HQ-5090-SES SINGLE ENDED OUTPUT TRANSFORMER

TYPE & APPLICATION	:	VDV-HQ-5090-SES: 211 & equivalents	
Primary Impedance	:	Raa = 5.017	[kΩ]
Secondary Impedance	:	Rls = 4	[Ω]
Turns Ratio Np/Ns	:	Ratio = 35.415	[ ]
-.1 dB Frequency Range [Hz] - [kHz]	:	flf = 37.287	fhf = 10.195
-1 dB Frequency Range [Hz] - [kHz]	:	fl1 = 15.904	fh1 = 22.975
-3 dB Frequency Range [Hz] - [kHz]	:	fl3 = 8.094	fh3 = 43.791
Nominal Power (1)	:	Pn = 90	[W]
Full Power Bandwidth Starting at	:	fPnom = 28	[Hz]
Total Primary Inductance (2)	:	Lp = 32	[H]
Primary Leakage Inductance to sec.	:	lsp = 28	[mH]
Effective Primary Capacitance	:	Cip = 0.44	[nF]
Saturation Primary Current	:	2·Idc = 378.838	[mA]
Total Primary DC Resistance	:	Rip = 88.3	[Ω]
Total Secondary DC Resistance	:	Ris = 0.072	[Ω]
Tubes Plate Resistance	:	rp = 2.3	[kΩ]
Insertion Loss	:	Iloss = 0.152	[dB]
Q-factor 2-nd order HF roll-of (5)	:	Q = 0.438	[ ]
HF roll-off Specific Frequency (5)	:	Fo = 81.856	[kHz]
Quality Factor = Lp/Lsp (5)	:	$QF = 1.143 \times 10^3$	[ ]
Quality Decade Factor (5)	:	QDF = 3.058	[ ]
Tuning Factor (5)	:	TF = 4.734	[ ]
Tuning Decade Factor (5)	:	TDF = 0.675	[ ]
Frequency Decade Factor (4,5)	:	FDF = 3.733	[ ]

(1): calculated and measured under the conditions of applying 0.5*Idc-sat.
(2): 230 Volt 50 Hz measurement over the total primary winding
(3): calculated and measured 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, 97-th AES Convention San Francisco, preprint

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Specifications can deviate 15 % or improve without notice.