

4-VOLT A.C. VALVES WITH PIN BASES (POWER 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) $V_{g3(s)}$ 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 $W_{a\max}$ Watts	Grid anode capacity C_{ag1} μF	Type Number
					Heating	Voltage Volts	Current Amps.																
E453	Pentode	105 × 51	B35 (8)	12	indir.	4,0	1,1	250	24	—15	250	—	—	—	2,5	175	70.000	15.000	2,8	8	6	—	E453
E463	Pentode	119 × 55	B35 (8)	12	indir.	4,0	1,35	250	36	—22	250	—	—	—	2,7	100	37.000	8.000	4,1	12,3	9	—	E463
B409	Triode	91 × 46	A32 (1)	12	dir.	4,0	0,15	250	12	—18	—	—	—	—	1,8	9	5.000	12.000	0,65 ²⁾	12	3	—	B409
B443	Pentode	92 × 51	O35 (19)	12	dir.	4,0	0,15	250	12	—19	150	—	—	—	1,3	60	45.000	20.000	1,35	12,1	3	—	B443
B443S	Pentode	92 × 51	O35 (19)	12	dir.	4,0	0,15	250	12	—12	80	—	—	—	1,6	100	60.000	22.000	1,12	6,8	3	—	B443S
C443	Pentode	92 × 51	O35 (19)	12	dir.	4,0	0,25	300	20	—25	200	—	—	—	1,7	60	35.000	15.000	2,8	16	6	—	C443
C443N	Pentode	89 × 51	O35 (19)	12	dir.	4,0	0,25	300	20	—42	200	—	—	—	1,5	37	25.000	15.000	3,0	20	6	—	C443N
E443H	Pentode	123 × 55	O35 (19)	12	dir.	4,0	1,1	250	36	—15	250	—	—	—	2,8	120	13.000	7.000	3,1	9,7	9	—	E443H

¹⁾ Without pins.²⁾ At 5% distortion.

180-MA D.C. VALVES

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) $V_{g3(s)}$ 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 $W_{a\max}$ Watts	Grid anode capacity C_{ag1} μF	Type Number
					Heating	Voltage Volts	Current Amps.																
B2046	H.F. Pentode	138 × 51	O35 (23)	1, 2, 5, 7, 8, 11	indir.	20	0,180	200	3,0	—2,0	100	1,1	—	—	3,5	2,2	5000	2,2 · 10 ⁴	—	—	—	< 0,006	B2046
B2047	Variable-Mu Pentode	138 × 51	O35 (23)	1, 2, 5	indir.	20	0,180	200	4,0	—2,0 —50	100	1,8	—	—	3,0	2,0 < 0,002	2200	1,1 · 10 ⁴ > 10 ⁷	—	—	—	< 0,006	B2047
B2048	Hexode (oscillator modulator)	130 × 50	C35 (11)	4	indir.	20	0,180	200	3,0	—1,5	120	8,5 ³⁾	200	—4 ³⁾	—	0,58 ⁴⁾	—	> 0,15 · 10 ⁴	—	—	—	—	B2048
B2049	Variable-Mu Hexode	130 × 50	C35 (11)	1, 2	indir.	20	0,180	200	3	—1,5 —8	80	—	—1,5 —8	80	3	1,8 < 0,002	—	0,45 · 10 ⁴ > 50 · 10 ⁴	—	—	—	< 0,002	B2049
B2052T	Tetrode	127 × 51	O35 (22)	1, 2, 5, 7, 8, 11	indir.	20	0,180	200	3,0	—2,0	100	0,2	—	—	3,0	2,0	900	0,45 · 10 ⁴	—	—	—	0,003	B2052T
B2045	Variable-Mu Tetrode	120 × 51	O35 (22)	1, 2, 5	indir.	20	0,180	200	4,0 0,01	—2,0 —40	60	0,9	—	—	1,2	1,0 0,005	400	0,4 · 10 ⁴ > 10 ⁷	—	—	—	0,004	B2045
B2044	Binode (Diode-Tetrode)	130 × 51	B35 (7)	9	indir.	20	0,180	200	0,29 0,76	—3,2 —4,0	40 60	—	—	—	2,8	—	700 600	2,4 · 10 ⁴ 1,2 · 10 ⁴	0,32 · 10 ⁴ 0,1 · 10 ⁴	—	—	0,003	B2044
B2044S	Binode (Diode-Triode)	108 × 46	O35 (20)	9	indir.	20	0,180	200	6,0	—3,0	—	—	—	—	2,0	1,8	30	16.000	—	—	—	—	B2044S
B2038	Triode	105 × 51	O35 (17)	3, 6, 7, 10, 11	indir.	20	0,180	200	6,0	—3,0	—	—	—	—	3,5	2,3	33	14.000	—	—	—	—	B2038
B2099	High-Mu Triode	101 × 46	O35 (17)	11	indir.	20	0,180	200	0,08 0,2	—1,6 —1,6	—	—	—	—	3,0	—	99	330.000 100.000	0,32 · 10 ⁴ 1 · 10 ⁴	—	—	1,5	B2099
B2006	Power Triode	105 × 51	O35 (16)	12	indir.	20	0,180	200	15	—18	—	—	—	—	2,5	1,6	6	4.000	16.000	0,21 ⁵⁾	5	—	B2006
B2043	Power Pentode	105 × 51	B35 (8)	12	indir.	20	0,180	200	20	—18	200	8	—	—	2,5	1,7	70	40.000	10.000	1,7	5	—	B2043

¹⁾ Without pins.²⁾ Current of the third grid.³⁾ $V_{osc} = 6,3 V_{R.M.S.}$ ⁴⁾ Conversion conductance at $V_{osc} = 6,3 V_{R.M.S.}$ ⁵⁾ At 5% distortion.