

## TW022WA01 and -02 22 mm neodymium textile tweeters, 4 ohm

TW022WA01 and TW022WA02 are compact 22 mm neodymium tweeters for applications where small size is important, while requiring the highest level of performance

### The best of two worlds?

The design with 22 mm voice coil and wide surround caters for both applications that would normally require traditional 3/4" tweeters and those, where 1" tweeters would usually be used.



### Innovative

In order to keep distortion and resonance frequency low the TW022WA01/02 are designed around an external neodymium ring magnet in order to allow for a larger internal volume than that of traditional neodymium tweeter.

The dome shape and material choice allow for almost full output level to beyond 40 kHz.

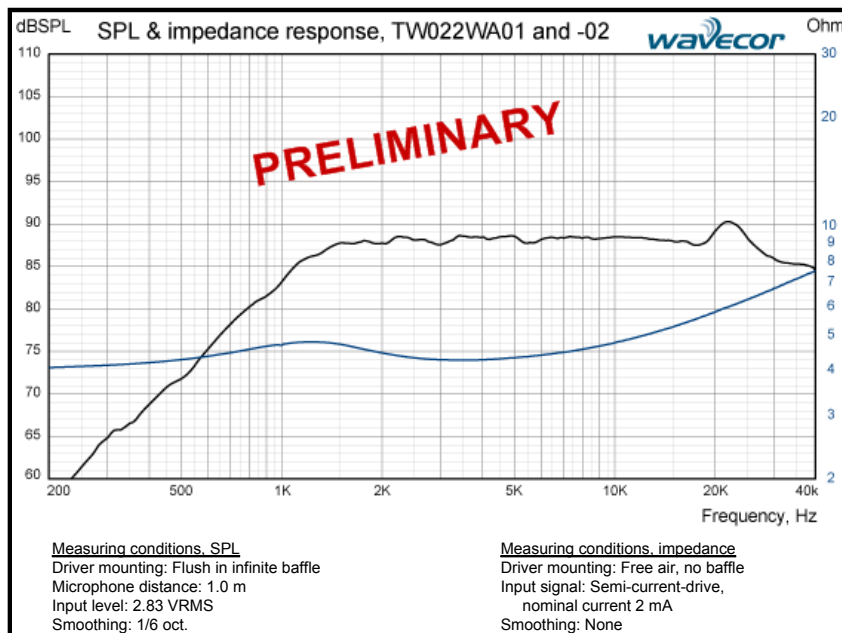
[Frequency resp.](#)  
[Specifications](#)  
[Dimensions](#)  
[Ordering info](#)

The only difference between the two models is that TW022WA02 is shipped with an optimized face plate attached while TW022WA01 comes without face plate, for direct mounting in the enclosure/baffle.

## FEATURES

- 22 mm design for optimal compromise between on- and off-axis frequency response, resonance frequency, and power handling
- External ring neodymium magnet for lower resonance frequency and distortion
- Precision-coated textile diaphragm for improved consistency and high-frequency extension
- Optimized dome shape for ultra high frequency cutoff
- Vented voice coil former for reduced distortion and compression
- Copper-clad aluminium voice coil wire offering lower moving mass for improved efficiency and transient response
- Build-in cavities under dome/edge to equalize pressure for lower distortion and lower resonance frequency
- Flexible lead wires for higher power handling and larger excursion
- Gold plated terminals to prevent oxidation and ensure long-term reliable connection
- Delivered with EVA gasket attached for hassle-free mounting and secure cabinet sealing (TW022WA02 only)

## FREQUENCY RESPONSE



## PRE-PRELIMINARY NOMINAL SPECIFICATIONS

Notes	Parameter	Value	Unit
	Nominal size	22	[mm]
	Nominal impedance	4	[ohm]
	Recommended frequency range	2.5 - 40	[kHz]
1, 5	Sensitivity, 2.83V/1m (average SPL in range 2 - 20 kHz)	88	[dB]
2	Power handling, short term, IEC 268-5, 3.0kHz@12dB/oct.		[W]
2	Power handling, long term, IEC 268-5, 3.0kHz@12dB/oct.		[W]
2	Power handling, continuous, IEC 268-5, 3.0kHz@12dB/oct.		[W]
	Effective radiating area, Sd	6.6	[sq.cm]
3, 5	Resonance frequency (free air, no baffle), Fs	1,200	[Hz]
	Moving mass, incl. air (free air, no baffle), Mms	0.22	[g]
3	Force factor, Bxl		[N/A]
3, 5	Suspension compliance, Cms		[mm/N]
3, 5	Equivalent air volume, Vas		[lit.]
3, 5	Mechanical resistance, Rms		[Ns/m]
3, 5	Mechanical Q, Qms		[-]
3, 5	Electrical Q, Qes		[-]
3, 5	Total Q, Qts		[-]
4	Voice coil resistance, RDC	3.8	[ohm]
6	Voice coil inductance, Le (measured at 10 kHz)		[μH]
	Voice coil inside diameter	22	[mm]
	Voice coil winding height	1.6	[mm]
	Air gap height	2.5	[mm]
	Magnet weight		[g]
	Total unit net weight excl. packaging		[kg]
3, 6	Krm		[mohm]
3, 6	Erm		[-]
3, 6	Kxm		[mH]
3, 6	Exm		[-]

Note 1 Measured in infinite baffle.

Note 2 Tested in free air (no cabinet).

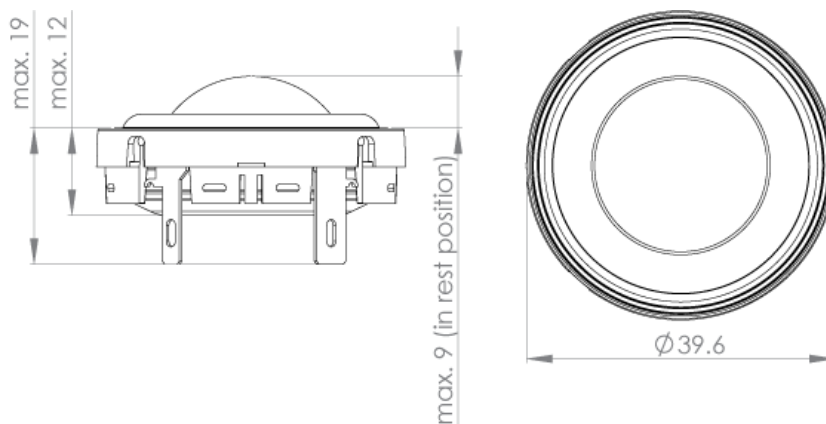
Note 3 Measured using a semi-constant current source, nominal level 2 mA.

Note 4 Measured at 20 deg. C

Note 5 Measured at 25 deg. C

Note 6 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 Krm, Erm, Kxm, and Exm. This more accurate transducer model is described in a technical paper (PDF) [here](#).

## OUTLINE DRAWING AND NOMINAL DIMENSIONS, TW022WA01 (mm)



### MORE INFO



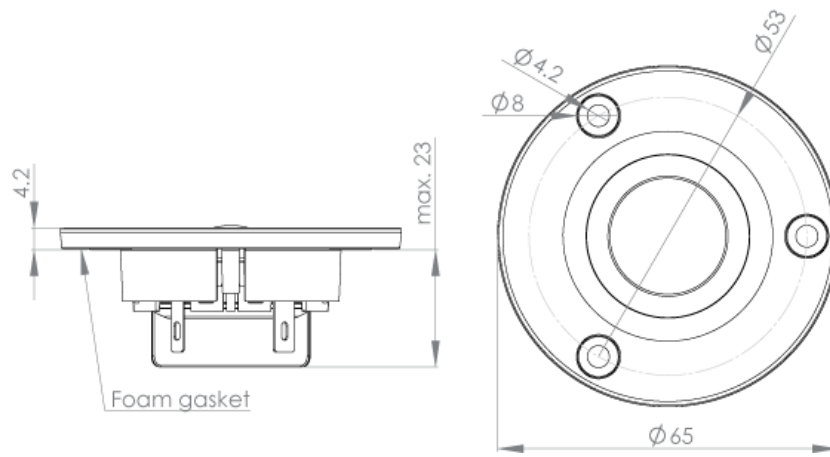
PDF data sheet (XXMB)

[All Wavecor drive units](#)

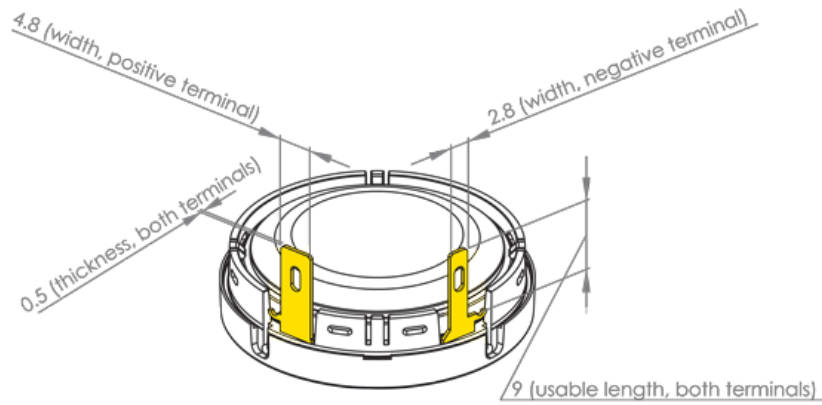
[Technical pages](#)

## OUTLINE DRAWING AND NOMINAL DIMENSIONS, TW022WA02 (mm)





### TERMINAL NOMINAL DIMENSIONS (mm)



Terminal plating: Gold

### PACKAGING AND ORDERING INFORMATION

Part no. TW022WA01-01	Version without face plate, bulk packaging
Part no. TW022WA02-01	Version with face plate, individual packaging (one pair per box)
Part no. TW022WA02-02	Version with face plate, bulk packaging

Latest update: Apr. 21, 2010

Specifications are subject to change without any further notice.  
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