PUSH-PULL TUBE OUTPUT TRANSFORMER

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Type and Application		Mable EL84-PP OPT test 20-10-2011.	
Primary Impedance	:	$Raa = 6.407$	[kΩ]
Secondary Impedance	:	$Rls = 8$	[Ω]
Turns Ratio Np/Ns	:	$Ratio = 28.3$	[ ]
UL-tap:		$tap = 14.5$	[%]
Cathode Feedback Ratio	:	$cfb = 0$	[%]
-.1 dB Frequency Range [Hz to kHz] (3)	:	$flf = 16.211$	$fhf = 3.126$
-1 dB Frequency Range [Hz to kHz] (3)	:	$fl1 = 6.914$	$fh1 = 7.109$
-3 dB Requency Range [Hz to kHz] (3)	:	$fl3 = 3.519$	$fh3 = 13.942$
Nominal Power (1)	:	$Pn = 10$	[W]
- 3 dB Power Bandwidth starting at	:	$fu = 24$	[Hz]
Total primary Inductance (2)	:	$Lp = 270$	[H]
Primary Leakage Inductance	:	$lsp = 6.08$	[mH]
Effective Primary Capacitance	:	$cip = 1.92$	[nF]
Total Primary DC Resistance	:	$Rip = 470$	[Ω]
Total Secondary DC Resistance	:	$Ris = 0.743$	[Ω]
Tubes Plate Resistance per section	:	$ri = 20$	[kΩ]
Insertion Loss	:	$Iloss = 0.668$	[dB]
Q-factor 2nd order HF roll-off (5)	:	$Q = 0.257$	[ ]
HF roll-off Specific Frequency (5)	:	$Fo = 50.747$	[kHz]
Quality Factor (5)	:	$QF = 4.441 \cdot 10^4$	[ ]
Quality Decade Factor = log(QF) (5)	:	$QDF = 4.647$	[ ]
Tuning Factor (5)	:	$TF = 0.089$	[ ]
Tuning Decade Factor = log(TF) (5)	:	$TDF = {}^-1.05$	[ ]
Frequency Decade Factor (4,5)	:	$FDF = 3.598$	[ ]

(1):   calculated under the conditions of balancing the DC-currents
          and the AC-anode voltages of the powertubes driving the transformer
(2):   measured at 300Vrms 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 15-08-2011.
          Final specs can deviate 15% or improve without notice

PUSH-PULL TRANSFORMER ; MABLE-EL84-pp OPT; product specs

Frequency Response; Vertical 1 dB/div; Horizontal .1 Hz to 1 MHz   (3)
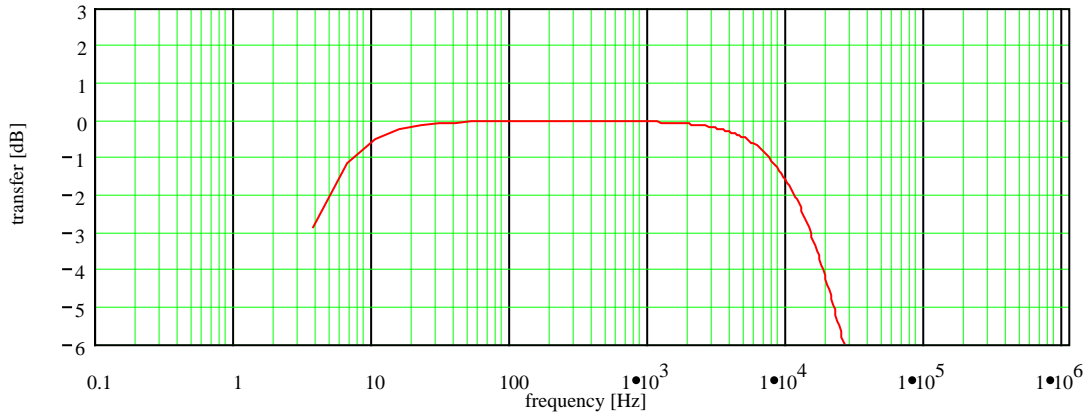
Phase Response; Vertical 30 deg./div; Horizontal .1 Hz to 1 MHz
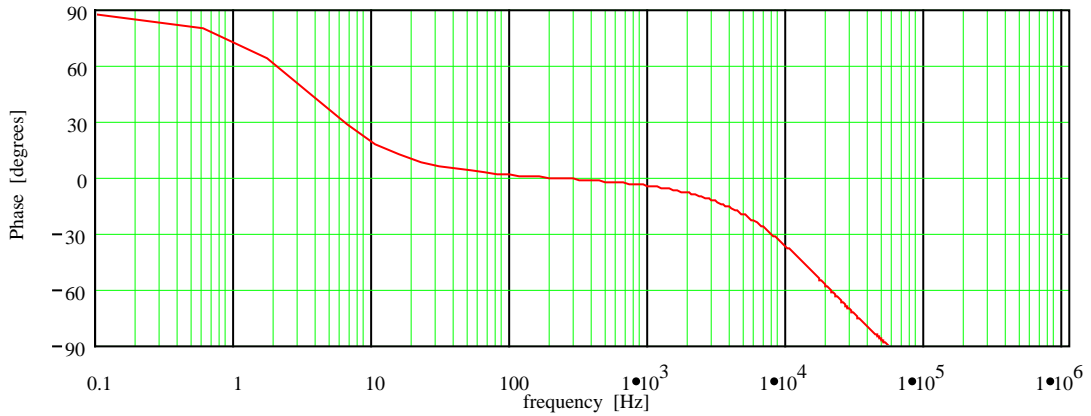
Differential Phase Distortion; vert. 30 deg./div; hor .1 Hz to 1 MHz

See: W.M.Leach, Differential Time Delay..; JAES sept.89 pp.709-715