

SPECIALIST TOROIDAL PUSH-PULL OUTPUT TRANSFORMER

Type and Application	:	VDV-1070-UC-PPS	
Primary Impedance	:	Raa = 4	[kΩ]
Secondary Impedance	:	RIs = 5	[Ω]
Turns Ratio Np/Ns	:	Ratio = 28.284	[]
UL-tap	:	tap = -100	[%]
Cathode Feedback Ratio	:	cfb = 100	[%]
-1 dB Frequency Range [Hz to kHz] (3)	:	flf = 0.367	fhf = 114.824
-1 dB Frequency Range [Hz to kHz] (3)	:	fl1 = 0.156	fh1 = 249.653
-3 dB Frequency Range [Hz to kHz] (3)	:	fl3 = 0.08	fh3 = 441.47
Nominal Power (1)	:	Pn = 70	[W]
- 3 dB Power Bandwidth starting at	:	fu = 14	[Hz]
Total primary Inductance (2)	:	Lp = 1.768 × 10 ³	[H]
Primary Leakage Inductance	:	lsp = 0.971	[mH]
Effective Primary Capacitance	:	cip = 0.349	[nF]
Total Primary DC Resistance	:	Rip = 67.2	[Ω]
Total Secondary DC Resistance	:	Ris = 0.122	[Ω]
Tubes Plate Resistance per section	:	ri = 0.53	[kΩ]
Insertion Loss	:	lloss = 0.175	[dB]
Q-factor 2nd order HF roll-off (5)	:	Q = 0.545	[]
HF roll-off Specific Frequency (5)	:	Fo = 606.987	[kHz]
Quality Factor (5)	:	QF = 1.821 × 10 ⁶	[]
Quality Decade Factor = log(QF) (5)	:	QDF = 6.26	[]
Tuning Factor (5)	:	TF = 3.047	[]
Tuning Decade Factor = log(TF) (5)	:	TDF = 0.484	[]
Frequency Decade Factor (4,5)	:	FDF = 6.744	[]

- (1): calculated under the conditions of balancing the DC-currents and the AC-anode voltages of the powertubes driving the transformer
- (2): measured at 230Vrms at 50Hz over total primary
- (3): calculation at 1 Watt in RIs; ri and RIs 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 29-08-2011.
Final specs can deviate 15% or improve without notice



Copyright 2018 ir. bureau Vanderveen; Version 1.8. Design Date: 07-05-2018.
Final specs can deviate 15% or improve without notice