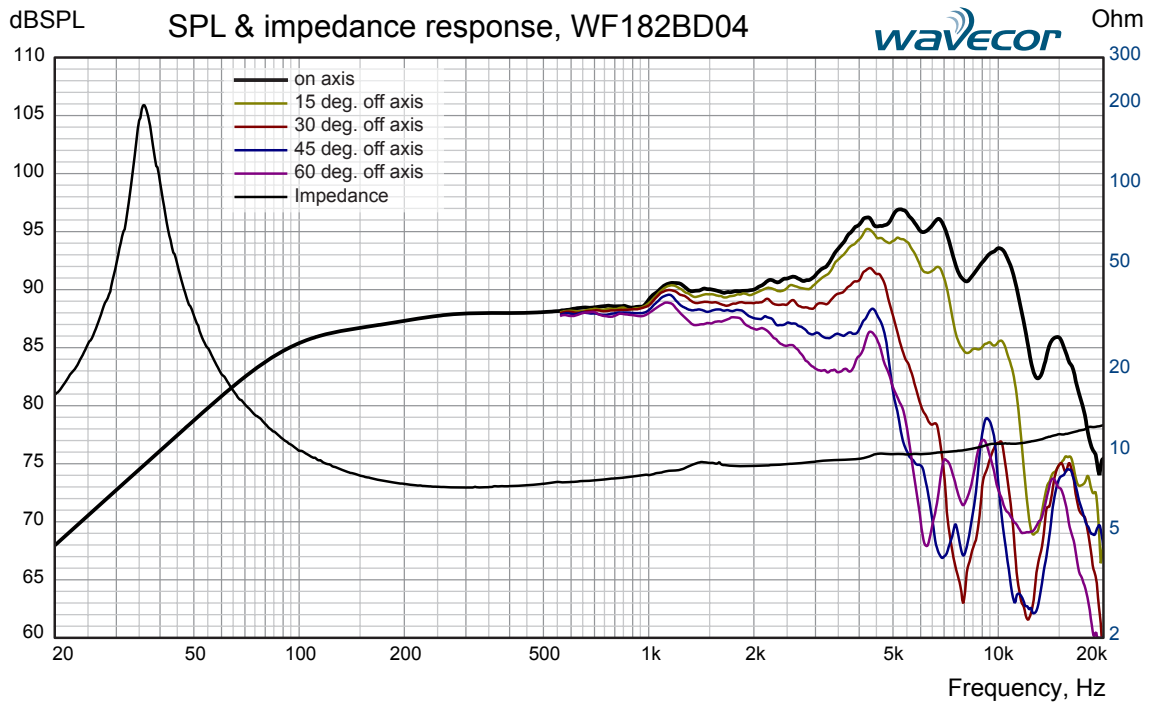
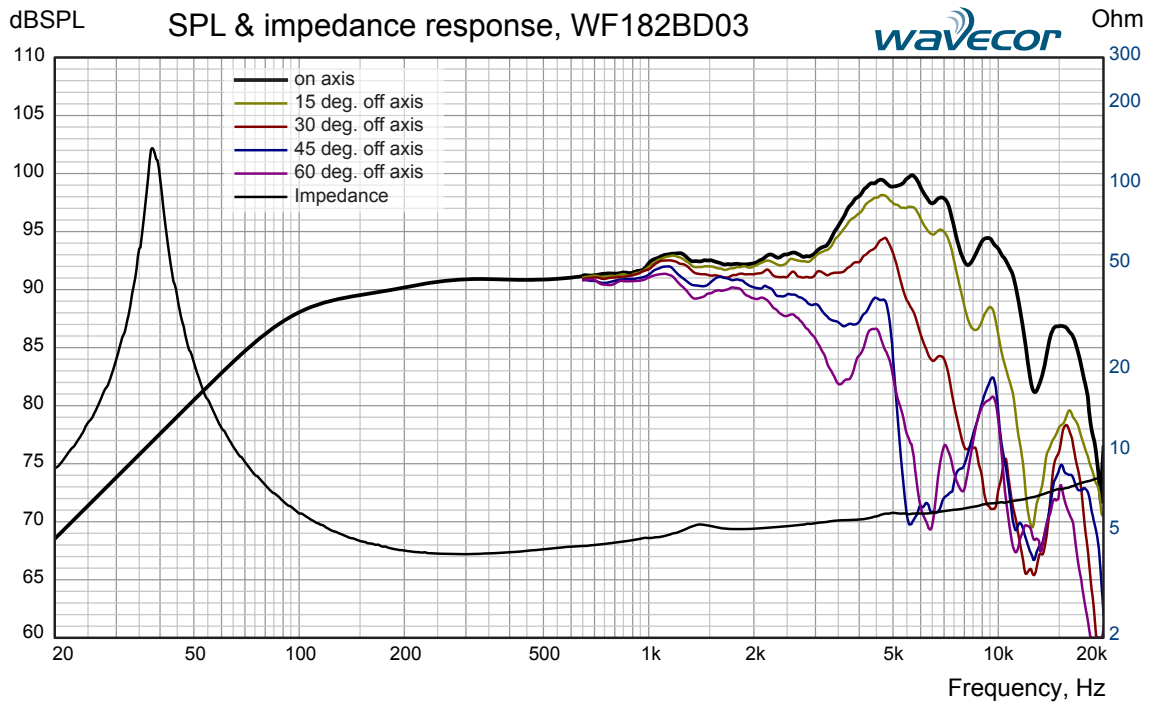
Note 4 Measured at 20 deg. C

Note 5 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](http://www.linearx.com)), involving parameters K<sub>rm</sub>, E<sub>rm</sub>, K<sub>xm</sub>, and E<sub>xm</sub>. This more accurate transducer model is described in a technical paper [here at our web site](#).

Note 6 After burn-in specifications are measured 12 hours after exiting the transducer by a 20 Hz sine wave for 2 hours at level 10/14.1 V<sub>RMS</sub> (4/8 ohm version). The unit is not burned in before shipping.

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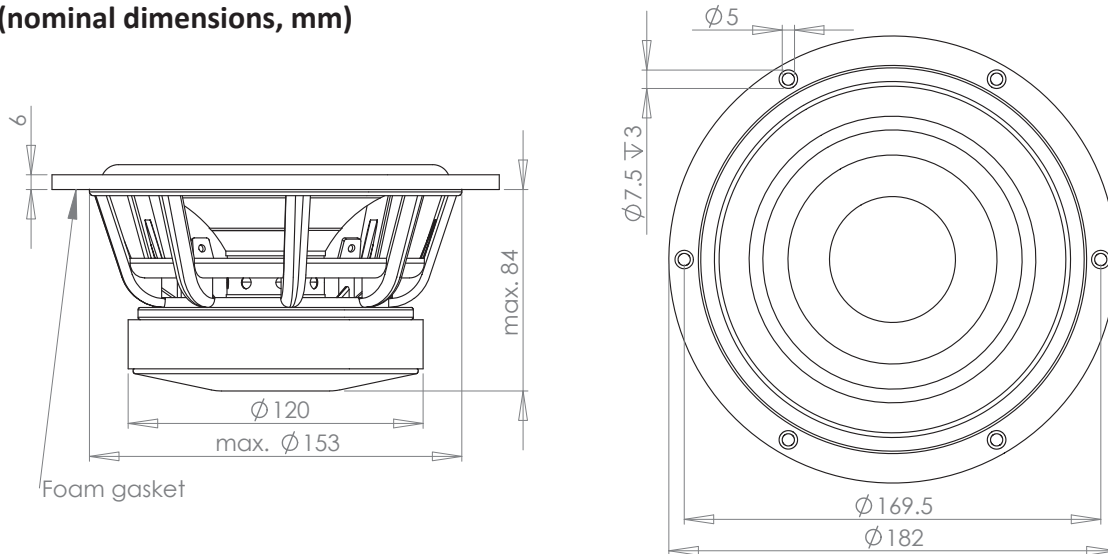


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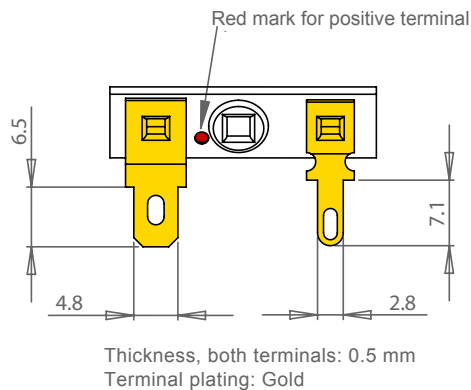
**WF182BD03/04 7" die cast, paper cone mid/woofers, 4/8 ohm**



## OUTLINE DRAWING (nominal dimensions, mm)



## CONNECTIONS



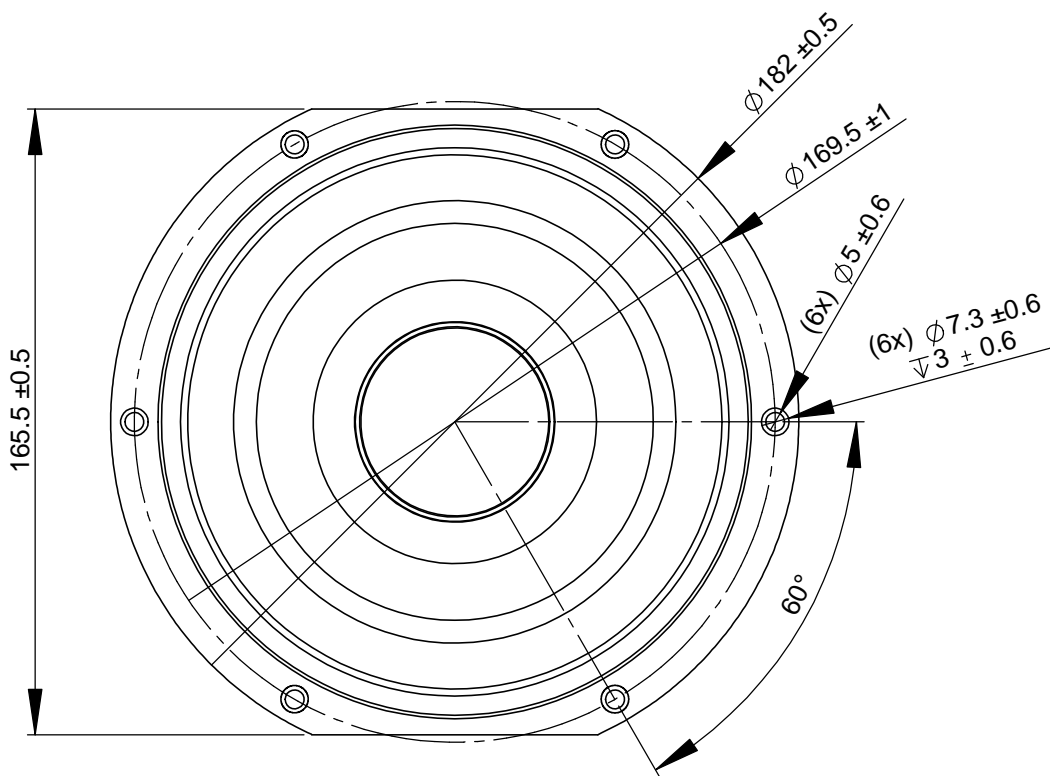
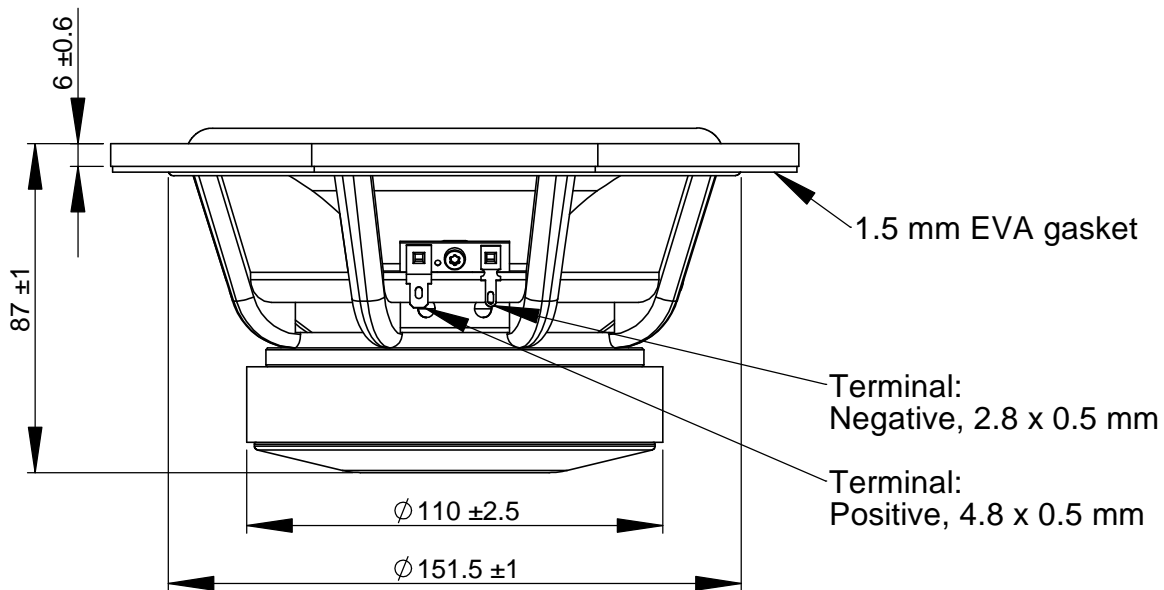
## PACKAGING AND ORDERING INFORMATION

Part no. WF182BD03-01	4 ohm version, individual packaging (one piece per box)
Part no. WF182BD03-02	4 ohm version, bulk packaging
Part no. WF182BD04-01	8 ohm version, individual packaging (one piece per box)
Part no. WF182BD04-02	8 ohm version, bulk packaging

Latest update: September 8, 2010

Revision

Rev.	Description	Date	Approved
A	New drawing	011613	PM



Notes:  
Weight: 1.95 kg



Drawing not to scale. All specifications are for reference only.

	Name	Date	Part no.	Sheets
Drawn	PM	011613	WF182BD11	1 / 1
Approved	PM	011613	Part name	Revision
CN:	-		7" Midwoofer	A

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**RoHS Directive compliance:** This component may not contain any lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBBs) or polybrominated diphenyl ethers (PBDEs).