

2100-PP

The very wide bandwidth (300 kHz) toroidal push-pull output transformer 2100 is meant for very high power (100 Watt) extreme loud high quality tube amplifiers. Four paralleled power tubes should be used like the EL34 (guitar) or the 6550 or KT88/90 for high-end applications. Screen grid taps at 40 % are present and the primary impedance is close to 2 kOhm. The secondary is at the standardized 5 Ohm impedance. This transformer is meant for very loud and dynamic high quality sound reproduction with bas-reflex or closed box loudspeakers. Larger than normal ratios of overall negative feedback are allowed, while resonances are absent. See (*) for a detailed description of this special amplifier set up

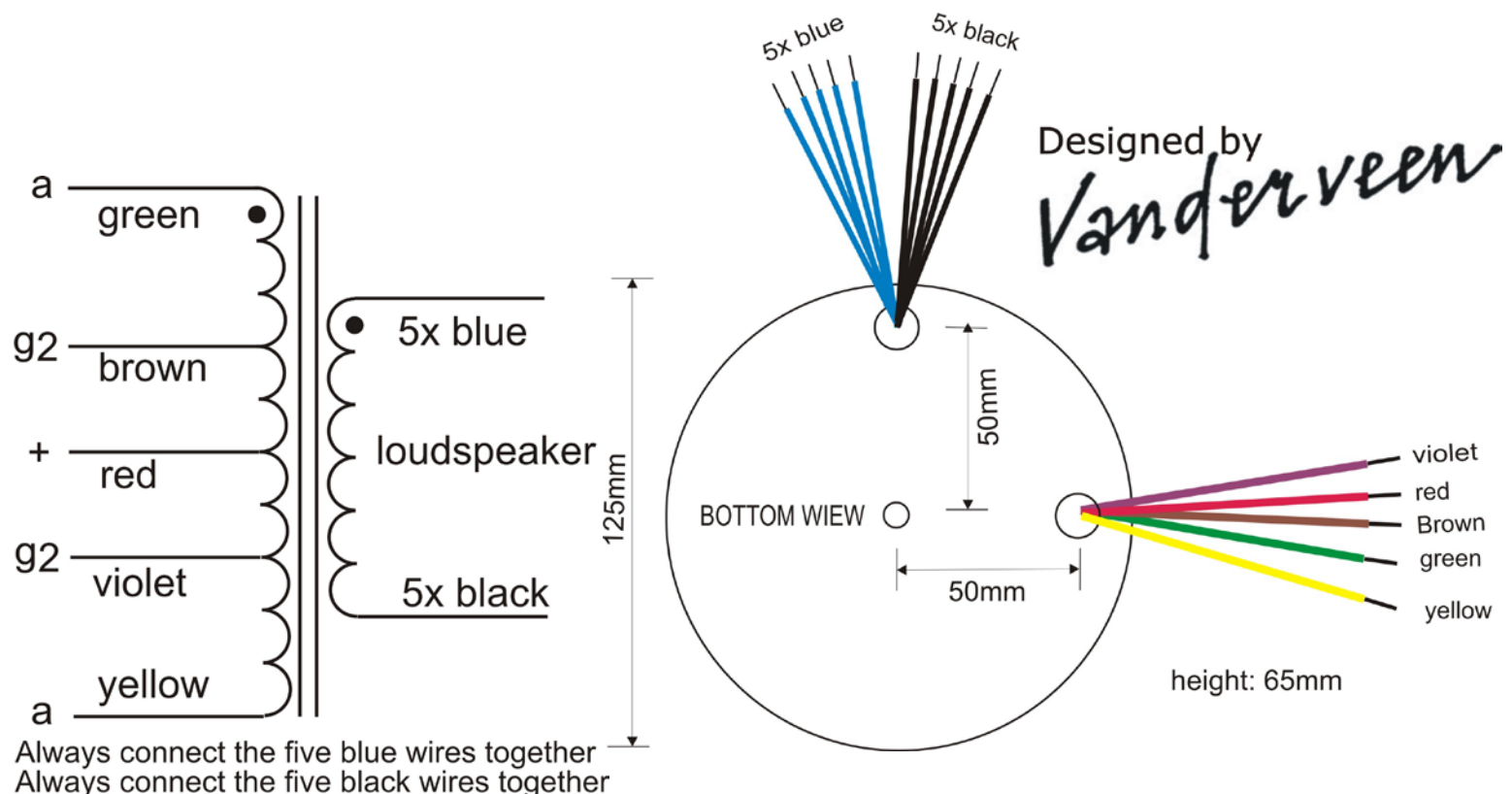
(*) Menno van der Veen: Modern High-end Valve Amplifiers based on toroidal output transformers; Elektor, ISBN: 978-0-905705-63-7; chapter 11.

dimensions: 125mm x 65mm

weight: 2,3Kg.

price: 203€

technical data:



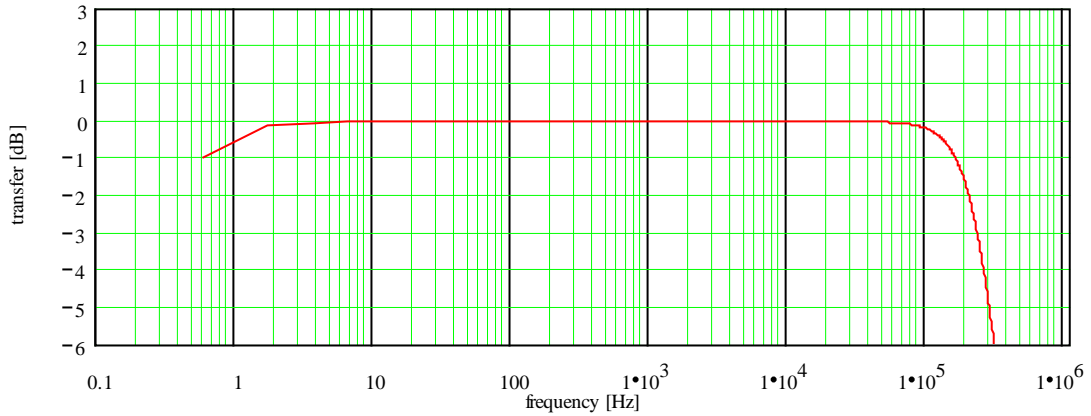
WIDE BANDWIDTH TOROIDAL PUSH-PULL TUBE OUTPUT TRANSFORMER

Type and Application		VDV-2100.	
Primary Impedance	:	Raa = 1.885	[kΩ]
Secondary Impedance	:	Rls = 5	[Ω]
Turns Ratio Np/Ns	:	Ratio = 19.417	[]
UL-tap:		tap = 40	[%]
Cathode Feedback Ratio	:	cfb = 0	[%]
-1 dB Frequency Range [Hz to kHz] (3)	:	flf = 1.401	fhf = 96.495
-1 dB Frequency Range [Hz to kHz] (3)	:	fl1 = 0.598	fh1 = 152.162
-3 dB Frequency Range [Hz to kHz] (3)	:	fl3 = 0.304	fh3 = 217.003
Nominal Power (1)	:	Pn = 100	[W]
- 3 dB Power Bandwidth starting at	:	fu = 21	[Hz]
Total primary Inductance (2)	:	Lp = 530	[H]
Primary Leakage Inductance	:	lsp = 1.8	[mH]
Effective Primary Capacitance	:	cip = 0.585	[nF]
Total Primary DC Resistance	:	Rip = 104	[Ω]
Total Secondary DC Resistance	:	Ris = 0.18	[Ω]
Tubes Plate Resistance per section	:	ri = 1	[kΩ]
Insertion Loss	:	Iloss = 0.379	[dB]
Q-factor 2nd order HF roll-off (5)	:	Q = 0.695	[]
HF roll-off Specific Frequency (5)	:	Fo = 220.9	[kHz]
Quality Factor (5)	:	QF = 2.944•10 ⁵	[]
Quality Decade Factor = log(QF) (5)	:	QDF = 5.469	[]
Tuning Factor (5)	:	TF = 2.423	[]
Tuning Decade Factor = log(TF) (5)	:	TDF = 0.384	[]
Frequency Decade Factor (4,5)	:	FDF = 5.853	[]

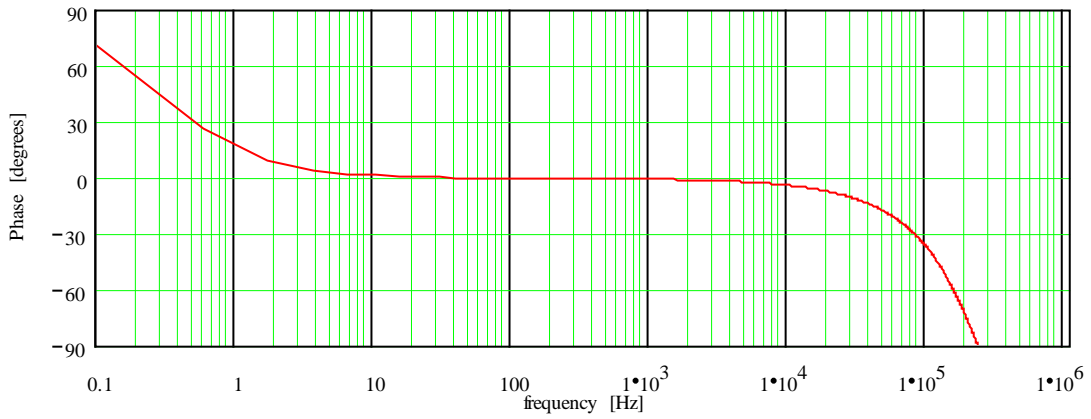
- (1): calculated under the conditions of balancing the DC-currents and the AC-anode voltages of the powertubes driving the transformer
- (2): measured at 230Vrms at 50Hz over total primary
- (3): calculation at 1 Watt in Rls; ri and Rls are pure Ohmic
- (4): defined as FDF = log(fh3/fl3) = number of frequency decades transferred
- (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 2-2-2012.
Final specs can deviate 15% or improve without notice

TRAFCO TOROIDAL PUSH-PULL TRANSFORMER ; VDV-2100

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

