



The PAT-SE range of single ended toroidal output provides the utmost in musical performance for the 300B tube and newly developed Russian directly heated triodes .

Toroidal Output Transformer for Tube Amplifiers

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PAT—3050-SE-02

Ratings

Type & Application	:	VDV-3050-SE-02;300B & equivalents	
Primary Impedance	:	Raa = 5.055	[k%]
Secondary Impedance	:	Rls = 4	[%]
Turns Ratio Np/Ns	:	Ratio = 35.551	[]
Flat Frequency Range	:	fif = 12.42 [Hz] → fhf = 20.329 [kHz]	
-1 dB Frequency Range	:	f11 = 5.301 [Hz] → fh1 = 45.32 [kHz]	
-3 dB Frequency Range	:	f13 = 2.697 [Hz] → fh3 = 84.047 [kHz]	
Nominal Power (1)	:	Pn = 13	[W]
Full Power Bandwidth starting at	:	fPnom = 20	[Hz]
Total Primary Inductance (2)	:	Lp = 40	[H]
Primary Leakage Inductance to sec.	:	lsp = 10	[mH]
Effective Primary Capacitance	:	Qp = 1.2	[nF]
Saturation Primary DC-current	:	Idc = 143.429	[mA]
Total Primary Resistance	:	Rip = 80	[%]
Total Secondary Resistance	:	Ris = 0.1	[%]
Tubes Rate Resistance	:	rp = 0.7	[k%]
Insertion Loss	:	lloss = 0.174	[dB]
Q-factor 2-nd or der HF roll-off	:	Q = 0.491	[] (5)
HF roll-off Specific Frequency	:	Fo = 134.082	[kHz] (5)
Quality Factor = Lp/Lsp	:	QF = 4*10 ³	[] (5)
Quality Decade Factor = log(QF)	:	QDF = 3.602	[] (5)
Tuning Factor	:	TF = 7.789	[] (5)
Tuning Decade Factor = log(TF)	:	TDF = 0.892	[] (5)
Frequency Decade Factor (4)	:	FDF = 4.494	[] (5)

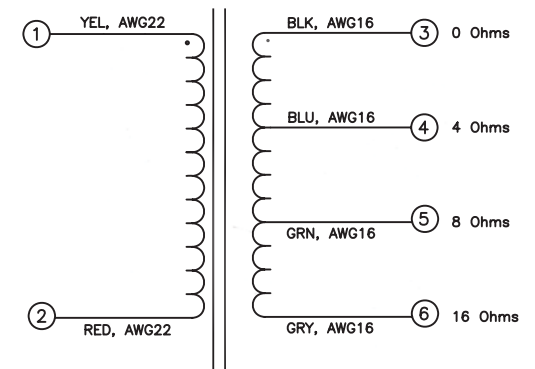
- (1): calculated and measured under the conditions of applying 0.5*Idc-sat.
 (2): 240 Volt 50 Hz measurement over the total primary winding
 (3): calculated and measured at 1 mWatt in Rls;Rl and Rls are pure Ohmic
 (4): defined as FDF = log(fh3/f13) = number of frequency decades transferred
 (5): ir.Menno van der Veen: Theory and Practise of Wide Band width Toroidal Output Transformers, 97-th AES Convention San Fransico,prepr int
 (@): copyright Vanderveen Sept 18 1997, Version 1.2, design date 7-11-1997

Single Ended Output Transformers (PAT-SE Range)



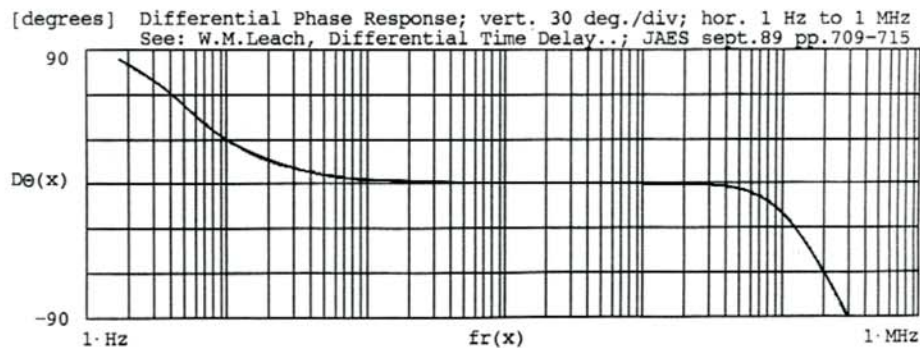
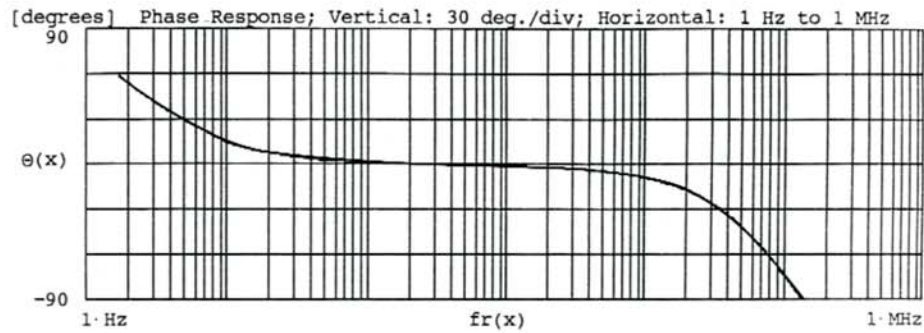
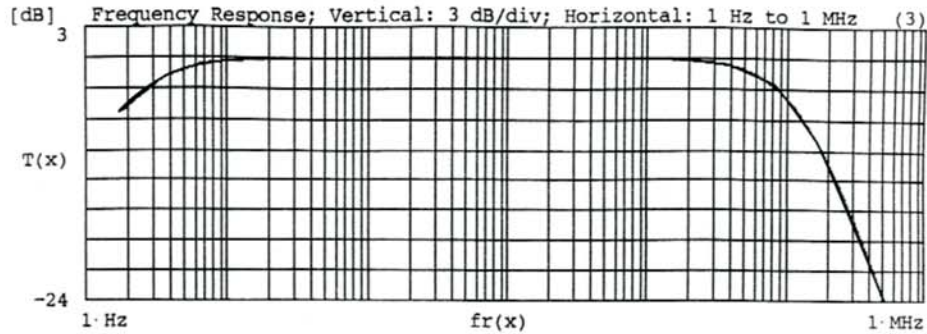
- A 13 watts single ended power
- A Primary impedance 5060 ohms
- A Power bandwidth 20 Hz -84 kHz (-3dB)

Schematic

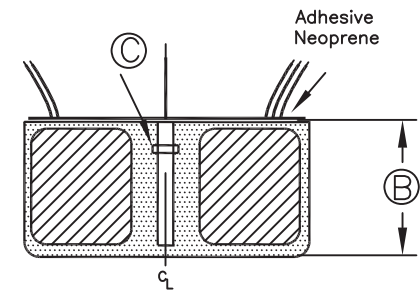
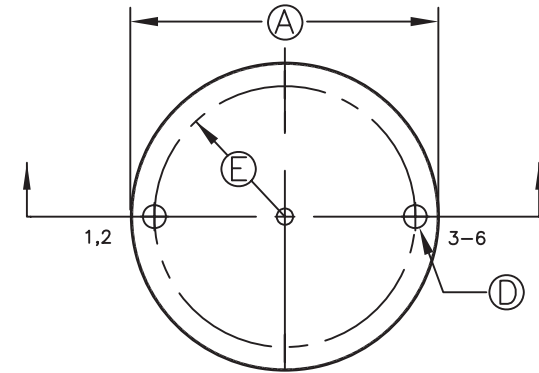


PAT—3050-SE-02

Response Curves



Mechanical



REF	DIMENSIONS			
	Unit:	(nom)	(max)	TOLERANCE
A	mm	152.4		
B	mm	88.9		
C	inch	5/16-18 T-NUT		
D	mm	20.0		±5
E	mm	60.0		±5

Weight: 5.4kg
Lead Length: 200mm (+/- 10mm)

