

4070-CFB-PP

The wide bandwidth toroidal push-pull output transformer 4070-CFB has, besides Ultra Linear taps at 33%, extra windings for 10% cathode feedback. These local feedbacks combined create a low impedance drive of this transformer, resulting in a 70 Watt power bandwidth from 14 Hz up to 200 kHz. With 6550 and KT88 tubes high quality low distortion sound reproduction is achieved while micro details are well amplified, without further losses. The primary impedance is 4 kOhm with a standardized 5 Ohm secondary. See (*) for a description of a special amplifier with this transformer.

(*) Menno van der Veen: High-end Valve Amplifiers 2

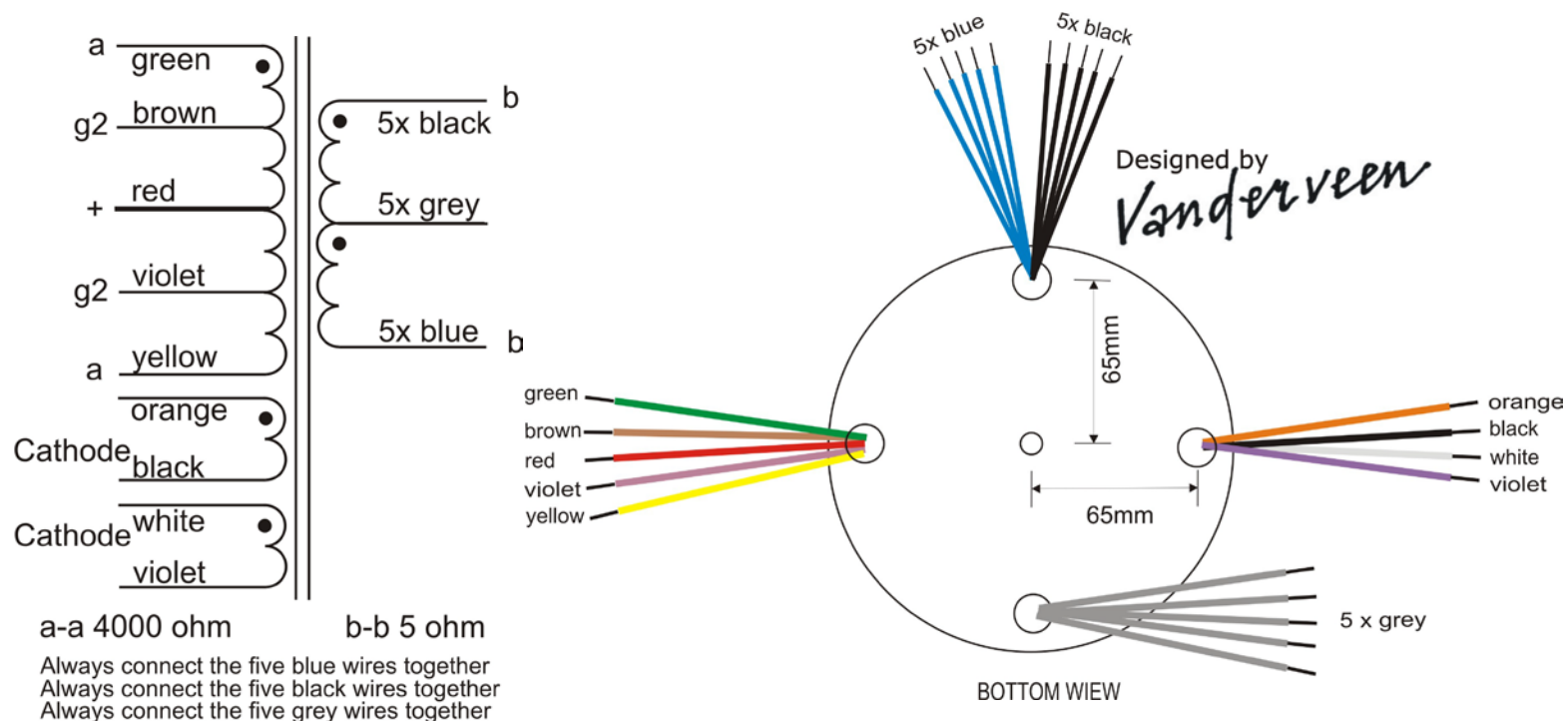
New models and applications; Elektor; ISBN: 978-0-905705-90-3; chapter 8

dimensions: 105mm x 55mm.

weight: 4,6 Kg.

price: 289€

technical data:



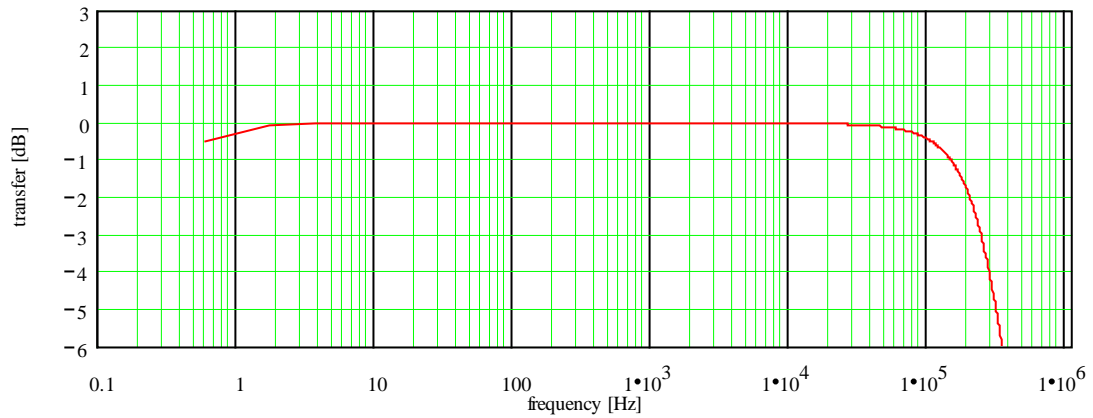
WIDE BANDWIDTH TOROIDAL PUSH-PULL TUBE OUTPUT TRANSFORMER

Type and Application		VDV-4070-CFB.	
Primary Impedance	:	Raa = 3.995	[kΩ]
Secondary Impedance	:	Rls = 5	[Ω]
Turns Ratio Np/Ns	:	Ratio = 28.267	[]
UL-tap:		tap = 33	[%]
Cathode Feedback Ratio	:	cfb = 7.1	[%]
-1 dB Frequency Range [Hz to kHz] (3)	:	flf = 0.971	fhf = 67.483
-1 dB Frequency Range [Hz to kHz] (3)	:	fl1 = 0.414	fh1 = 137.031
-3 dB Frequency Range [Hz to kHz] (3)	:	fl3 = 0.211	fh3 = 223.771
Nominal Power (1)	:	Pn = 70	[W]
- 3 dB Power Bandwidth starting at	:	fu = 14	[Hz]
Total primary Inductance (2)	:	Lp = 1.056•10 ³	[H]
Primary Leakage Inductance	:	lsp = 3.1	[mH]
Effective Primary Capacitance	:	cip = 0.358	[nF]
Total Primary DC Resistance	:	Rip = 120	[Ω]
Total Secondary DC Resistance	:	Ris = 0.15	[Ω]
Tubes Plate Resistance per section	:	ri = 1	[kΩ]
Insertion Loss	:	Iloss = 0.253	[dB]
Q-factor 2nd order HF roll-off (5)	:	Q = 0.607	[]
HF roll-off Specific Frequency (5)	:	Fo = 266.745	[kHz]
Quality Factor (5)	:	QF = 3.406•10 ⁵	[]
Quality Decade Factor = log(QF) (5)	:	QDF = 5.532	[]
Tuning Factor (5)	:	TF = 3.115	[]
Tuning Decade Factor = log(TF) (5)	:	TDF = 0.493	[]
Frequency Decade Factor (4,5)	:	FDF = 6.026	[]

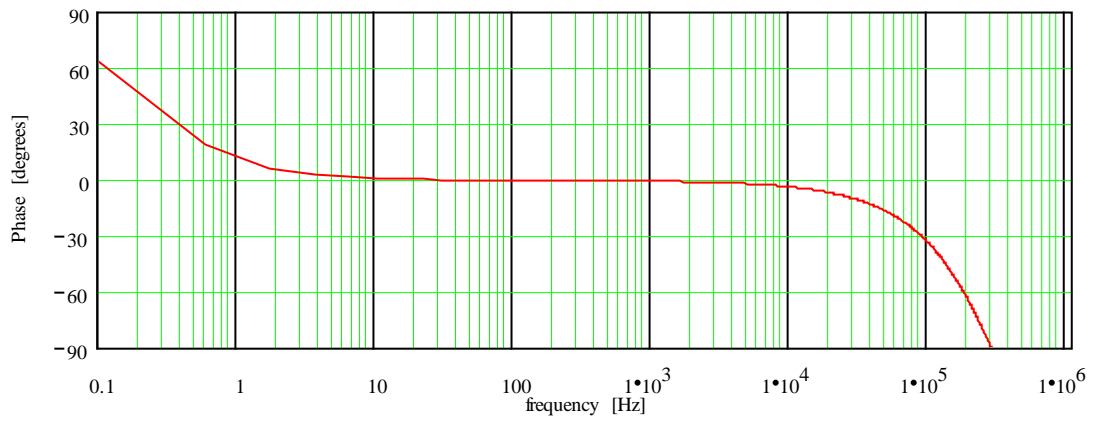
- (1): calculated under the conditions of balancing the DC-currents and the AC-anode voltages of the powertubes driving the transformer
- (2): measured at 230Vrms at 50Hz over total primary
- (3): calculation at 1 Watt in Rls; ri and Rls are pure Ohmic
- (4): defined as FDF = log(fh3/fl3) = number of 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-4070-CFB

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

