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)	:	$QF = 2.5 \cdot 10^5$	[ ]
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 100 Vrms 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
(C):   Copyright 1994 Vanderveen; Version 1.7; results date 23-7-2012.
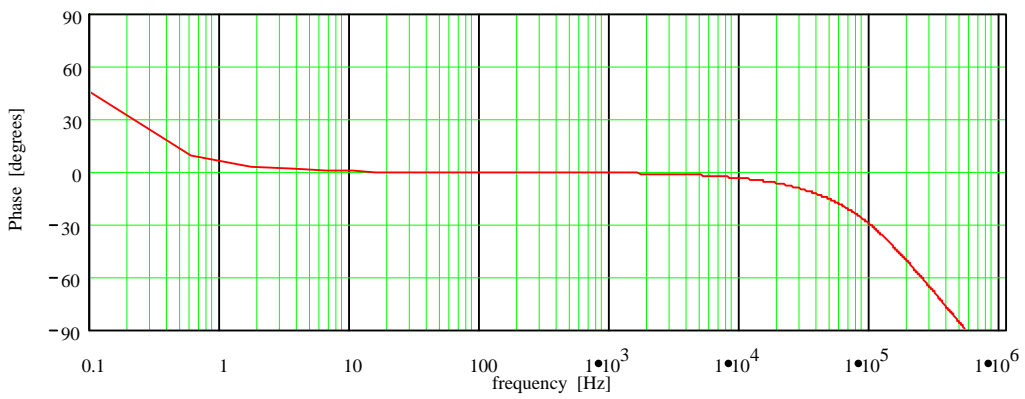   Final specs can deviate 15% or improve without notice
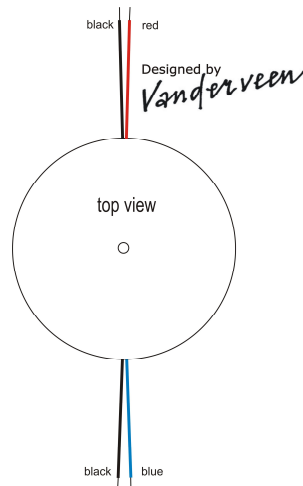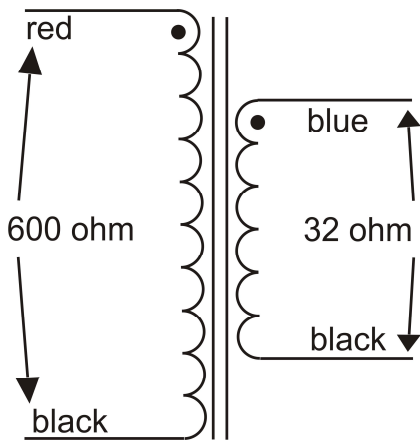
TOROIDAL HEADPHONE TRANSFORMER ; VDV-600-32-HPH Impedance match

Frequency Response; Vertical 1 dB/div; Horizontal .1 Hz to 1 MHz   (3)
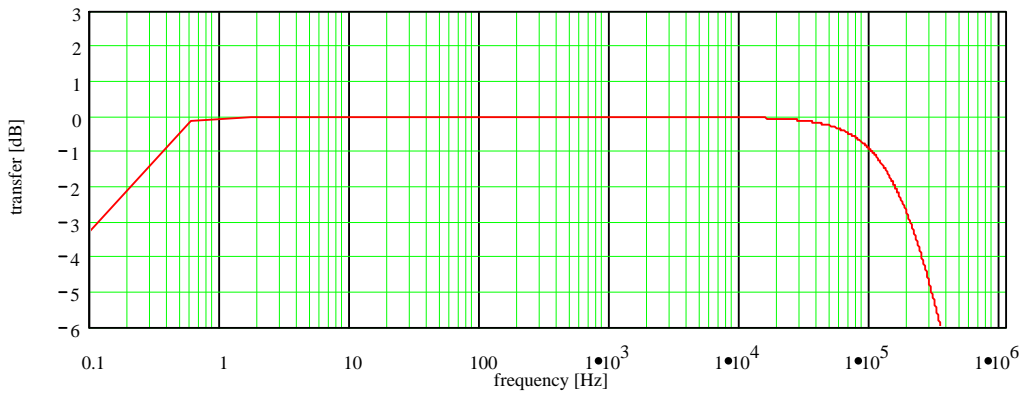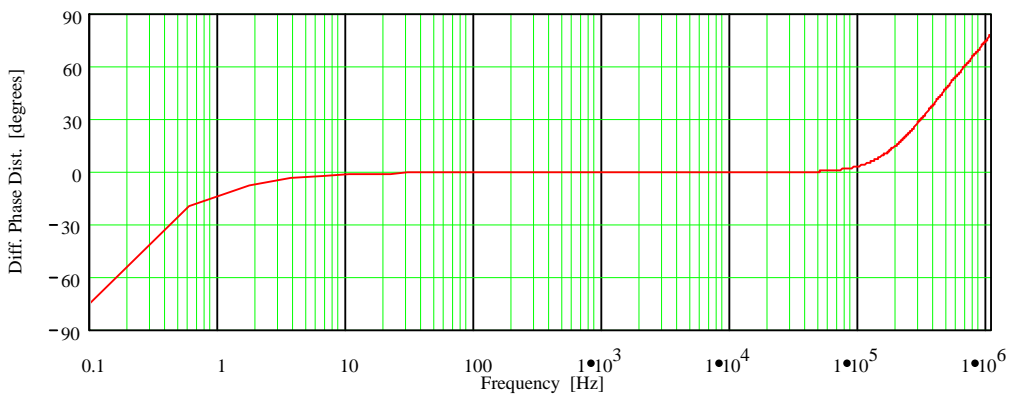
Phase Response; Vertical 30 deg./div; Horizontal .1 Hz to 1 MHz

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