TRAFCO-VDV-600-32-HPH impedance matching transformer.

Most modern headphones have an impedance of 32 Ohms. Earlier types and some very high quality phones are at 600 Ohms. These 600 Ohms types are very well suited for tube headphone amplifiers. Suppose you wish to join the qualities of modern 32 Ohms headphones, with excellent tube circuitry, then a good impedance match is mandatory. The small toroidal transformer VDV-600-32-HPH does this. Now you can connect your 32 Ohms headphones to valve circuitry, which works the best in a 600 Ohms load.

The specifications of this matching transformer are outstanding. The output level is way over the standard 1 Vrms output in 32 Ohms, thus creating a large headroom. The bandwidth is wider than ever seen before. Special care is given to low distortion magnetics to prevent any loss of precious micro details in the sound stage.

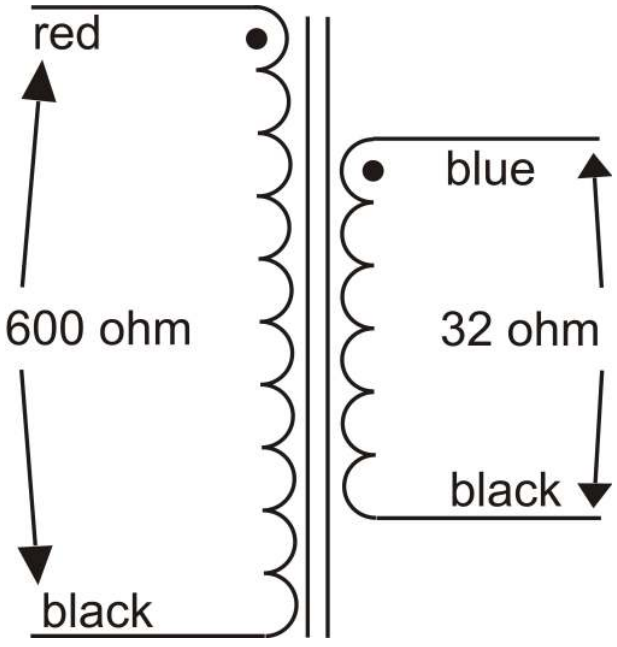
This impedance matching transformer can also be used to optimally match high quality 600 Ohms headphones to modern transistor headphone amplifiers. The matching is both ways: from high to low, or from low to high impedance.

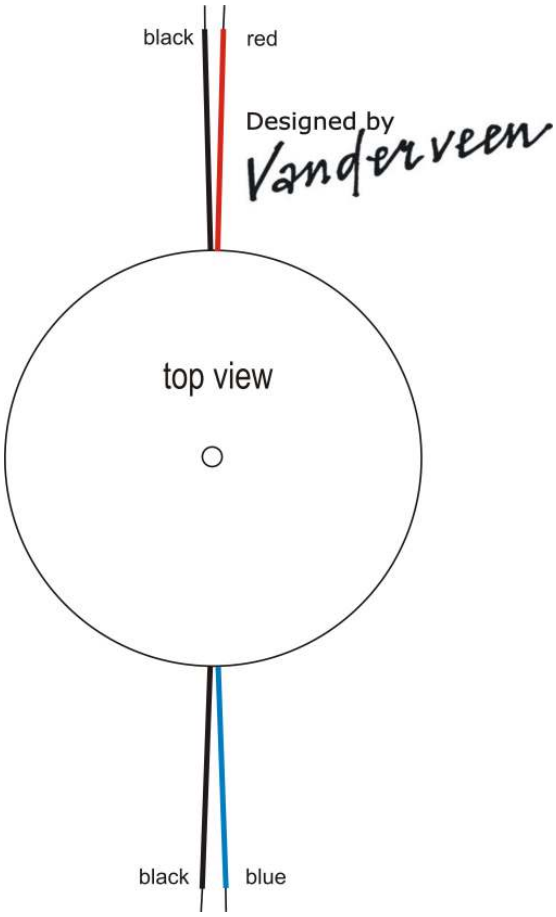
dimensions: 66 mm x 35mm.

weight: 0,35 Kg.

price: 65€

technical data:





WIDE BANDWIDTH TOROIDAL SPECIAL HEADPHONE TRANSFORMER

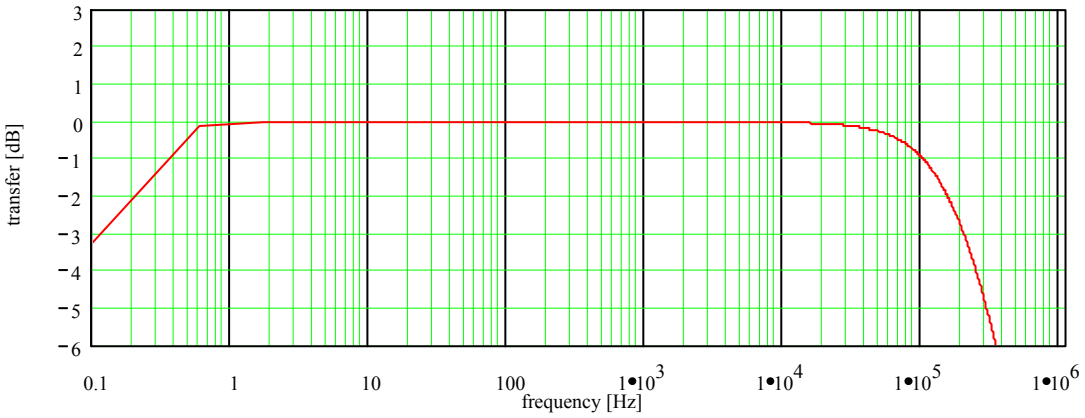
Type and Application		VDV-600-32-HPH impedance match	
Primary Impedance	:	$Raa = 0.6$	[kΩ]
Secondary Impedance	:	$Rls = 32$	[Ω]
Turns Ratio Np/Ns	:	$Ratio = 4.332$	[ ]
UL-tap:		$tap = 0$	[%]
Cathode Feedback Ratio	:	$cfb = 0$	[%]
-.1 dB Frequency Range [Hz to kHz] (3)	:	$flf = 0.487$	$fhf = 42.128$
-1 dB Frequency Range [Hz to kHz] (3)	:	$fl1 = 0.208$	$fh1 = 95.663$
-3 dB Requency Range [Hz to kHz] (3)	:	$fl3 = 0.106$	$fh3 = 186.624$
Nominal Power (1)	:	$Pn = 3$	[W]
- 3 dB Power Bandwidth starting at	:	$fu = 14$	[Hz]
Total primary Inductance (2)	:	$Lp = 175$	[H]
Primary Leakage Inductance	:	$lsp = 0.7$	[mH]
Effective Primary Capacitance	:	$cip = 1.2$	[nF]
Total Primary DC Resistance	:	$Rip = 40$	[Ω]
Total Secondary DC Resistance	:	$Ris = 4.3$	[Ω]
Tubes Plate Resistance per section	:	$ri = 0.05$	[kΩ]
Insertion Loss	:	$Iloss = 0.795$	[dB]
Q-factor 2nd order HF roll-off (5)	:	$Q = 0.334$	[ ]
HF roll-off Specific Frequency (5)	:	$Fo = 497.61$	[kHz]
Quality Factor (5)	:	$QF = 2.5 \bullet 10^5$	[ ]
Quality Decade Factor = log(QF) (5)	:	$QDF = 5.398$	[ ]
Tuning Factor (5)	:	$TF = 7.068$	[ ]
Tuning Decade Factor = log(TF) (5)	:	$TDF = 0.849$	[ ]
Frequency Decade Factor (4,5)	:	$FDF = 6.247$	[ ]

(1): calculated under the conditions of balancing the DC-currents and the AC-anode voltages of the powertubes driving the transformer
(2): measured at 100Vrms at 50Hz over total primary
(3): calculation at 1 Watt in Rls; ri and Rls are pure Ohmic
(4): defined as FDF = log(fh3/fl3) = number of frequency decades transfered
(5): ir. Menno van der Veen; Theory and Practise of Wide Bandwidth Toroidal Output Transformers; preprint 3887, 97th AES Convention San Francisco

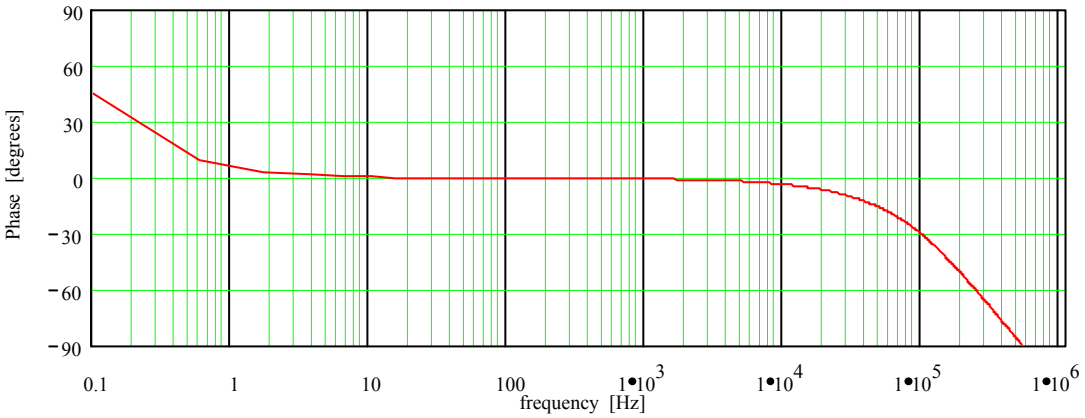
Final specs can deviate 15% or improve without notice

TOROIDAL HEADPHONE TRANSFORMER ; VDV-600-32-HPH Impedance match

Frequency Response; Vertical 1 dB/div; Horizontal .1 Hz to 1 MHz (3)



Phase Response; Vertical 30 deg./div; Horizontal .1 Hz to 1 MHz



Differential Phase Distortion; vert. 30 deg./div; hor .1 Hz to 1 MHz

See: W.M.Leach, Differential Time Delay..; JAES sept.89 pp.709-715