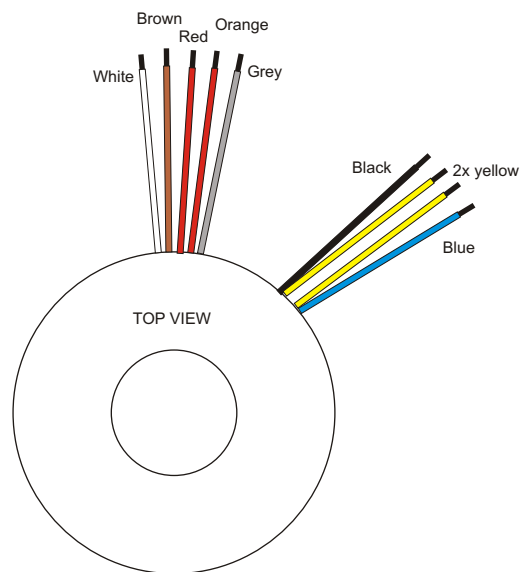


WIDE BANDWIDTH TOROIDAL PUSH-PULL TUBE OUTPUT TRANSFORMER

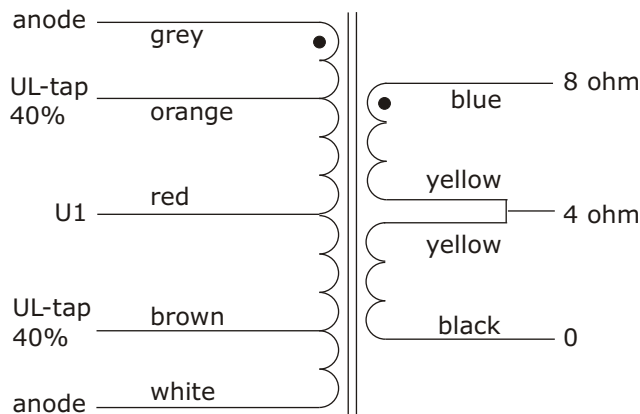
VANDESIGNED BY
VANDERVEEN

Type and Application	:	3A524-UL: VDV dedicated design	
Primary Impedance	:	Raa 3.545	[k]
Secondary Impedance	:	Rls 8	[]
Turns Ratio Np/Ns	:	Ratio 21.05	[]
Ultra Linear Tapping at	:	tap 40	[%]
-1 dB Frequency Range [Hz to kHz] (3):	:	flf 3.277	fhf 21.52
-1 dB Frequency Range [Hz to kHz] (3):	:	fl1 1.398	fh1 26.346
-3 dB Frequency Range [Hz to kHz] (3):	:	fl3 0.711	fh3 33.707
Nominal Power (1)	:	Pn 40	[W]
-3 dB Power Bandwidth starting at	:	fu 27	[Hz]
Total primary Inductance (2)	:	Lp 764	[H]
Primary Leakage Inductance	:	lsp 16.6	[mH]
Effective Primary Capacitance	:	cip 1.79	[nF]
Total Primary DC Resistance	:	Rip 72.9	[]
Total Secondary DC Resistance	:	Ris 0.423	[]
Tubes Plate Resistance per section	:	ri 20	[k]
Insertion Loss	:	lloss 0.308	[dB]
Q-factor 2nd order HF roll-off (5)	:	Q 0.789	[]
HF roll-off Specific Frequency (5)	:	Fo 30.554	[kHz]
Quality Factor (5)	:	QF 4.602·10 ⁴	[]
Quality Decade Factor = log(QF) (5)	:	QDF 4.663	[]
Tuning Factor (5)	:	TF 1.03	[]
Tuning Decade Factor = log(TF) (5)	:	TDF 0.013	[]
Frequency Decade Factor (4,5)	:	FDF 4.676	[]



- (1): calculated under the conditions of balancing the DC-currents and the AC-anode voltages of the powertubes driving the transformer
- (2): maximum value, measured over secondary, transferred to primary
- (3): calculation 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; preprint 3887, 97th AES Convention San Francisco
- (C): Copyright 1994 Vanderveen; Version 1.7; design date.....

Always connect the two red wires together
Always connect the two yellow wires together
diameter91mm
height35mm
mounting kit supplied



Use only one tap at a time !



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HB

July 2007

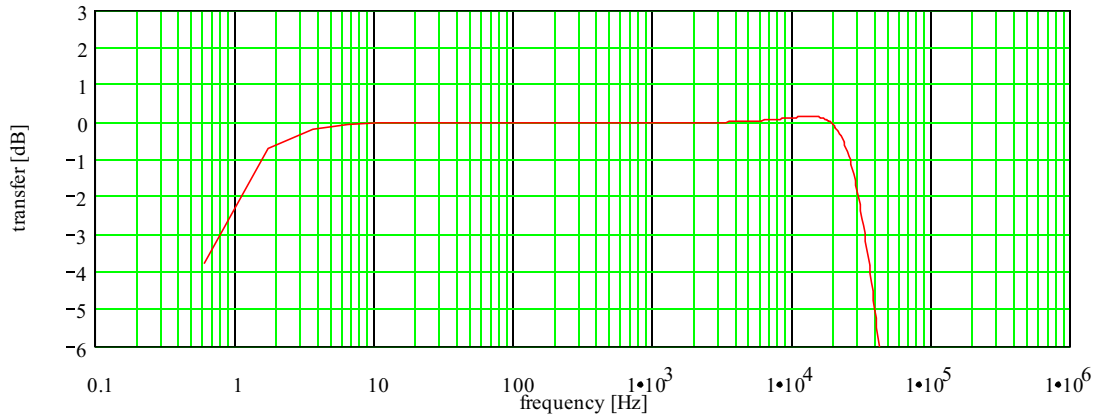
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3A524-UL

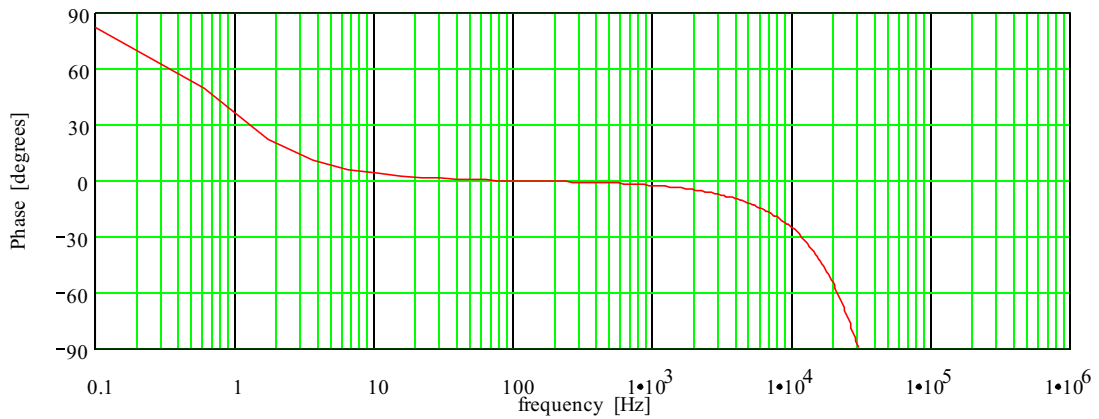
Wide bandwidth toroidal
tube output transformer
with UL-taps

WIDE BANDWIDTH TOROIDAL PUSH-PULL TUBE OUTPUT TRANSFORMER ; 3A524-UL

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

