2100-SSCR-CFB-PP

This special toroidal transformer combines all the goodies of earlier designs. It can handle 100 W push-pull, has a primary impedance of 2 kOhm, and is special meant for 4 output tubes like the 6550 or KT88, two by two in push-pull. The screen grid ultra linear feedback winding is totally separated from the primary. This enables lower screen grid supply voltages than the anode voltages, thus largely lowering the harmonic distortion. Also two separate windings are added for cathode feedback of 10 % ratio, largely raising the damping factor of the amplifier without using negative feedback. For an indication of application, please go to (*) where in chapter 8 a two valve application is mentioned. Only the output valves should be doubled to fully use the properties of this special output transformer.

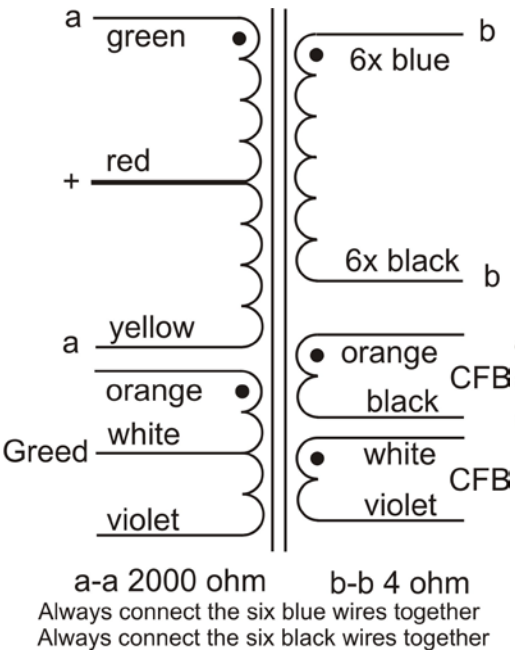
(*) Menno van der Veen: "High-end Valve Amplifiers 2"; Elektor ISBN 978-0-905705-90-3

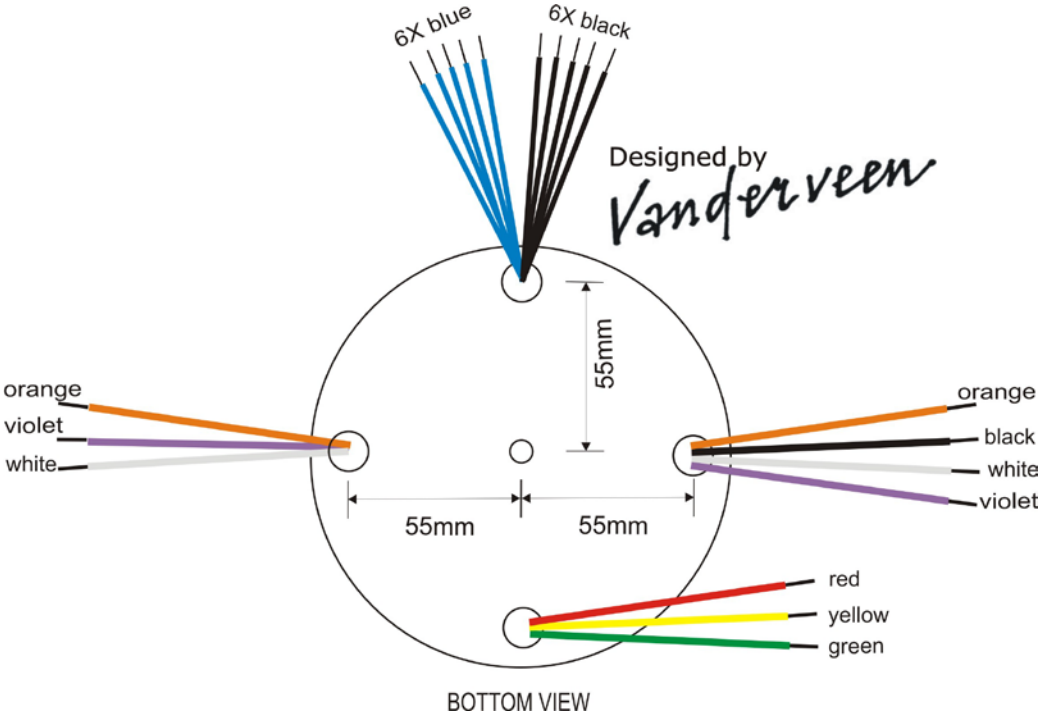
dimensions: 155mm x 90mm.

weight: 5,3 Kg.

price: 309€

technical data:





WIDE BANDWIDTH TOROIDAL PUSH-PULL TUBE OUTPUT TRANSFORMER

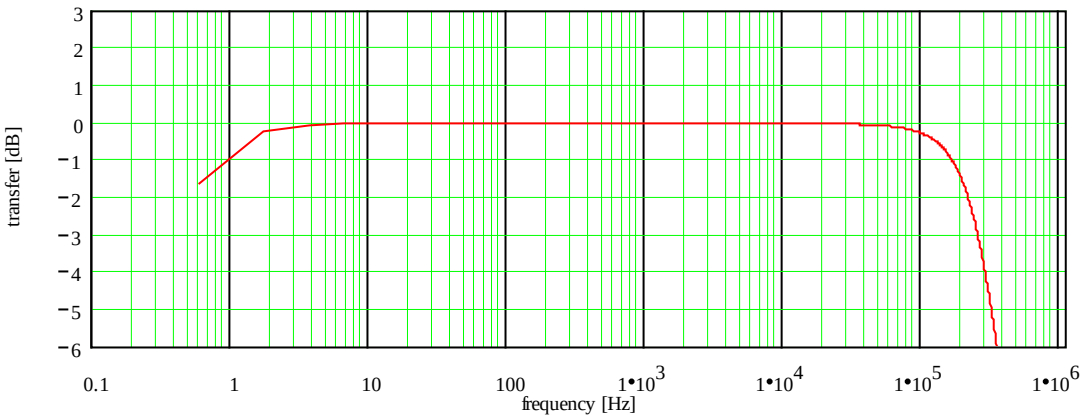
Type and Application		VDV-2100-SSCR-CFB.	
Primary Impedance	:	Raa = 2.011	[kΩ]
Secondary Impedance	:	Rls = 4	[Ω]
Turns Ratio Np/Ns	:	Ratio = 22.421	[ ]
UL-tap:		tap = 40	[%]
Cathode Feedback Ratio	:	cfb = 10	[%]
-.1 dB Frequency Range [Hz to kHz] (3)	:	flf = 1.855	fhf = 84.373
-1 dB Frequency Range [Hz to kHz] (3)	:	fl1 = 0.791	fh1 = 154.016
-3 dB Requency Range [Hz to kHz] (3)	:	fl3 = 0.403	fh3 = 234.272
Nominal Power (1)	:	Pn = 100	[W]
- 3 dB Power Bandwidth starting at	:	fu = 14	[Hz]
Total primary Inductance (2)	:	Lp = 410	[H]
Primary Leakage Inductance	:	lsp = 1.3	[mH]
Effective Primary Capacitance	:	cip = 0.619	[nF]
Total Primary DC Resistance	:	Rip = 62.1	[Ω]
Total Secondary DC Resistance	:	Ris = 0.153	[Ω]
Tubes Plate Resistance per section	:	ri = 1	[kΩ]
Insertion Loss	:	Iloss = 0.29	[dB]
Q-factor 2nd order HF roll-off (5)	:	Q = 0.652	[ ]
HF roll-off Specific Frequency (5)	:	Fo = 255.566	[kHz]
Quality Factor (5)	:	$QF = 3.154 \cdot 10^5$	[ ]
Quality Decade Factor = log(QF) (5)	:	QDF = 5.499	[ ]
Tuning Factor (5)	:	TF = 1.845	[ ]
Tuning Decade Factor = log(TF) (5)	:	TDF = 0.266	[ ]
Frequency Decade Factor (4,5)	:	FDF = 5.765	[ ]

(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 transfered
(5): ir. Menno van der Veen; Theory and Practise of Wide Bandwidth Toroidal Output Transformers; preprint 3887, 97th AES Convention San Francisco

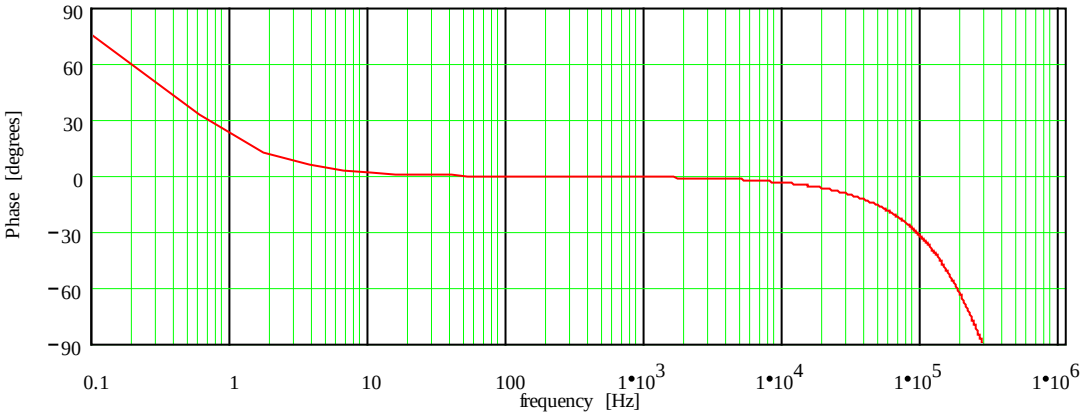
Final specs can deviate 15% or improve without notice

TRAFCO TOROIDAL PUSH-PULL TRANSFORMER ; VDV-2100-SSCR-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