



PAT-2100-CFB/H Ratings

Type & Applications	:	PAT-2100-CFB/H		
Primary Impedance	:	Raa = 1.995		[kΩ]
Secondary Impedance	:	Rls = 5		[Ω]
Turns Ratio Np/Ns	:	Ratio = 19.976		[]
Ultra Linear Tapping at	:	tap = 33		[%]
Flat Frequency Range	:	f1f = 1.485	[Hz]->	fhf = 131.334 [kHz]
-1 dB Frequency Range	:	f11 = 0.633	[Hz]->	fh1 = 204.48 [kHz]
-3 dB Frequency Range	:	f13 = 0.322	[Hz]->	fh3 = 290.171 [kHz]
Nominal Power (1)	:	Pn = 100		[W]
-3 dB Power Bandwidth starting at	:	fu = 23		[Hz]
Total Primary Inductance (2)	:	Lp = 505		[H]
Primary Leakage Inductance to sec.	:	lsp = 1.5		[mH]
Effective Primary Capacitance	:	cip = 0.4		[nF]
Total Primary Resistance	:	Rip = 56		[Ω]
Total Secondary Resistance	:	Ris = 0.1		[Ω]
Tube-Resistance per section	:	ri = 1		[kΩ]
Q-factor 2-nd order HF roll-off	:	Q = 0.698		[] (5)
HF roll-off Specific Frequency	:	Fo = 293.864		[kHz] (5)
Quality Factor = Lp/Lsp	:	QF = 3.367·10 ⁵		[] (5)
Quality Decade Factor = log(QF)	:	QDF = 5.527		[] (5)
Tuning Factor	:	TF = 2.674		[] (5)
Tuning Decade Factor = log(TF)	:	TDF = 0.427		[] (5)
Frequency Decade Factor (4)	:	fdf = 5.954		[] (5)

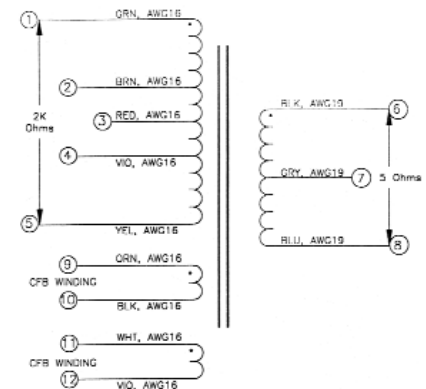
- (1): calculated under the conditions of balancing the DC-currents and the AC-anode voltages of the powertubes driving the transformer
 - (2): 240 Volt 60 Hz measurement over the total primary winding
 - (3): calculation at 1 mWatt in Rls; rl and Rls are pure Ohmic
 - (4): defined as $fdf = \log(fh3/f13) = \text{number of frequency decades transfered}$
 - (5): ir. Menno van der Veen: Theory and Practise of Wide Bandwidth Toroidal Output Transformers, 97-th AES Convention San Fransico, preprint
- (@): copyright Vanderveen Sept 20 1994, Version 1.5, design date Apr 26, 97

Specialist Range Toroidal Output Transformers



- cathode feedback tape
- 100 watts power
- primary impedance 2000 ohms
- Power bandwidth
23 Hz – 290kHz (-3dB)

Schematic

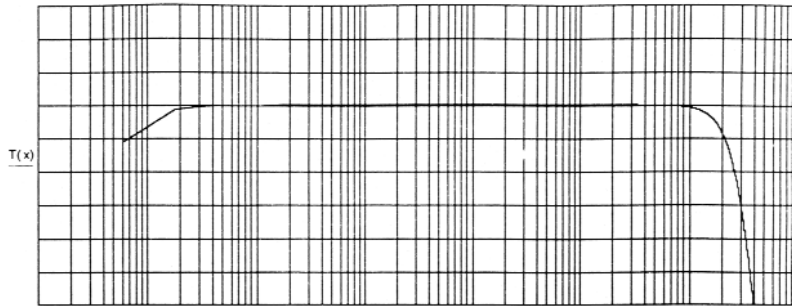


Toroidal Output Transformer for Tube Amplifiers

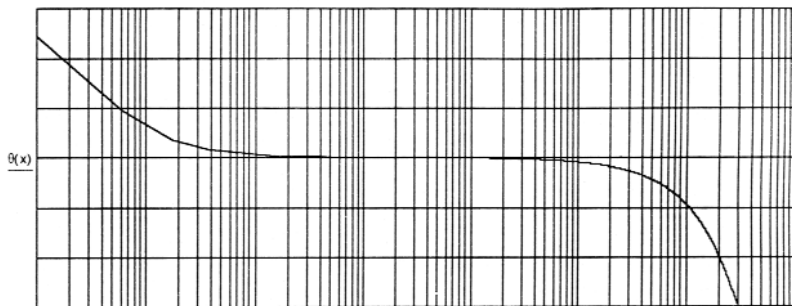
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PAT-2100-CFB/H Response Curves

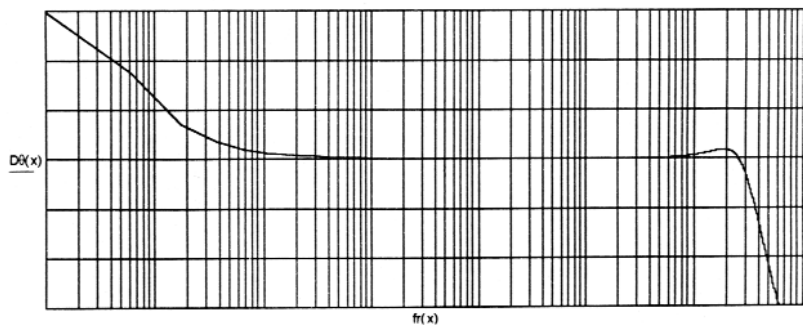
[dB] Frequency Response; Vertical 1 dB/div; Horizontal .1 Hz to 1 MHz (3)



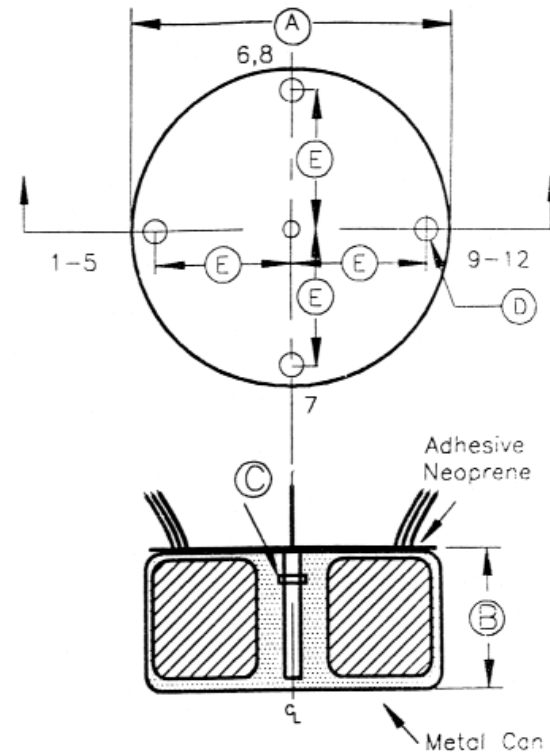
[degrees] Phase Response; Vertical 30 deg./div; Horizontal .1 Hz to 1 MHz



[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



Mechanical



REF	Dimension, in mm
A	152.4 nominal
B	88.9 nominal
C	5/16-18T-NUT
D	25.4 nominal
E	50 +/- 5

Weight: 4.42 kg
Lead Length: 200mm (+/- 10mm)

