

4-VOLT A.C. VALVES WITH PIN BASES (INITIAL STAGES)

Type Number	Valve type	Maximum dimensions ¹⁾ mm	Base (Connection reference in brackets)	Application (see p. 2)	Filament data			Anode voltage V_a Volts	Anode current I_a mA	Neg. grid bias V_{g1} Volts	Screen-grid voltage V_{g2} Volts	Screen-grid current I_{g2} mA	Voltage on grids 3 (and 5) $V_{g3(5)}$ Volts	Voltage on grid 4 V_{g4} Volts	Mutual conduct. S mA/V	Amplification factor μ	Internal resistance R_i Ohms	External anode resist. or optimum matching imped. R_a Ohm	Output at 10% distortion W_o Watts	Grid A.C. voltage at the indicated output V_i V R.M.S.	Max anode dissipation W_{amax} Watts	Grid anode capacity C_{ag1} μF	Type Number
					Heating	Voltage Volts	Current Amps.																
AK1	Octode	118 × 46	C35 (12)	4	indir.	4,0	0,65	200	1,6 ⁹⁾ <0,015	-1,5	90	2,0 ⁴⁾	70	-1,5 -25	—	0,6 ⁹⁾ <0,002	—	1,6·10 ⁴ >10 ⁷	—	—	—	<0,06 ⁹⁾	AK1
ACH1	Triode-Hexode	130 × 50	C35 (13)	4	indir.	4,0	1,0	300	2,5 0,01	-2,0 -20	70	—	$V_{osc} = 15 V^{10)}$	70	—	0,75 ⁹⁾ <0,002	—	>0,8·10 ⁶ >10 ⁷	—	—	—	<0,1 ⁹⁾	ACH1
								150	5,0	—	—	—	—	—	2,0	—	13	—	—	—	—	—	
E418	Hexode (oscillator-modulator)	130 × 50	C35 (11)	4	indir.	4,0	1,2	200	3,0	-1,5	120	8,5 ⁹⁾	200	-4 ¹⁰⁾	—	0,58 ¹¹⁾	—	>0,15·10 ⁶	—	—	—	—	E418
E449	Variable-Mu Hexode	130 × 50	C35 (11)	1, 2	indir.	4,0	1,2	200	3,0	-2 -8	80	—	-2 -8	80	3,0	1,8 <0,002	—	0,45·10 ⁶ >50·10 ⁶	—	—	—	<0,002	E449
E446	H.F. Pentode	138 × 51	O35 (23)	1, 2, 5, 7, 8, 11	indir.	4,0	1,1	200	3,0	-2,0	100	1,1	—	—	3,5	2,3	5000	2,2·10 ⁴	—	—	—	<0,006	E446
AF2	Variable-Mu Pentode	138 × 51	O35 (23)	1, 2, 5	indir.	4,0	1,1	200	4,25 <0,015	-2,0 -22	100	1,8	—	—	3,2	2,5 <0,002	3500	1,4·10 ⁶ >10 ⁷	—	—	—	<0,006	AF2
E447	Variable-Mu Pentode	138 × 51	O35 (23)	1, 2, 5	indir.	4,0	1,1	200	4,5 0,01	-2,0 -50	100	1,8	—	—	3,5	2,3 <0,002	2300	1,0·10 ⁶ >10 ⁷	—	—	—	<0,006	E447
E452T	Tetrode	129 × 51	O35 (22)	1, 2, 8, 7, 11	indir.	4,0	1,0	200	3,0	-2,0	100	0,7	—	—	3,0	2,0	900	450.000	—	—	—	0,003	E452T
E455	Variable-Mu Tetrode	127 × 51	O35 (22)	1, 2, 5	indir.	4,0	1,0	200	3,0 0,01	-1,5 -40	100	0,8	—	—	3,0	2,0 0,005	700	350.000 >10 ⁷	—	—	—	0,003	E455
E442	Tetrode	112 × 47	O35 (22)	1, 2	indir.	4,0	1,0	200	1,5	-1,3	100	0,6	—	—	1,2	0,9	700	800.000	—	—	—	0,005	E442
E442S	Tetrode	120 × 51	O35 (22)	1, 2, 8, 11	indir.	4,0	1,0	200	4,0	-2,0	60	0,5	—	—	1,1	1,0	400	400.000	—	—	—	0,02	E442S
E445	Variable-Mu Tetrode	127 × 51	O35 (22)	1, 2, 5	indir.	4,0	1,1	200	6,0 0,01	-2,0 -40	100	0,8	—	—	1,2	1,0 0,005	300	300.000 >10 ⁷	—	—	—	0,003	E445
AB1	Duodiode	91 × 28	O24 (21)	13	indir.	4,0	0,65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	AB1
E444	Binode (Diode-Tetrode)	130 × 51	B35 (7)	9	indir.	4,0	1,1	200	0,35 0,9	-2,3 -2,3	33 45	—	—	—	3,0	—	1000 800	2,5·10 ⁶ 1,0·10 ⁶	0,3·10 ⁶ 0,1·10 ⁶	—	—	—	E444
E444S	Binode (Diode-Triode)	115 × 46	O35 (20)	9	indir.	4,0	1,0	200	6,0	-3,5	—	—	—	—	2,5	2,0	30	15.000	—	—	—	—	E444S
E499	High-Mu Triode	101 × 46	O35 (17)	7, 8, 11	indir.	4,0	1,0	200	0,2 0,08	-1,6 -1,6	—	—	—	—	4,0	—	99	100.000 330.000	0,3·10 ⁶ 1,0·10 ⁶	—	—	1,5	E499
E424N	Triode	100 × 46	O35 (17)	3, 6, 7, 10, 11	indir.	4,0	1,0	200	6,0	-3,5	—	—	—	—	3,5	2,4	30	12.500	—	—	—	2	E424N
E438	Triode	91 × 47	O35 (17)	7, 8, 11	indir.	4,0	1,0	200	0,3 0,1	-2,5 -2,5	—	—	—	—	1,5	—	38	120.000 400.000	0,3·10 ⁶ 1,0·10 ⁶	—	—	3	E438
E409	Triode	91 × 47	O35 (17)	3	indir.	4,0	1,0	200	12	-1,5	—	—	—	—	4,0	1,3	9	7.000	—	—	—	4	E409

¹⁾ Without pins.²⁾ See page 15. The figure after the letter indicates the maximum base diameter in mm. The data of this horizontal column apply for the oscillating condition at $V_{osc} = 8,5 V_{R.M.S.}$ ³⁾ ($I_{g1} = 190 \mu A$) and for all-wave receivers. The valve must not be controlled by A.V.C. in the short wave range. The grid leak resistance amounts to 50.000 ohms and is connected to the neutral.⁴⁾ Screen-grid current $I_{g3} + I_{g5} = 3,8 mA$.⁵⁾ Capacity between anode and grid 4.⁶⁾ Across a resistance of 20.000 ohms.⁷⁾ Conversion conductance.⁸⁾ Capacity between grid 1 and grid 3.⁹⁾ Current of the third grid.¹⁰⁾ $V_{osc} = 6,3 V_{R.M.S.}$ ¹¹⁾ Conversion conductance at $V_{osc} = 6,3 V_{R.M.S.}$

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