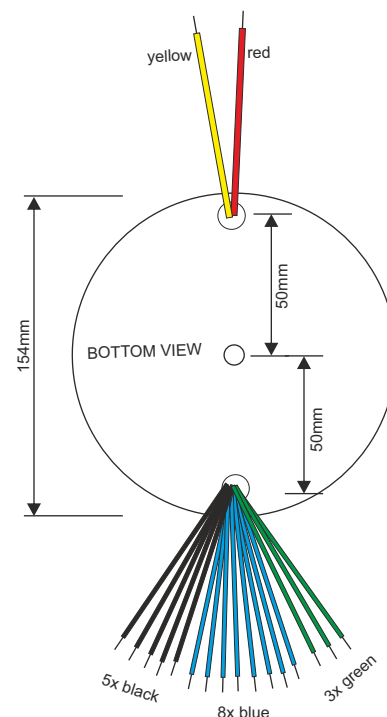


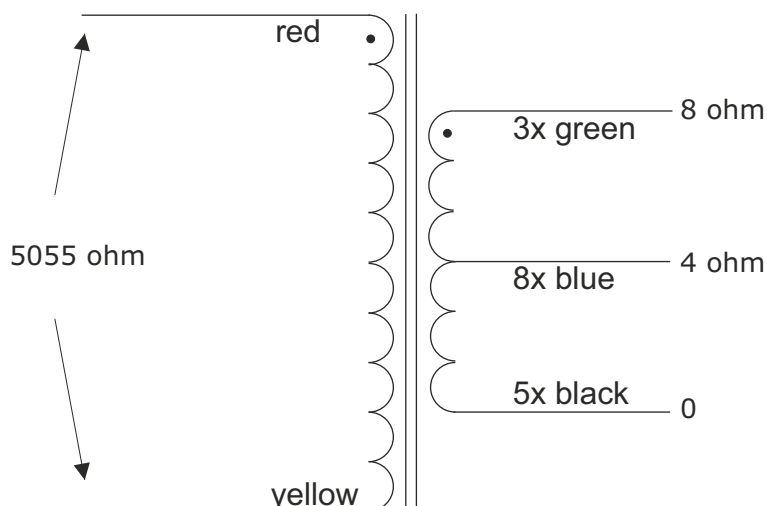
WIDE BANDWIDTH LOW LOSS TOROIDAL SINGLE ENDED OUTPUT TRANSFORMER

DESIGNED BY
VANDERVEEN

TYPE & APPLICATION	:	VDV-3050-SE; 300B & equivalents
Primary Impedance	:	Raa = 5.055 [kW]
Secondary Impedance	:	Rls = 4 [W]
Turns Ratio Np/Ns	:	Ratio = 35.551 []
-1 dB Frequency Range [Hz] - [kHz]	:	flf = 12.427 fhf = 20.329
-1 dB Frequency Range [Hz] - [kHz]	:	fl1 = 5.301 fh1 = 45.321
-3 dB Frequency Range [Hz] - [kHz]	:	fl3 = 2.697 fh3 = 84.048
Nominal Power (1)	:	Pn = 13 [W]
Full Power Bandwidth Starting at	:	fPhom = 20 [Hz]
Total Primary Inductance (2)	:	Lp = 40 [H]
Primary Leakage Inductance to sec.	:	lsp = 10 [mH]
Effective Primary Capacitance	:	Cip = 1.2 [nF]
Saturation Primary Current	:	2·Idc = 143.428 [mA]
Total Primary DC Resistance	:	Rip = 80 [W]
Total Secondary DC Resistance	:	Ris = 0.1 [W]
Tubes Plate Resistance	:	rp = 0.7 [kW]
Insertion Loss	:	lloss = 0.174 [dB]
Q-factor 2-nd order HF roll-of (5)	:	Q = 0.491 []
HF roll-off Specific Frequency (5)	:	Fo = 134.083 [kHz]
Quality Factor = Lp/Lsp (5)	:	QF = 4·10 ³ []
Quality Decade Factor (5)	:	QDF = 3.602 []
Tuning Factor (5)	:	TF = 7.789 []
Tuning Decade Factor (5)	:	TDF = 0.892 []
Frequency Decade Factor (4,5)	:	FDF = 4.494 []



- (1): calculated and measured under the conditions of applying 0.5·Idc-sat.
 (2): 230 Volt 50 Hz measurement over the total primary winding
 (3): calculated and measured at 1 mWatt in Rls; ri and Rls are pure Ohmic
 (4): defined as FDF = log(fh3/fl3) = number of frequency decades transferred
 ir. Menno van der Veen; Theory and Practise of Wide Bandwidth Toroidal
 Output Transformers, 97-th AES Convention San Francisco, preprint
 (C): copyright Vanderveen 1997, Version 1.3; design date



13 Watt single ended power
 Primary impedance 5055ohm
 Power bandwidth 20Hz - 84kHz (-3dB)

Height 90 mm
 Diameter 154 mm
 Weight 4.6kg
 All leads solid and approx 200mm long
 Fully potted in aluminium black textured shell



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HB

02-03-2003

VDV3050SE / PAT-3050-SE

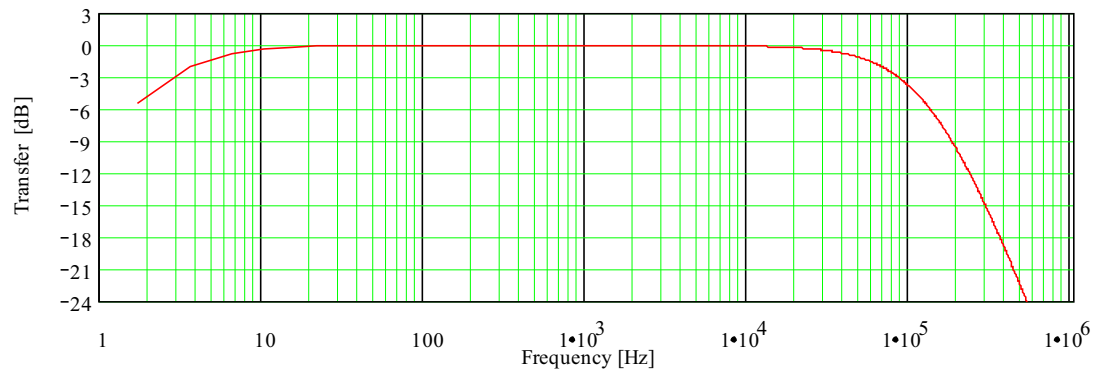
WIDE BANDWIDTH TOROIDAL
SINGLE_ENDED
 TUBE OUTPUT TRANSFORMER

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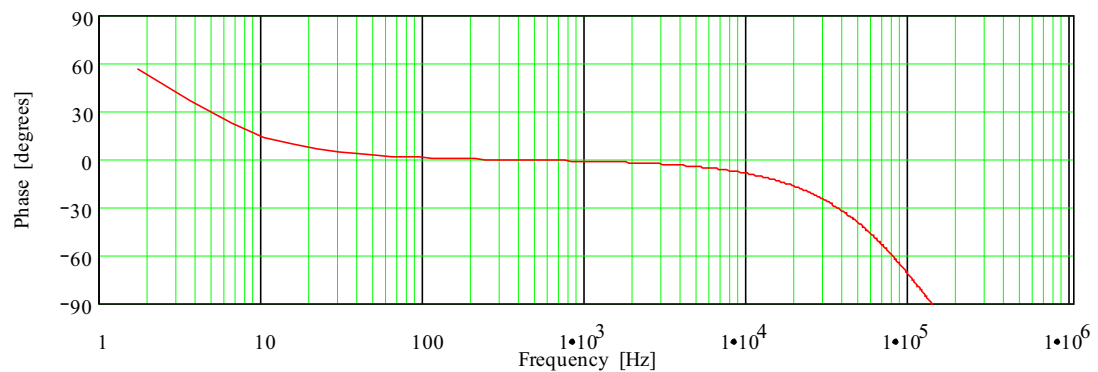
WIDE BANDWIDTH LOW LOSS TOROIDAL SINGLE ENDED OUTPUT TRANSFORMER

VDV - 3050 - SE

[dB] Frequency Response; Vertical: 3 dB/div; Horizontal: 1 Hz to 1 MHz (3)



[degrees] Phase Response; Vertical: 30 deg./div; Horizontal: 1 Hz to 1 MHz



[degrees] Differential Phase Response; vert. 30 deg./div; hor. 1 Hz to 1 MHz
See: W.M.Leach, Differential Time Delay.; JAES sept.89 pp.709-715

