



PAT-1070-UC Ratings

Type & Applications	:	PAT-1070-UC		
Primary Impedance	:	Raa = 3.995		[k Ω]
Secondary Impedance	:	Rls = 5		[Ω]
Turns Ratio Np/Ns	:	Ratio = 28.267		[]
Ultra Linear Tapping at	:	tap = -100		[%]
Flat Frequency Range	:	f1f = 0.413	[Hz]->	fhf = 110.771 [kHz]
-1 dB Frequency Range	:	f11 = 0.176	[Hz]->	fh1 = 246.049 [kHz]
-3 dB Frequency Range	:	f13 = 0.09	[Hz]->	fh3 = 452.631 [kHz]
Nominal Power (1)	:	Pn = 70		[W]
-3 dB Power Bandwidth starting at	:	fu = 14		[Hz]
Total Primary Inductance (2)	:	Lp = 1.574 \cdot 10 ³		[H]
Primary Leakage Inductance to sec.	:	lsp = 0.67		[mH]
Effective Primary Capacitance	:	cip = 0.388		[nF]
Total Primary Resistance	:	Rip = 78.4		[Ω]
Total Secondary Resistance	:	Ris = 0.18		[Ω]
Tube-Resistance per section	:	ri = 0.525		[k Ω]
Q-factor 2-nd order HF roll-off	:	Q = 0.502		[] (5)
HF roll-off Specific Frequency	:	Fo = 699.14		[kHz] (5)
Quality Factor = Lp/Lsp	:	QF = 2.349 \cdot 10 ⁶		[] (5)
Quality Decade Factor = log(QF)	:	QDF = 6.371		[] (5)
Tuning Factor	:	TF = 2.149		[] (5)
Tuning Decade Factor = log(TF)	:	TDF = 0.332		[] (5)
Frequency Decade Factor (4)	:	fdf = 6.703		[] (5)

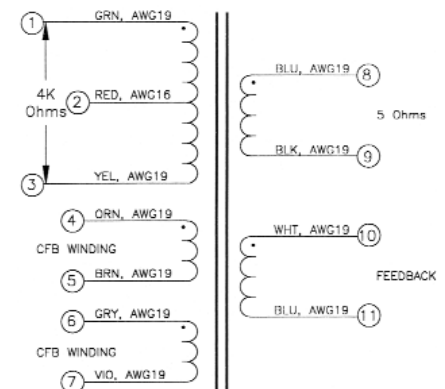
- (1): calculated under the conditions of balancing the DC-currents and the AC-anode voltages of the powertubes driving the transformer
 (2): 240 Volt 60 Hz measurement over the total primary winding
 (3): calculation at 1 mWatt in Rls; rl and Rls are pure Ohmic
 (4): defined as $fdf = \log(fh3/f13) = \text{number of frequency decades transfered}$
 (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



- unity coupled
- 70 watts power
- primary impedance 4000 ohms
- Power bandwidth
14 Hz – 451kHz (-3dB)

Schematic

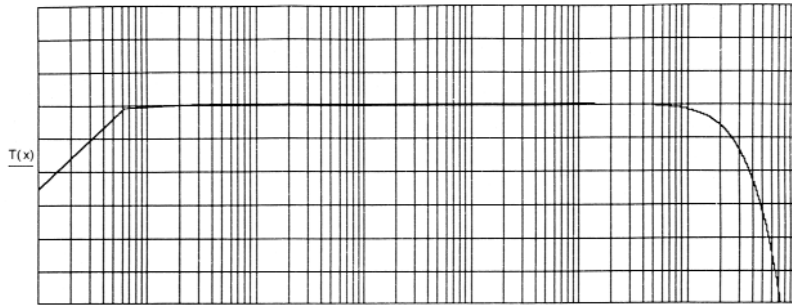


Toroidal Output Transformer for Tube Amplifiers

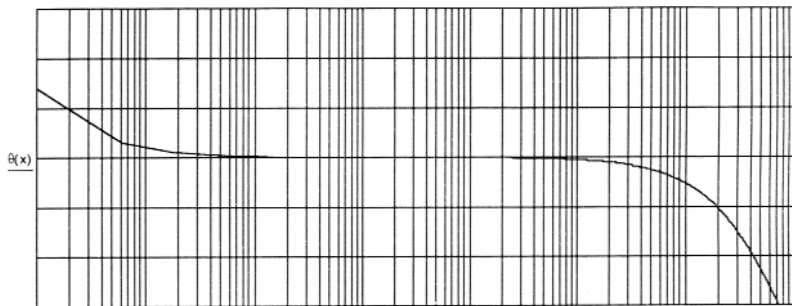
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PAT-1070-UC Response Curves

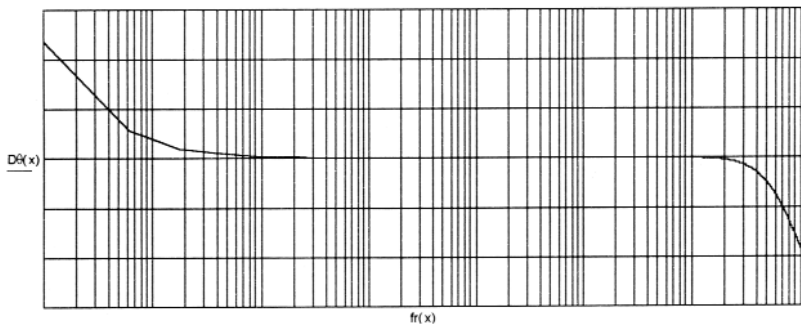
[dB] Frequency Response; Vertical 1 dB/div; Horizontal .1 Hz to 1 MHz (3)



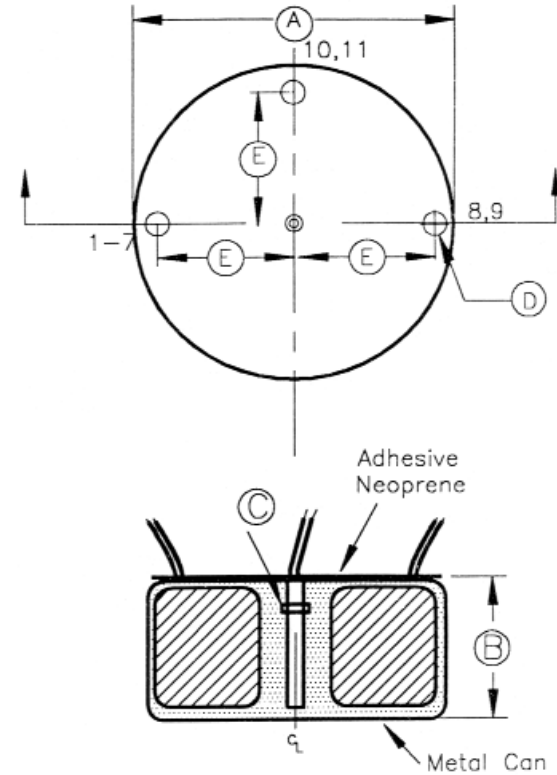
[degrees] Phase Response; Vertical 30 deg./div; Horizontal .1 Hz to 1 MHz



[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	152.0 nominal
B	89.0 nominal
C	5/16-18T-NUT
D	20 +/- 5
E	70 +/- 5

Weight: 5.53kg
Lead Length: 200mm (+/- 10mm)

