

SPECIFICATIONS

WF168WA01/02 6½" paper cone mid/woofer, 4/8 ohm

Nominal impedance is 4 ohm for WF168WA01 and 8 ohm for WF168WA02. Otherwise the two models are identical. WF168WA01/02 are mid/woofers designed for demanding bass and midrange applications. It works equally well for high-end hi-fi, high quality home theater systems, and monitoring setups.

FEATURES

- Alu field-stabilizing ring inside magnet assembly for reduced high-level distortion
- Vented voice coil former and magnet center pole for reduced distortion and compression
- New vented chassis for lower air flow speed reducing audible distortion
- Heavy-duty black fiber glass voice coil bobbin to increase power handling and reduce mechanical losses resulting in better dynamic performance and low-level details
- Large motor system with 1¼" voice coil diameter and 90 mm magnet for better control, power handling, and efficiency
- Black magnet parts for better heat transfer to increase power handling
- Linear suspension with specially designed Conex damper (spider) for long durability under extreme operating conditions
- Gold plated terminals to ensure long-term trouble free connection



NOMINAL SPECIFICATIONS

Notes	Parameter	WF168WA01		WF168WA02		Unit
		Before burn-in	After burn-in	Before burn-in	After burn-in	
	Nominal size	6½		6½		[inch.]
	Nominal impedance	4		8		[ohm]
	Recommended max. upper frequency limit	3		3		[kHz]
1	Sensitivity, 2.83V/1m (average SPL in range 200 - 1,000 Hz)	91.5		89		[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	60		60		[W]
	Effective radiating area, S _d	139		139		[cm ²]
3, 6	Resonance frequency (free air, no baffle), F _s	47.5		49		[Hz]
	Moving mass, incl. air (free air, no baffle), M _{ms}	12.5		11.8		[g]
3	Force factor, B _{xl}	5.1		6.4		[N/A]
3, 6	Suspension compliance, C _{ms}	0.90		0.90		[mm/N]
3, 6	Equivalent air volume, V _{as}	24.6		24.6		[lit.]
3, 6	Mechanical Q, Q _{ms}	7.0		7.1		[-]
3, 6	Electrical Q, Q _{es}	0.46		0.56		[-]
3, 6	Total Q, Q _{ts}	0.43		0.52		[-]
4	Voice coil resistance, R _{DC}	3.2		6.3		[ohm]
5	Voice coil inductance, L _e (measured at 10 kHz)	0.24		0.39		[mH]
	Voice coil inside diameter	32		32		[mm]
	Voice coil winding height	11		11		[mm]
	Air gap height	5		5		[mm]
	Magnet weight	400		400		[g]
	Total unit net weight excl. packaging	1.03		1.03		[kg]
3, 5	K _{rrm}	0.46		0.26		[mohm]
3, 5	E _{rrm}	0.88		0.69		[-]
3, 5	K _{xm}	5.2		8.1		[mH]
3, 5	E _{xm}	0.69		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.

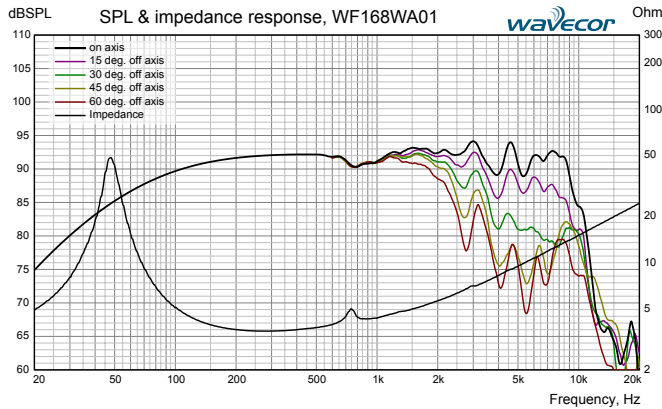
Note 4 Measured at 20 deg. C

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_{rrm}, E_{rrm}, K_{xm}, and E_{xm}. This more accurate transducer model is described in a technical paper [here at our web site](#).

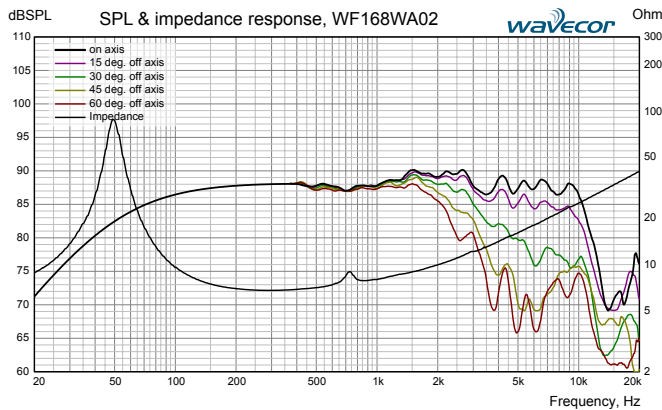
Note 6 After burn-in specifications are measured 12 hours after exiting the transducer by a 20 Hz sine wave for 2 hours at level 10/14.1 VRMS (4/8 ohm version). The unit is not burned in before shipping.

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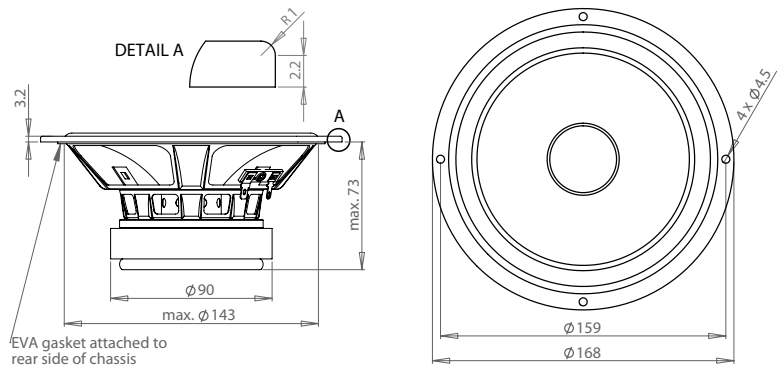


Measuring conditions, SPL
 Driver mounting: Flush in infinite baffle, back side open (no cabinet)
 Microphone distance: 1.0 m
 Input level: 2.83 V_{RMS}
 Smoothing: 1/6 oct.

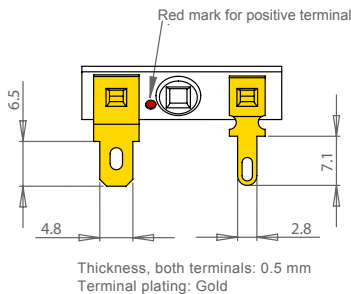


Measuring conditions, impedance
 Driver mounting: Free air, no baffle, back side open (no cabinet)
 Input signal: Semi-current-drive, nominal current 2 mA
 Smoothing: None

OUTLINE DRAWING (nominal dimensions, mm)



CONNECTIONS



PACKAGING AND ORDERING INFORMATION

Part no. WF168WA01-01	4 ohm version, individual packaging (one piece per box)
Part no. WF168WA01-02	4 ohm version, bulk packaging
Part no. WF168WA02-01	8 ohm version, individual packaging (one piece per box)
Part no. WF168WA02-02	8 ohm version, bulk packaging

Latest update: March 26, 2024