WIDE BANDWIDTH TOROIDAL PUSH-PULL TUBE OUTPUT TRANSFORMER

# Specialist Range Series output transformers for tube amplifiers

Designed by Vanderveen

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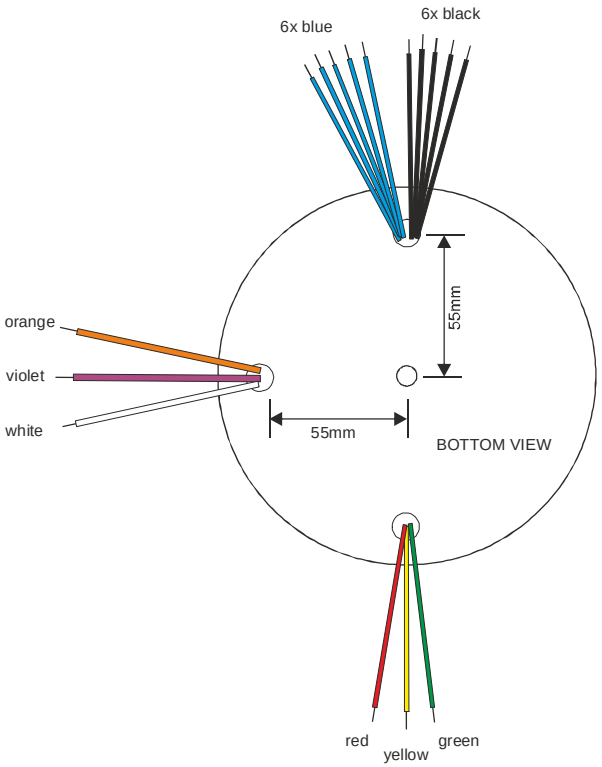
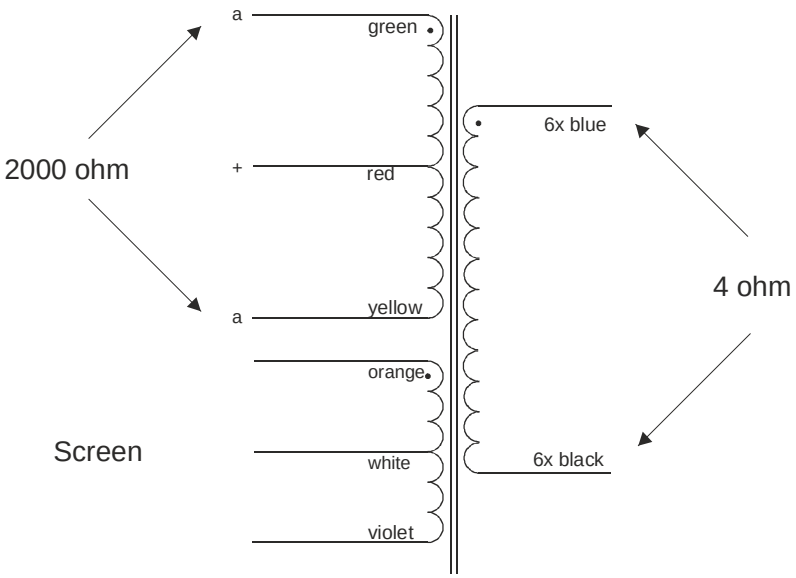
|---|---|---|---|
| Type and Application | | VDV-2100-SSCR reference specs. | |
| Primary Impedance | : | Raa = 2.011 | [kΩ] |
| Secondary Impedance | : | Rls = 4 | [Ω] |
| Turns Ratio Np/Ns | : | Ratio = 22.421 | [ ] |
| UL-tap: | | tap = 40 | [%] |
| Cathode Feedback Ratio | : | cfb = 0 | [%] |
| -.1 dB Frequency Range [Hz to kHz] (3) | : | flf = 2.581 | fhf = 113.157 |
| -1 dB Frequency Range [Hz to kHz] (3) | : | fl1 = 1.101 | fh1 = 147.645 |
| -3 dB Requency Range [Hz to kHz] (3) | : | fl3 = 0.56 | fh3 = 195.062 |
| Nominal Power (1) | : | Pn = 100 | [W] |
| - 3 dB Power Bandwidth starting at | : | fu = 14 | [Hz] |
| Total primary Inductance (2) | : | Lp = 389 | [H] |
| Primary Leakage Inductance | : | lsp = 1.91 | [mH] |
| Effective Primary Capacitance | : | cip = 0.604 | [nF] |
| Total Primary DC Resistance | : | Rip = 49.8 | [Ω] |
| Total Secondary DC Resistance | : | Ris = 0.116 | [Ω] |
| Tubes Plate Resistance per section | : | ri = 2 | [kΩ] |
| Insertion Loss | : | Iloss = 0.227 | [dB] |
| Q-factor 2nd order HF roll-off (5) | : | Q = 0.756 | [ ] |
| HF roll-off Specific Frequency (5) | : | Fo = 183.271 | [kHz] |
| Quality Factor (5) | : | QF = $2.037 \cdot 10^{5}$ | [ ] |
| Quality Decade Factor = log(QF) (5) | : | QDF = 5.309 | [ ] |
| Tuning Factor (5) | : | TF = 1.709 | [ ] |
| Tuning Decade Factor = log(TF) (5) | : | TDF = 0.233 | [ ] |
| Frequency Decade Factor (4,5) | : | FDF = 5.542 | [ ] |

(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
(C): Copyright 1994 Vanderveen; Version 1.7; results date 29-08-2011. Final specs can deviate 15% or improve without notice




Always connect the six blue wires together
Always connect the six black wires together
diameter approx.153mm
height approx.89mm
Lead length solid leads approx. 200mm
fully potted in aluminium black textured shell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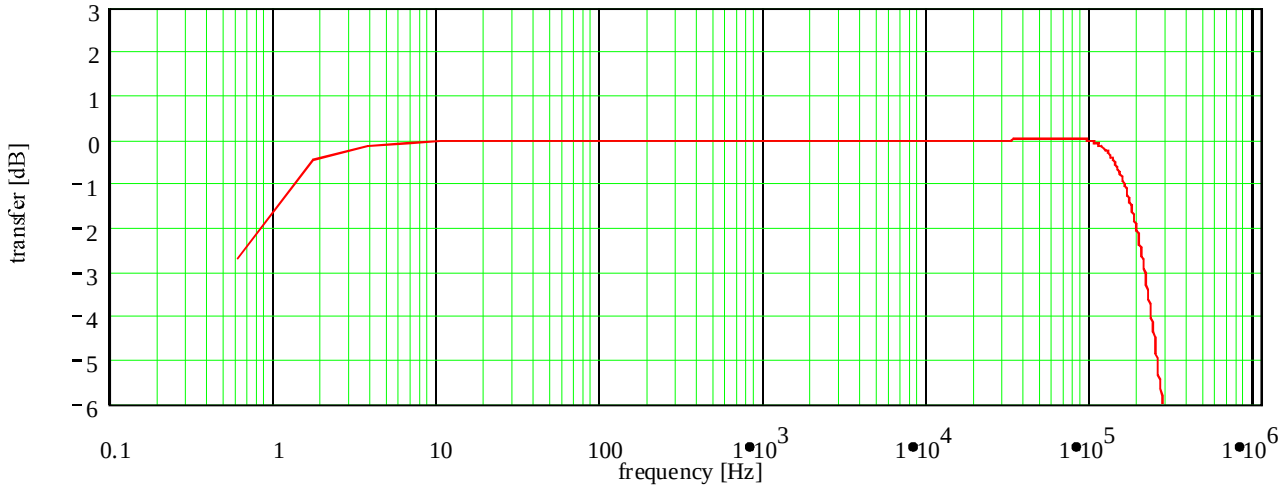
VDV2100SSCR

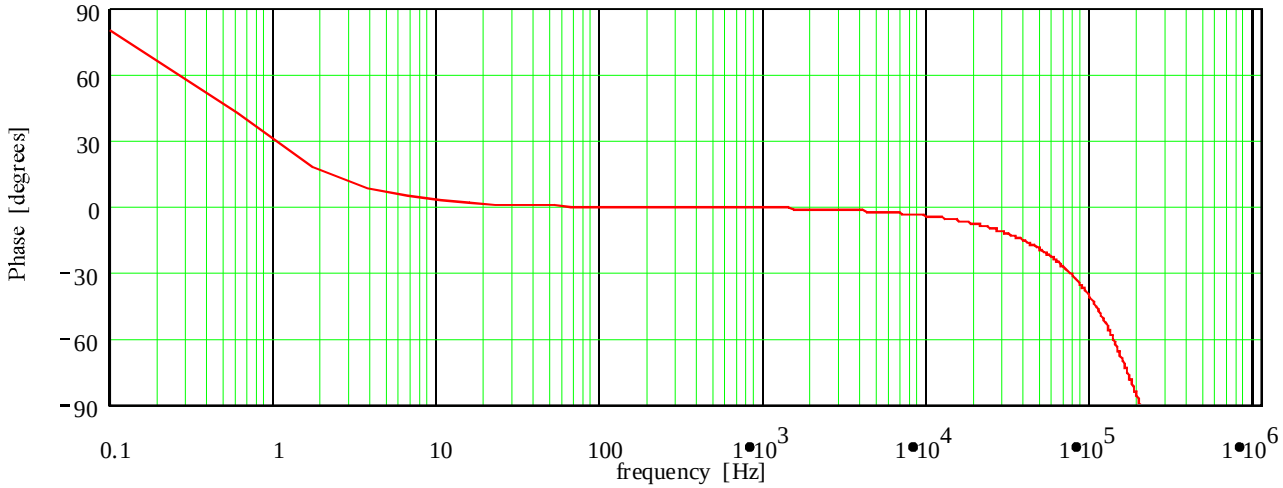
WIDE BANDWITH TOROIDAL
SPECIALIST RANGE
TUBE OUTPUT TRANSFORMER

AMPLIMO TOROIDAL PUSH-PULL TRANSFORMER ; VDV-2100-SSCR; reference specs

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