SPECIFICATIONS

WF146OM01/02 5¾" paper cone mid/woofers, 4/8 ohm

WF146OM01 (4 ohm) and WF146OM02 (8 ohm) are mid/woofers designed for demanding bass and midrange applications. They work equally well for hi-fi, high quality home theater systems, multimedia setups, or high quality personal audio systems.

OEM Line

BALANCED DRIVE

FEATURES

- FEA optimized suspension for perfect symmetry, reducing even order harmonic distortion
- Balanced Drive motor with perfect force factor symmetry for reduced distortion
- Vented voice coil former for reduced distortion and compression
- 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
- Progressive suspension with optimized compromise between linearity and soft clipping
- New damper (spider) woven of a mix of polymers and natural fibers for improved durability
- Gold plated terminals to prevent oxidation for long-term reliable connection
- Delivered with foam gasket attached to the frame for hassle-free mounting and secure enclosure sealing

NOMINAL SPECIFICATIONS

Notes	Parameter	WF146OM01		WF146OM02		Unit
		Before burn-in	After burn-in	Before burn-in	After burn-in	
	Nominal size	5¾		5¾		[inch.]
	Nominal impedance	4		8		[ohm]
	Recommended max. upper frequency limit	3.5		3.5		[kHz]
1, 3	Sensitivity, 2.83V/1m (average 400-4,000 Hz)	89		86.5		[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	50		50		[W]
	Effective radiating area, S_d	93		93		[cm²]
3, 6	Resonance frequency (free air, no baffle), F_S	49		50		[Hz]
	Moving mass, incl. air (free air, no baffle), M_{ms}	9.6		9.2		[g]
3	Force factor, Bxl	4.6		5.4		[N/A]
3, 6	Suspension compliance, C_{ms}	1.11		1.11		[mm/N]
3, 6	Equivalent air volume, V_{as}	13.6		13.6		[lit.]
3, 6	Mechanical resistance, R_{ms}	0.41		0.41		[Ns/m]
3, 6	Mechanical Q, Q_{ms}	7.2		7.0		[-]
3, 6	Electrical Q, Q_{es}	0.45		0.55		[-]
3, 6	Total Q, Q_{ts}	0.42		0.51		[-]
4	Voice coil resistance, R_{DC}	3.2		5.6		[ohm]
5	Voice coil inductance, L_e (measured at 10 kHz)	0.25		0.38		[mH]
	Voice coil inside diameter	26		26		[mm]
	Voice coil winding height	10.6		10.6		[mm]
	Air gap height	4		4		[mm]
	Theoretical linear motor stroke, Xmax	±3.3		±3.3		[mm]
	Magnet weight					[g]
	Total unit net weight excl. packaging					[kg]
3, 5	K_{rm}	0.49		0.58		[mohm]
3, 5	E_{rm}	0.89		0.91		[-]
3, 5	K_{xm}	10.6		16.0		[mH]
3, 5	E_{xm}	0.63		0.62		[-]

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 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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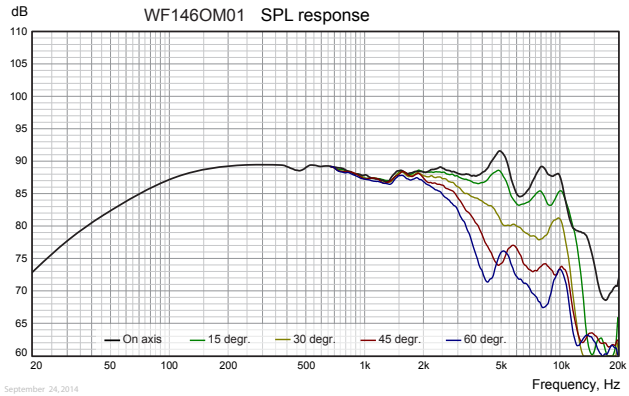
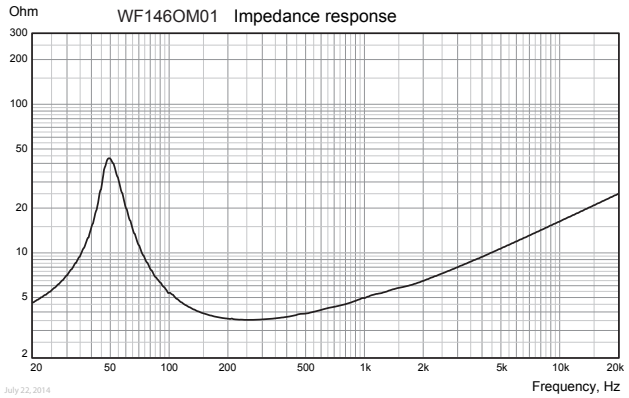
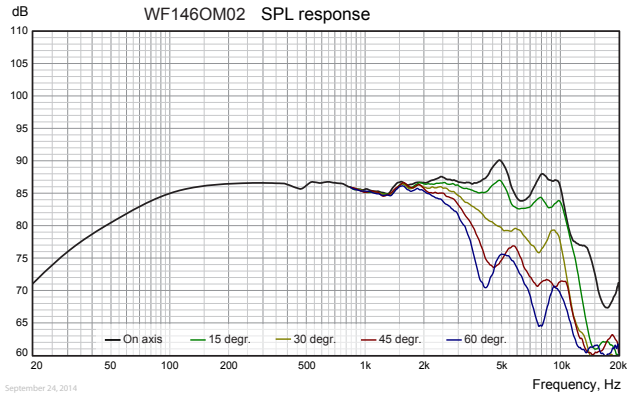
WF146OM01/02 5¾” paper cone mid/woofers, 4/8 ohm



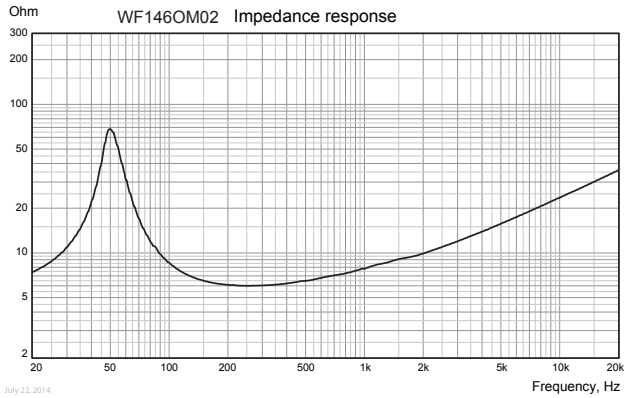
Measuring conditions, SPL
Driver mounting: Flush in infinite baffle, back side open (no cabinet)
Microphone distance: 1.0 m
Input signal: 2.83 VRMS stepped sine wave
Smoothing: 1/6 oct.



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



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.



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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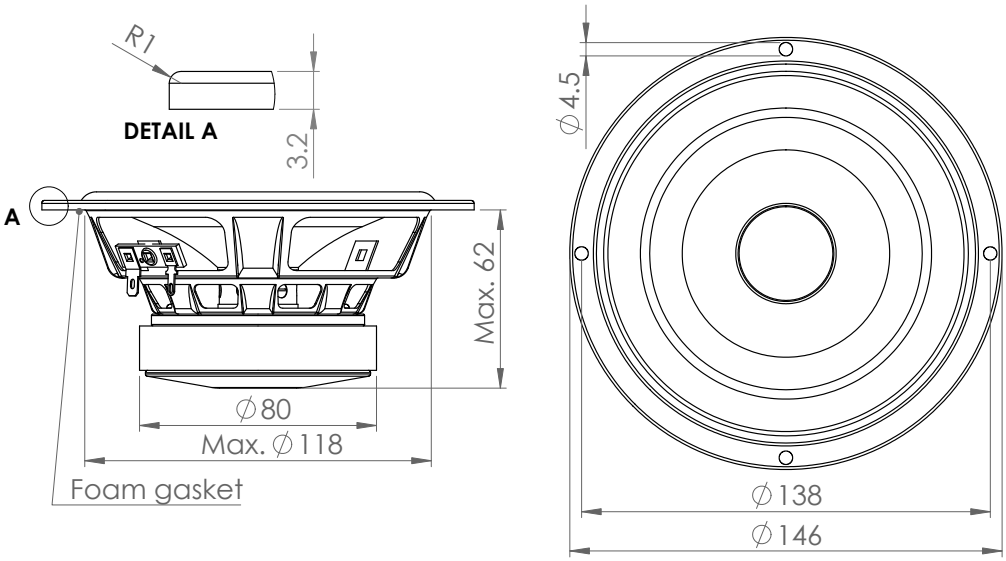
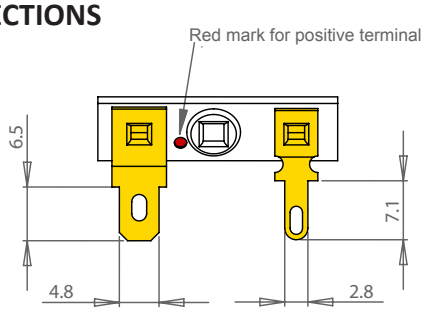
OUTLINE DRAWING (nominal dimensions)

Dimensions in mm



August 28, 2014

CONNECTIONS



Thickness, both terminals: 0.5 mm
Terminal plating: Gold

PACKAGING AND ORDERING INFORMATION

Part no. WF146OM01-01	4 ohm version, bulk packaging
Part no. WF146OM02-01	8 ohm version, bulk packaging

Latest update: December 22, 2014