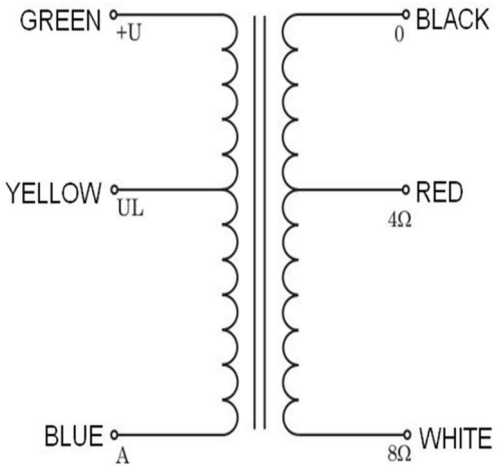
Toroidy.pl Transformatory L. Lachowski Sp.k.
Kolonia Koplany 1E
16-061 Juchnowiec Kościelny
www.toroidy.pl

AFTT-50-600

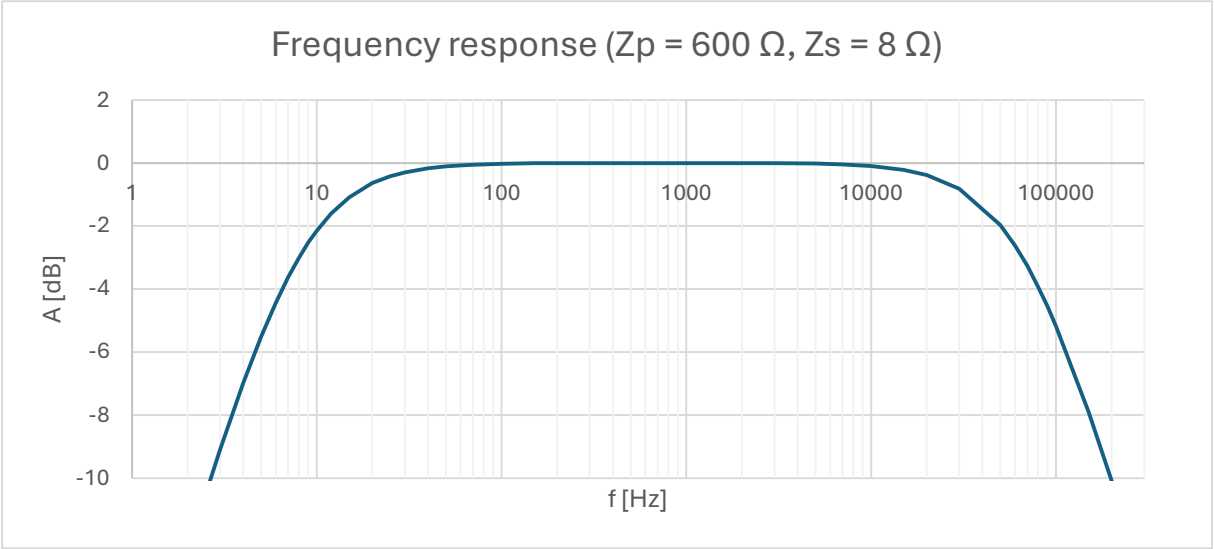
Audio frequency toroidal output transformer intended for high fidelity valve amplifiers, designed for single ended operation. Based on patented technology of air-gapped toroidal audio output transformer, manufactured in accordance with Pat.239728. Wound on annealed, 0,27 mm tape-thickness, grain oriented silicon steel (GOSS) core, with high-grade, OFC double enamelled wire. Inter-winding insulation, consisting of double layer of mylar dielectric tape withstands test voltage of 2 kV, minimalizing risk of primary to secondary insulation breakdown, due to flyback pulse during accidental load disconnection. Due to elaborate design and interleaving, transformer offers broad and flat frequency response, without significant resonance peaks in the passband. Low copper resistance minimizes losses and enhances loudspeaker damping. Tapped secondary winding allows for easy connection of both 4 and 8 Ω loads with essentially no difference in terms of sound quality.

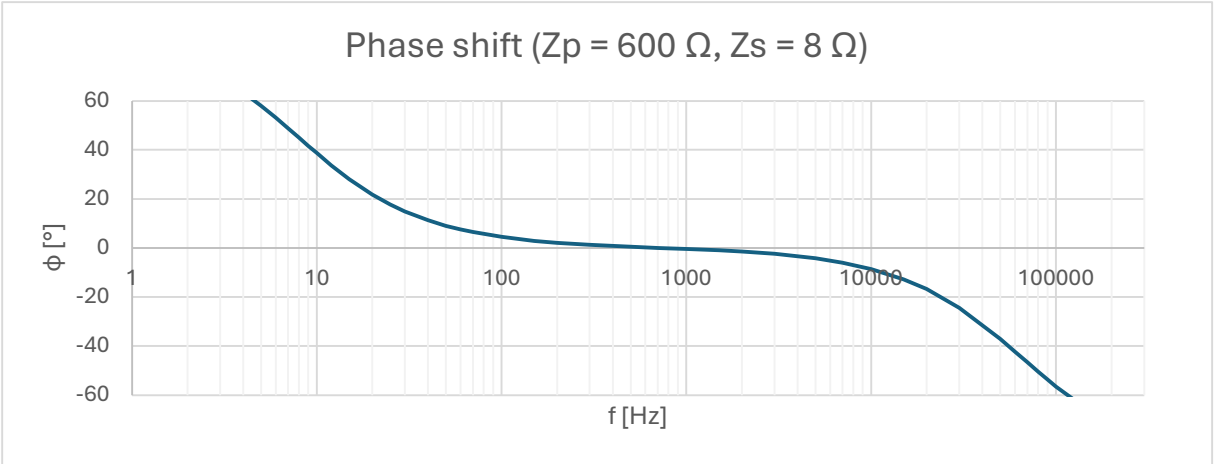
ELECTRICAL SPECIFICATIONS		
Parameter	**Nominal value**	**Comments**
Output power	50 W	
Primary impedance	600 Ω	
Secondary impedance	4 Ω / 8 Ω	
Turns ratio	8,66	ref. 8 Ω tap
	12,25	ref. 4 Ω tap
UL tap	43%	
Primary DC resistance	9,5 Ω	blue - yellow
	6,5 Ω	yellow - green
Secondary DC resistance	0,21 Ω	black - white
	0,12 Ω	black - red
Efficiency	95%	
Insertion loss	0,5 dB	
Max DC anode current	230 mA	
Primary inductance	48,2 H	
Leakage inductance	0,96 mH	PRI to SEC
Interwinding capacitance	1,22 nF	
Dielectric strength	2000 V	duration 60 s
Bandwidth	8 Hz – 66 kHz	±3 dB, 50 W
Distortion	0,25%	50 Hz, 50 W

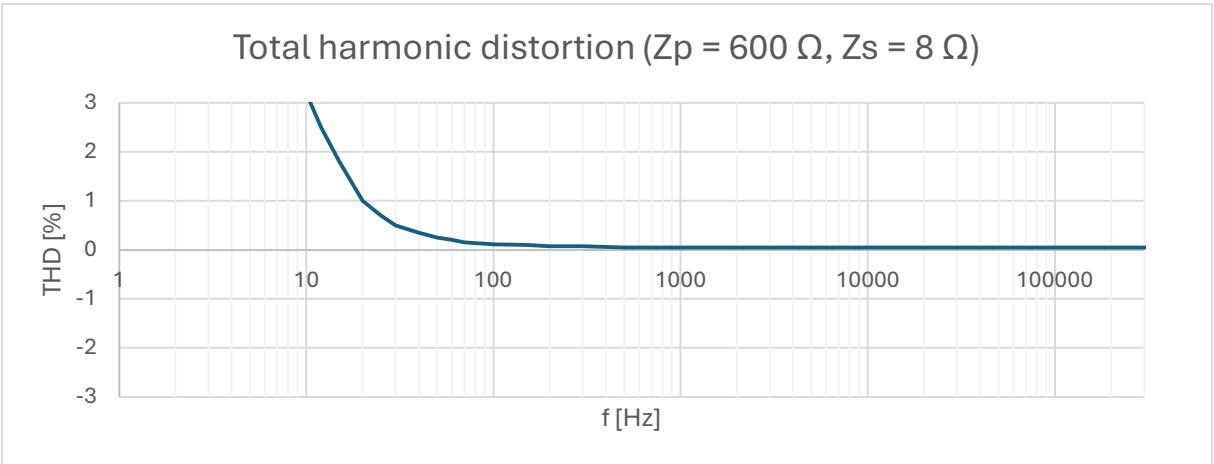


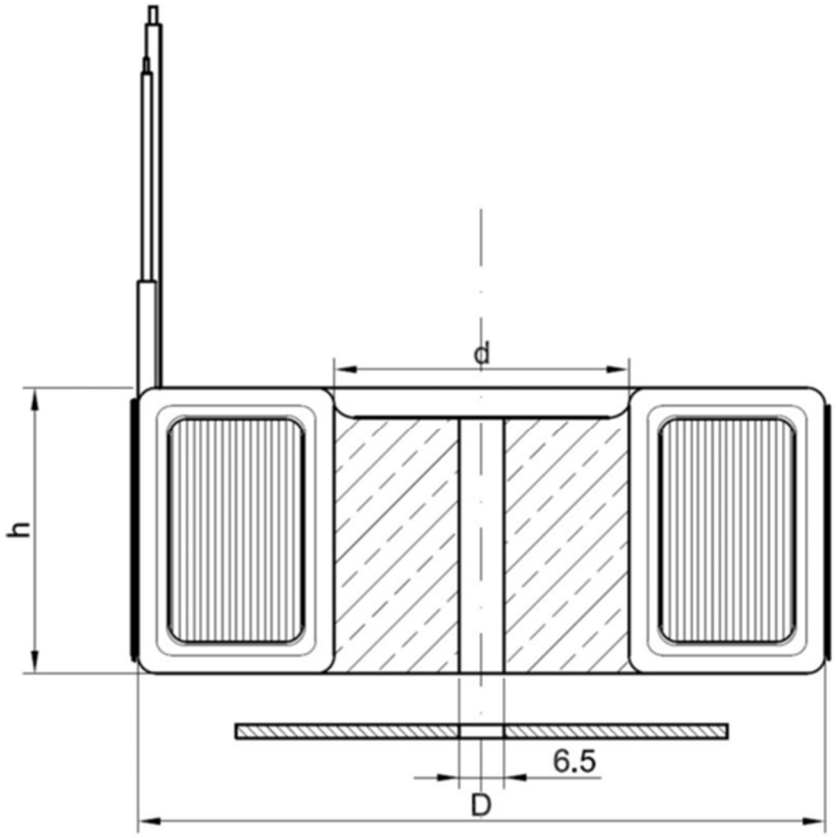
Test conditions

Resistance measured on Fluke 8845A digital multimeter, using 4-wire Kelvin test circuit. Inductances and capacitances measured on GW Instek LCR-816 meter, using 4-wire Kelvin test circuit, with test frequency either 100 Hz or 2 kHz, depending on reactance value. Distortion, frequency and phase measurements performed on Keysight U8903B Audio Analyzer, with both primary and secondary windings terminated with resistances equal to their nominal impedance.


Frequency response (Zp = 600 Ω, Zs = 8 Ω)
2
0
-2
-4
-6
-8
-10
A [dB]
1
10
100
1000
10000
100000
f [Hz]


Phase shift (Zp = 600 Ω, Zs = 8 Ω)
60
40
20
0
-20
-40
-60
ϕ [°]
1
10
100
1000
10000
100000
f [Hz]


Total harmonic distortion (Zp = 600 Ω, Zs = 8 Ω)
3
2
1
0
-1
-2
-3
THD [%]
1
10
100
1000
10000
100000
f [Hz]



DIMENSIONS AND WEIGHT	
Outer diameter (D)	115 mm
Inner diameter (d)	40 mm
Height (h)	65 mm
Weight	2,5 kg
Leads length (L)	250 mm

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