SPECIFICATIONS

WF182BD01/02 7” die cast, Nomex cone mid/woofers, 4/8 ohm

The 7” transducers WF182BD01 (4 ohm) and WF182BD02 (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 Nomex 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	WF182BD01		WF182BD02		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)	88		85		[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_d	131		131		[cm²]
3, 6	Resonance frequency (free air, no baffle), F_s	33	28.5	34	29.5	[Hz]
	Moving mass, incl. air (free air, no baffle), M_{ms}	23.4		21.9		[g]
3	Force factor, Bxl	6.5		8.2		[N/A]
3, 6	Suspension compliance, C_{ms}	1.0	1.33	1.0	1.33	[mm/N]
3, 6	Equivalent air volume, V_{as}	24.4	32.4	24.4	32.4	[lit.]
3, 6	Mechanical resistance, R_{ms}	0.44	0.46	0.44	0.46	[Ns/m]
3, 6	Mechanical Q, Q_{ms}	11	9.1	10.6	8.8	[-]
3, 6	Electrical Q, Q_{es}	0.37	0.32	0.45	0.39	[-]
3, 6	Total Q, Q_{ts}	0.35	0.31	0.43	0.37	[-]
4	Voice coil resistance, R_{DC}	3.2		6.4		[ohm]
5	Voice coil inductance, L_e (measured at 10 kHz)	0.10		0.16		[mH]
	Voice coil inside diameter	39		39		[mm]
	Voice coil winding height	16		16		[mm]
	Air gap height	5		5		[mm]
	Magnet weight	725		725		[g]
	Total unit net weight excl. packaging	1.9		1.9		[kg]
3, 5	K_{rm}	44		57		[mohm]
3, 5	E_{rm}	0.40		0.41		[-]
3, 5	K_{xm}	63		141		[mH]
3, 5	E_{xm}	0.32		0.28		[-]

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), involving parameters K_{rm}, E_{rm}, K_{xm}, and E_{xm}.* 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_{RMS} (4/8 ohm version). The unit is not burned in before shipping.

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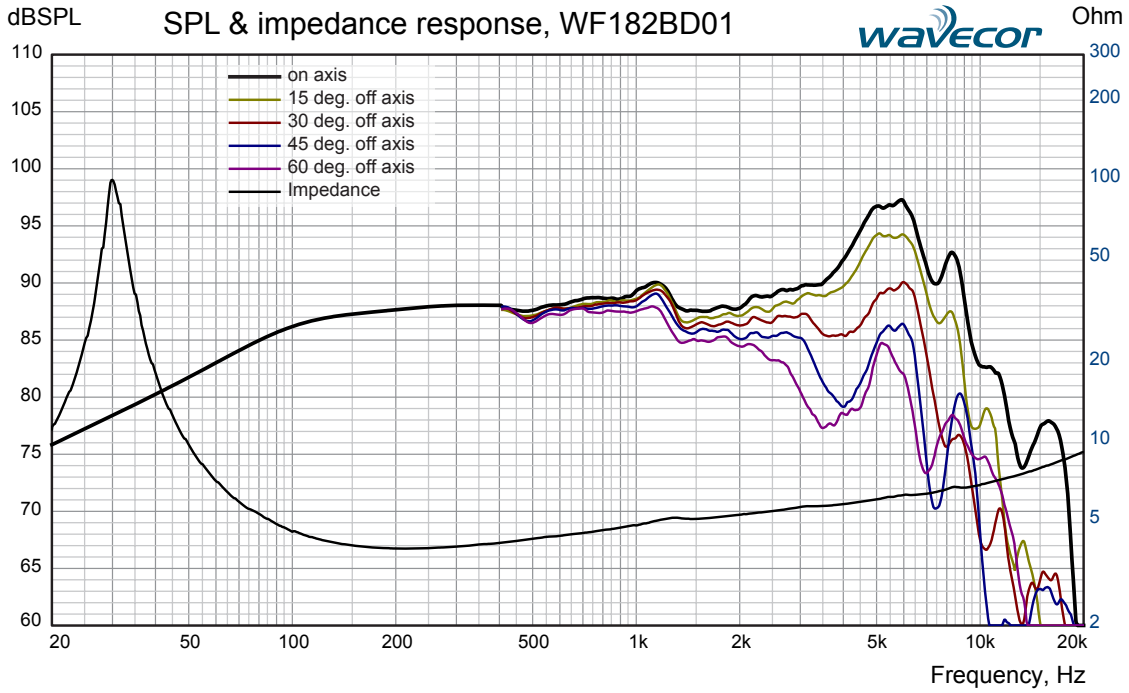
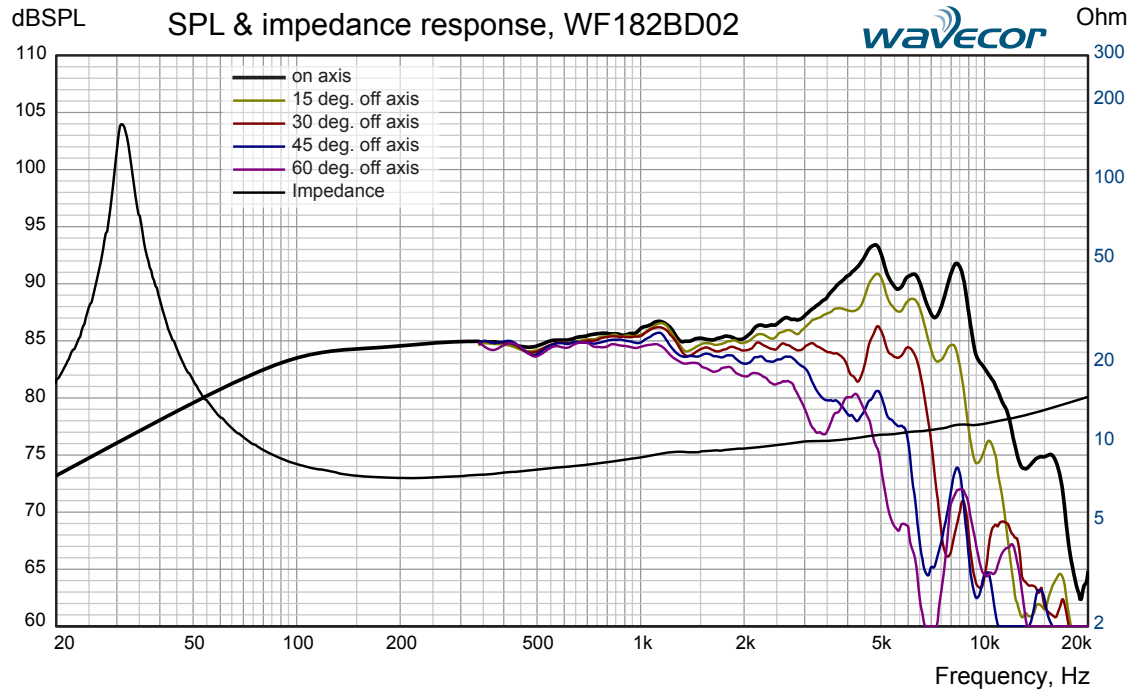


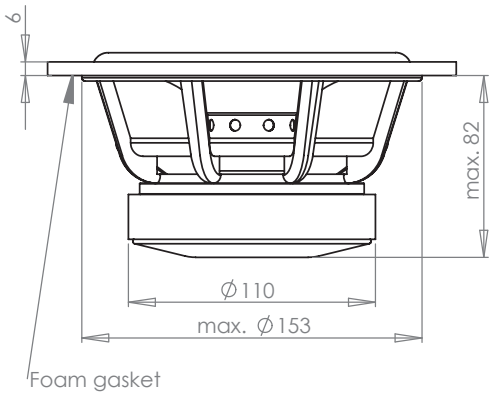
Measuring conditions, SPL
Driver mounting: Flush in infinite baffle, back side open (no cabinet)
Microphone distance: 1.0 m
Input level: 2.83 V_{RMS}
Smoothing: 1/6 oct.

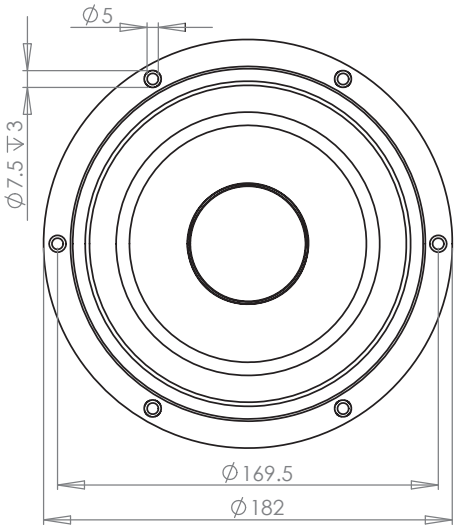
Measuring conditions, impedance
Driver mounting: Free air, no baffle, back side open (no cabinet)
Input signal: Semi-current-drive, nominal current 2 mA
Smoothing: None



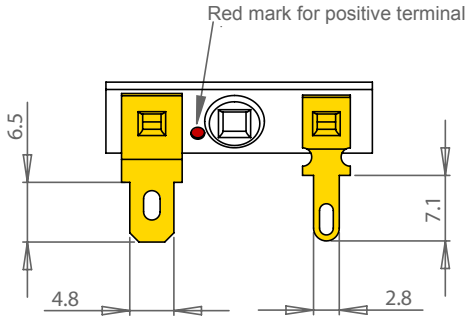
SPECIFICATIONS

OUTLINE DRAWING
(nominal dimensions, mm)





CONNECTIONS



Thickness, both terminals: 0.5 mm
Terminal plating: Gold

PACKAGING AND ORDERING INFORMATION

Part no. WF182BD01-01	4 ohm version, individual packaging (one piece per box)
Part no. WF182BD01-02	4 ohm version, bulk packaging
Part no. WF182BD02-01	8 ohm version, individual packaging (one piece per box)
Part no. WF182BD02-02	8 ohm version, bulk packaging

Latest update: September 8, 2010