

SPECIFICATIONS

WF095WA01/02 3¾" paper cone mid/woofer, 4/8 ohm

The 3.75" transducers WF095WA01 (4 ohm) and WF095WA02 (8 ohm) were designed especially for high quality multimedia and lifestyle speakers, where small size is required while still obtaining sound reproduction without compromises. Built in a stamped steel frame, high performance is obtained without paying a high cost premium.

FEATURES

- Vented voice coil former for reduced distortion and compression
- Vented chassis for lower air flow speed reducing audible distortion
- Voice coil wound with Copper Clad Aluminium Wire for higher efficiency and better dynamics
- 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
- Low-loss suspension (high Qm) for better reproduction of details and dynamics
- Black magnet parts for better heat transfer to increase power handling
- Progressive suspension with specially designed CONEX damper (spider) for long durability under extreme operating conditions
- Gold plated terminals to prevent oxidation for long-term reliable connection
- Delivered with foam gasket attached for hassle-free mounting and secure cabinet sealing



NOMINAL SPECIFICATIONS

Notes	Parameter	WF095WA01		WF095WA02		Unit
		Before burn-in	After burn-in	Before burn-in	After burn-in	
	Nominal size	3¾		3¾		[inch.]
	Nominal impedance	4		8		[ohm]
	Recommended max. upper frequency limit	5		5		[kHz]
1, 3	Sensitivity, 2.83V/1m (average 100-5,000 Hz)	86.5		84		[dB]
2	Power handling, short term, IEC 268-5, no additional filtering	40		40		[W]
2	Power handling, long term, IEC 268-5, no additional filtering	25		25		[W]
2	Power handling, continuous, IEC 268-5, no additional filtering	10		19		[W]
	Effective radiating area, S _d	35		36		[cm ²]
3, 6	Resonance frequency (free air, no baffle), F _s	89	86	91	88	[Hz]
	Moving mass, incl. air (free air, no baffle), M _{ms}	3.6		3.5		[g]
3	Force factor, B _{xl}	3.0		3.6		[N/A]
3, 6	Suspension compliance, C _{ms}	0.87	0.94	0.87	0.94	[mm/N]
3, 6	Equivalent air volume, V _{as}	1.5	1.6	1.5	1.6	[lit.]
3, 6	Mechanical resistance, R _{ms}	0.30	0.30	0.30	0.30	[Ns/m]
3, 6	Mechanical Q, Q _{ms}	6.8	6.6	6.6	6.5	[-]
3, 6	Electrical Q, Q _{es}	0.71	0.69	0.90	0.86	[-]
3, 6	Total Q, Q _{ts}	0.64	0.62	0.79	0.76	[-]
4	Voice coil resistance, R _{DC}	3.1		5.6		[ohm]
5	Voice coil inductance, L _e (measured at 10 kHz)					[mH]
	Voice coil inside diameter	22		22		[mm]
	Voice coil winding height	8.4		8.4		[mm]
	Air gap height	3		3		[mm]
	Theoretical linear motor stroke, X _{max}	±2.7		±2.7		[mm]
	Magnet weight	184		184		[g]
	Total unit net weight excl. packaging	0.47		0.47		[kg]
3, 5	K _{rm}					[mohm]
3, 5	E _{rm}					[-]
3, 5	K _{xm}					[mH]
3, 5	E _{xm}					[-]

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 25 deg. C

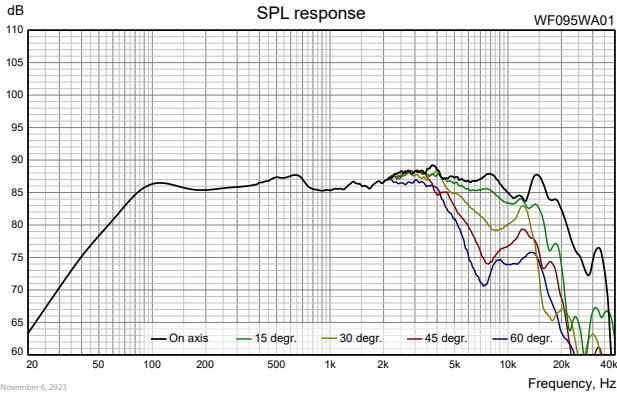
Note 5 It is generally a rough simplification to assume that loudspeaker transducer voice coils exhibit the characteristics of an inductor. Instead it is a far more accurate approach to use the more advanced model often referred to as the "Wright empirical model", also used in LEAP-4 as the TSL model (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 at least 12 hours after exciting the transducer by a sine wave at the frequency of F_s for 2 hours at level 4/5 VRMS (4/8 ohm version). The unit is not burned in before shipping.

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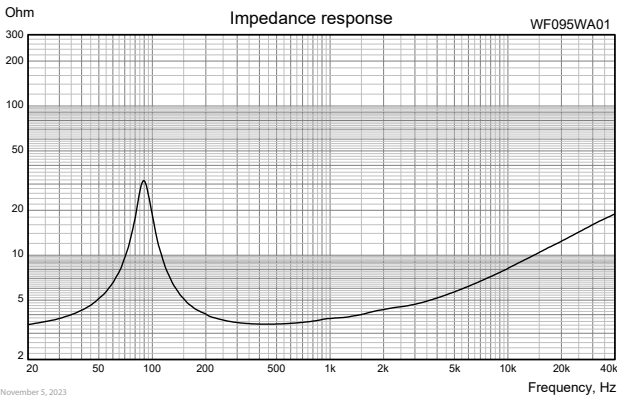
WF095WA01/02 3 3/4" paper cone mid/woofer, 4/8 ohm

Important!
Please observe that graphs on the left side of this page and the below text files for download are actual measurements of the drivers measured in infinite baffle and without any enclosure. Measuring the drivers in a finite baffle (like the baffle of most speaker cabinets) and in any size of enclosure will lead to different response curves.



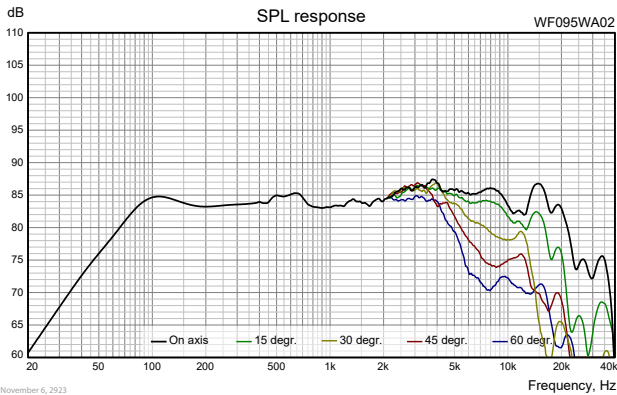
Download WF095WA01 on-axis SPL response as .txt file

Measuring conditions, SPL
Driver mounting: Flush in infinite baffle, back side open (no cabinet)
Microphone distance: 1.0 m
Input signal: 2.83 VRMS stepped sine wave
Smoothing: 1/6 oct.



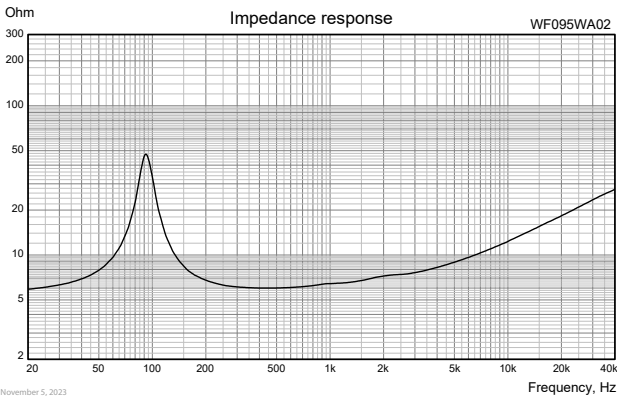
Download WF095WA01 impedance response as .txt file

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



Download WF095WA02 on-axis SPL response as .txt file

Measuring conditions, SPL
Driver mounting: Flush in infinite baffle, back side open (no cabinet)
Microphone distance: 1.0 m
Input signal: 2.83 VRMS stepped sine wave
Smoothing: 1/6 oct.



Download WF095WA02 impedance response as .txt file

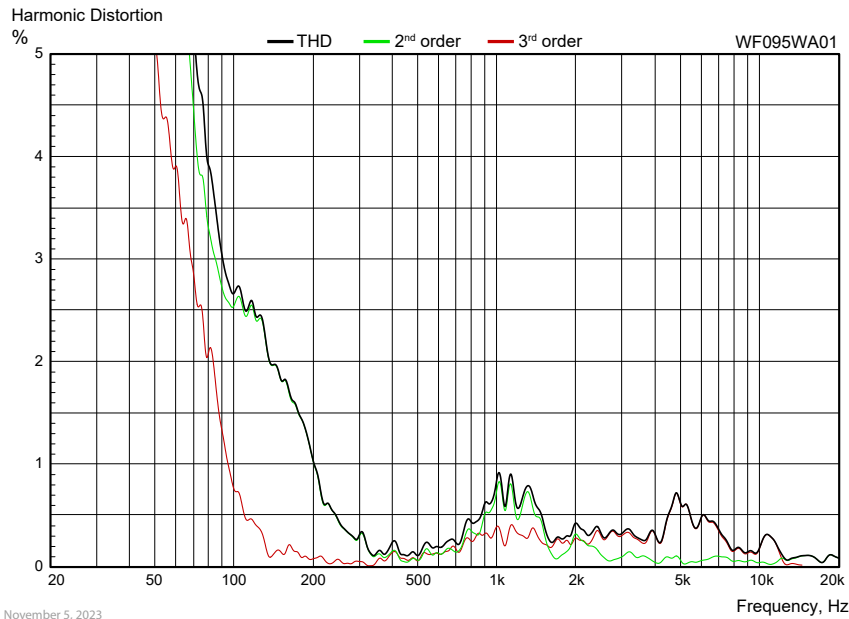
Measuring conditions, impedance
Driver mounting: Free air, no baffle, back side open (no cabinet)
Input signal: Stepped sine wave, semi-current-drive, nominal current 2 mA
Smoothing: None

SPECIFICATIONS



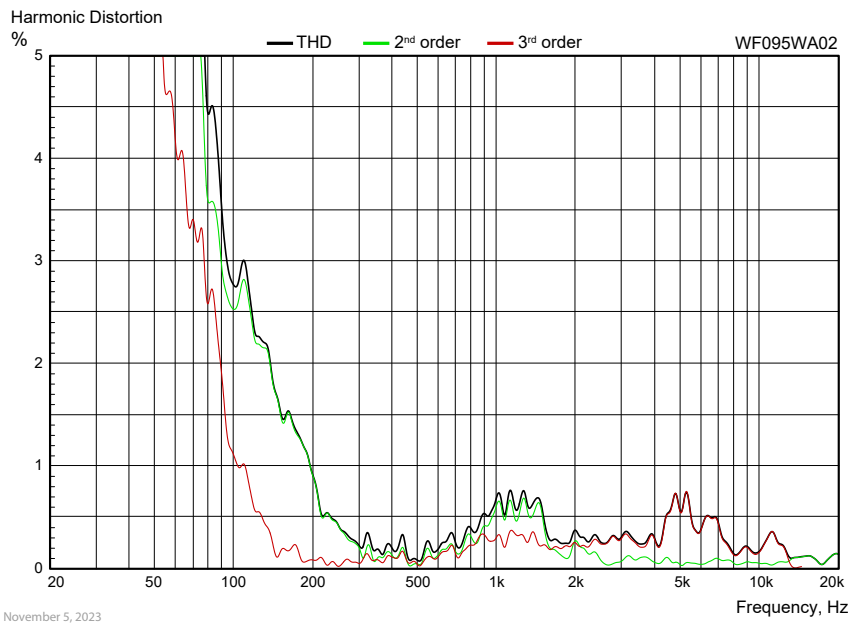
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HARMONIC DISTORTION



Measuring conditions, Harmonic Distortion

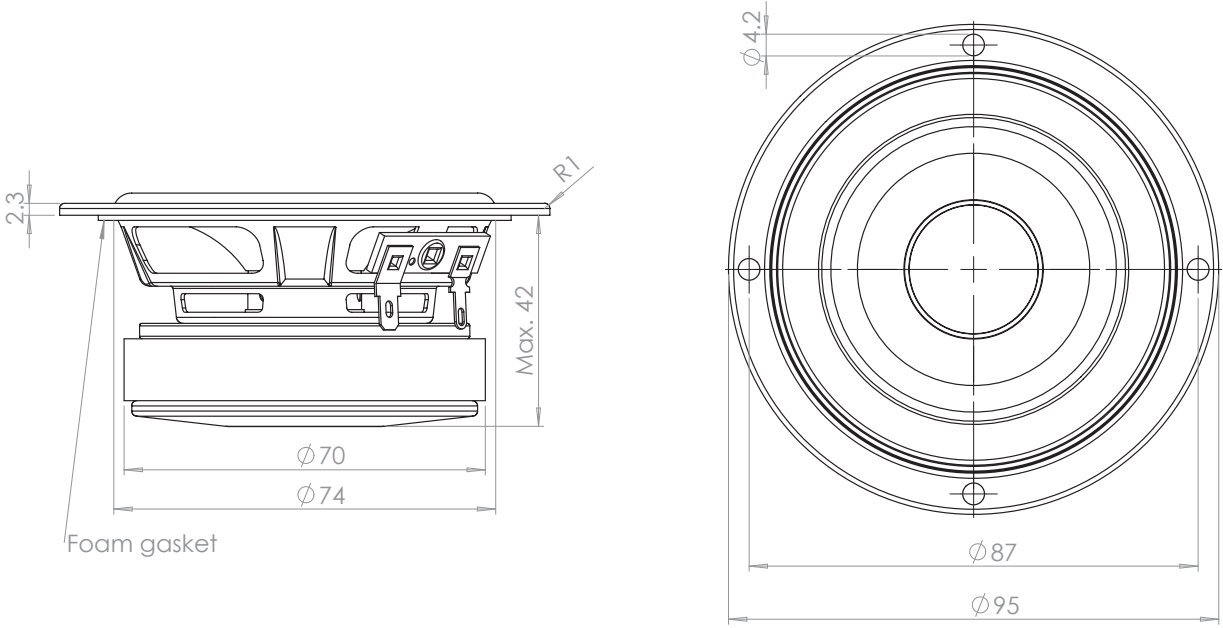
Driver mounting: In sealed enclosure, internal volume 1 lit.
Microphone distance: 0.5 m
Input signal: Stepped sine wave, 2.0 V (WF095WA01) / 2.7 V (WF095WA02)
Smoothing: 1/12 oct.



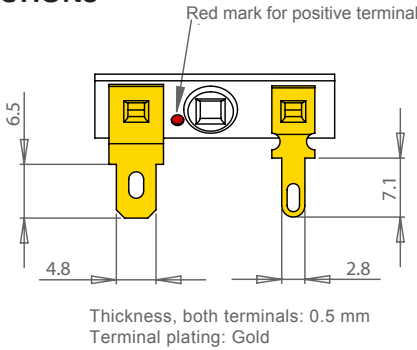
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OUTLINE DRAWING (nominal dimensions, mm)



CONNECTIONS



PACKAGING AND ORDERING INFORMATION

Part no. WF095WA01-01	4 ohm version, individual packaging (one piece per box)
Part no. WF095WA01-02	4 ohm version, bulk packaging
Part no. WF095WA02-01	8 ohm version, individual packaging (one piece per box)
Part no. WF095WA02-02	8 ohm version, bulk packaging

Latest update: November 8, 2023