

# SPECIFICATIONS

## TW013WA01 13 mm textile super tweeter, 4 ohm

The TW013WA01 super tweeter was designed to add an extra dimension of extreme high frequency performance to systems that feature only conventional tweeters.

At the same time, due to the compact size and low resonance frequency, the TW013WA01 is an ideal tweeter for compact 2- or 3-way speaker systems.

### FEATURES

- 13 mm design to ensure real super sonic treble reproduction
- Copper cap shielding of center pole to reduce voice coil induction and ensure full output level at the highest frequencies
- Precision-coated textile diaphragm for improved consistency and high-frequency extension
- Optimized dome shape for ultra high frequency roll-off
- 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
- Internal volume vented through to a rear chamber 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 foam gasket attached for hassle-free mounting and secure cabinet sealing



### NOMINAL SPECIFICATIONS

Notes	Parameter	Value	Unit
	Nominal size	13	[mm]
	Nominal impedance	4	[ohm]
	Recommended frequency range	5 - 45	[kHz]
1, 4	Sensitivity, 2.83V/1m (average SPL in range 5 - 40 kHz)	87	[dB]
	Power handling, short term, IEC 268-5, 4 kHz@12dB/oct.		[W]
	Power handling, long term, IEC 268-5, 4 kHz@12dB/oct.		[W]
	Power handling, continuous, IEC 268-5, 4 kHz@12dB/oct.	20	[W]
	Effective radiating area, S <sub>d</sub>	2.1	[cm <sup>2</sup> ]
3, 4, 6	Resonance frequency (free air, no baffle), F <sub>s</sub>	1,100	[Hz]
	Moving mass, incl. air (free air, no baffle), M <sub>ms</sub>	0.12	[g]
3	Force factor, Bxl	0.88	[N/A]
3, 4, 6	Suspension compliance, C <sub>ms</sub>	0.18	[mm/N]
3, 4, 6	Equivalent air volume, V <sub>as</sub>	1.13	[ml]
3, 4, 6	Mechanical resistance, R <sub>ms</sub>	0.70	[Ns/m]
3, 4, 6	Mechanical Q, Q <sub>ms</sub>	1.17	[-]
3, 4, 6	Electrical Q, Q <sub>es</sub>	3.3	[-]
3, 4, 6	Total Q, Q <sub>ts</sub>	0.86	[-]
4	Voice coil resistance, R <sub>DC</sub>	3.1	[ohm]
5	Voice coil inductance, L <sub>e</sub> (measured at 10 kHz)		[μH]
	Voice coil inside diameter	22	[mm]
	Voice coil winding height	1.4	[mm]
	Air gap height	2.0	[mm]
	Theoretical linear motor stroke, X <sub>max</sub>	±0.3	[mm]
	Magnet weight		[g]
	Total unit net weight excl. packaging		[kg]
3, 4, 5	K <sub>rm</sub>		[mohm]
3, 4, 5	E <sub>rm</sub>		[-]
3, 4, 5	K <sub>xm</sub>		[mH]
3, 4, 5	E <sub>xm</sub>		[-]

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.

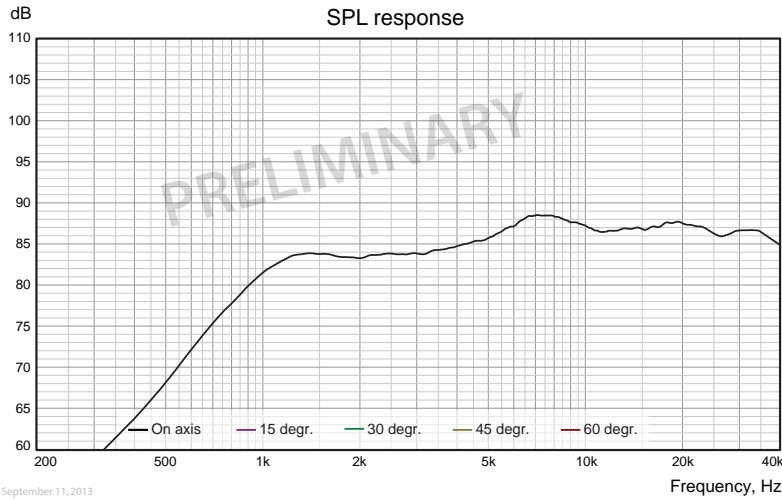
Note 4 Measured at 25 deg. C

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](http://www.linearx.com)), involving parameters K<sub>rm</sub>, E<sub>rm</sub>, K<sub>xm</sub>, and E<sub>xm</sub>. This more accurate transducer model is described in a technical paper [here at our web site](#).

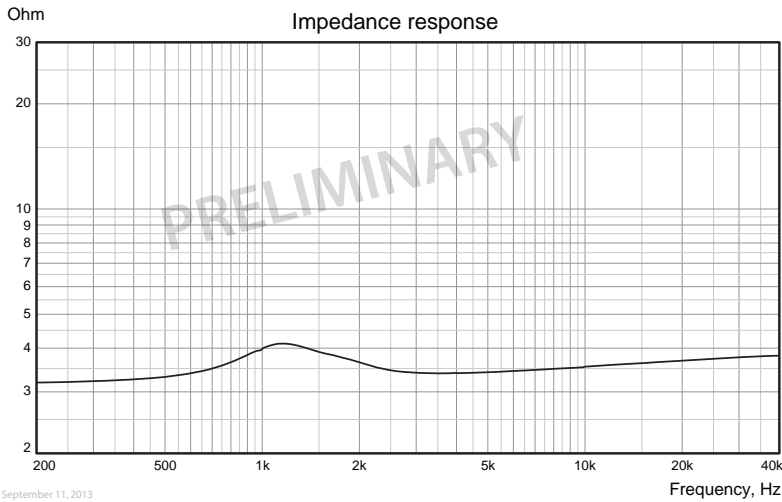
Note 6 Measured before burn in

# SPECIFICATIONS

## TW013WA01 13 mm textile super tweeter, 4 ohm

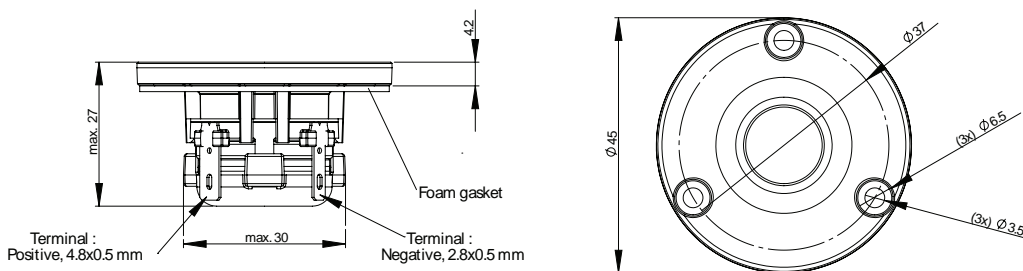


Measuring conditions, SPL  
 Driver mounting: Flush in infinite baffle, back side open (no cabinet)  
 Microphone distance: 1.0 m  
 Input level: 2.83 V<sub>RMS</sub>  
 Smoothing: 1/6 oct.



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)



### PACKAGING AND ORDERING INFORMATION

Part no. TW013WA01-01	Pair packaging (two pieces per box)
Part no. TW013WA01-02	Bulk packaging

Latest update: September 16, 2013