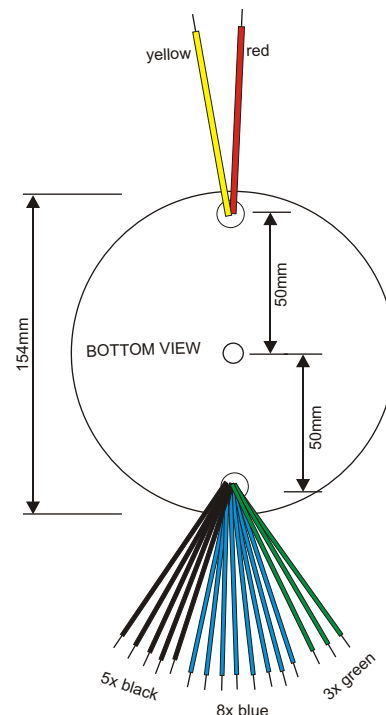


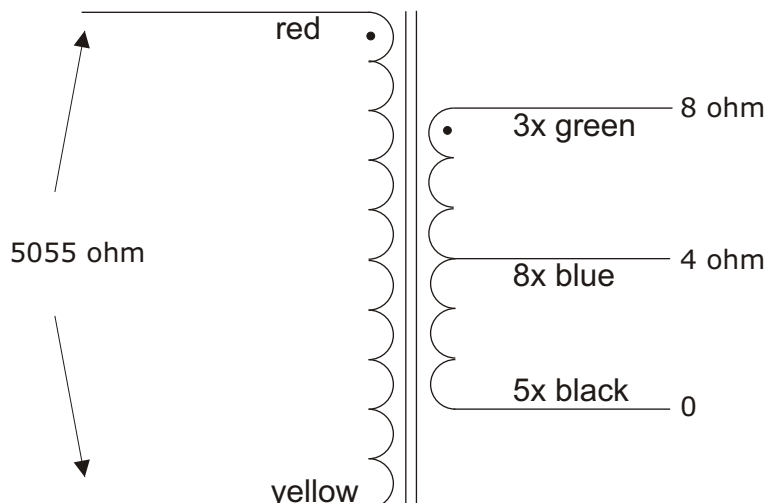
WIDE BANDWIDTH LOW LOSS TOROIDAL SINGLE ENDED OUTPUT TRANSFORMER

DESIGNED BY
VANDERVEEN

TYPE & APPLICATION	:	VDV-3050-SE; 300B & equivalents
Primary Impedance	:	Ra 5.055 [k]
Secondary Impedance	:	Rls 4 []
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 []
Total Secondary DC Resistance	:	Ris 0.1 []
Tubes Plate Resistance	:	rp 0.7 [k]
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
 (5): ir. Menno van der Veen; Theory and Practise of Wide Bandwidth Toroidal
 Output Transformers, 97-th AES Convention San Francisco, preprint
 copyright Vanderveen 1997, Version 1.3; design date



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

Height 89 mm
 Diameter 154 mm
 Weight 5.4kg
 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

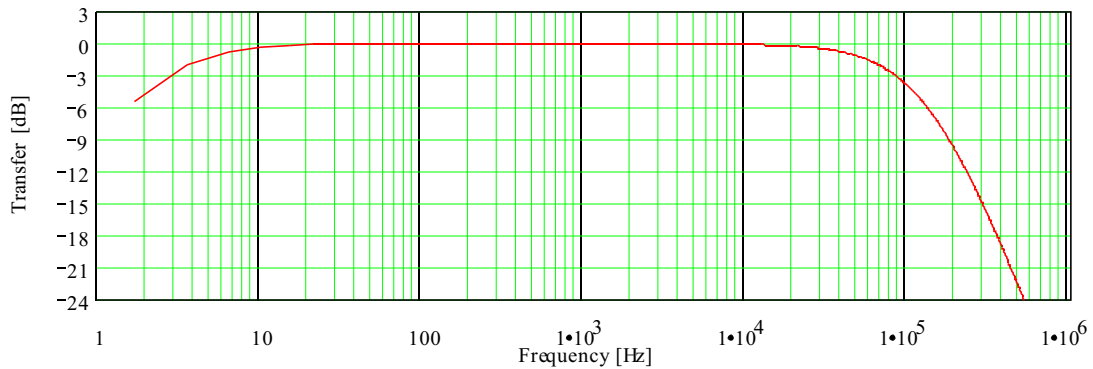
WIDE BANDWIDTH TOROIDAL
SINGLE_ENDED
 TUBE OUTPUT TRANSFORMER

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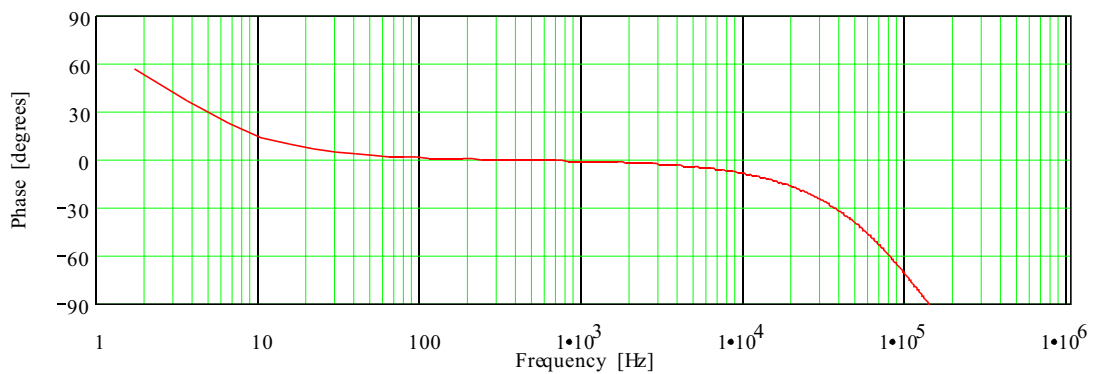
WIDE BANDWIDTH LOWLOSS TOROIDAL SINGLE ENDED OUTPUT TRANSFORMER

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

