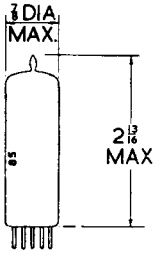
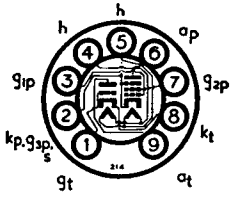


Current Equipment Types

TYPES ECL82/ PCL82



The BRIMAR ECL82 and PCL82 are noval triode-pentodes for use in frame time-base circuits and as sound amplifiers and output valves.

RATINGS

	ECL82	PCL82			ECL82	PCL82	
Heater Voltage ...	6.3	16.0	volts	Heater Current ...	0.78	0.3	amps.

	ECL82 Triode	ECL82 Pentode	PCL82 Triode	PCL82 Pentode	
Anode Voltage ($I_a = 0$)	550	900	550	900	volts max.
Anode Voltage	300	600	250	600	volts max.
Anode Peak Voltage, Positive †	600	2,500	600	2,500	volts max.
Negative	600	500	600	500	volts max.
Anode Dissipation ($V_a < 250$ volts) ...	1	7	1	7	watts max.
Anode Dissipation ($V_a > 250$ volts) ...	1	5	—	—	watts max.
Screen Voltage ($Ig_2 = 0$)	—	550	—	550	volts max.
Screen Voltage	—	300	—	250	volts max.
Screen Dissipation	—	1.8	—	1.8	watts max.
Screen Dissipation (at full drive)	—	3.2	—	3.2	watts max.
Cathode Current	15	50	15	50	mA max.
Peak Cathode Current †*	250	—	250	—	mA max.
Control Grid Resistance, Fixed Bias ...	1	1	1	1	MΩ max.
Cathode Bias ...	3	2	3	2	MΩ max.

† Maximum duration 4% of a cycle, with a maximum duration of 800 micro seconds.
* Under frame blocking oscillator conditions.

CHARACTERISTICS

ECL82 and PCL82

	Triode	Pentode			Triode	Pentode	
Anode Voltage ...	100	170	volts	Screen Current ...	—	8	mA.
Screen Voltage ...	—	170	volts	Mutual Conductance	2.5	7.5	mA/V.
Grid Voltage	0	—11.5	volts	Anode Impedance	27	16	kilohms.
Anode Current ...	3.5	41	mA.	Amplification Factor	70	10	(g_1-g_2)

OPERATING CONDITIONS

Pentode section as an audio output stage

Anode and Screen Voltage	170	200	volts
Grid Voltage	—11.5	—16	volts
Anode Current ...	41	35	mA.

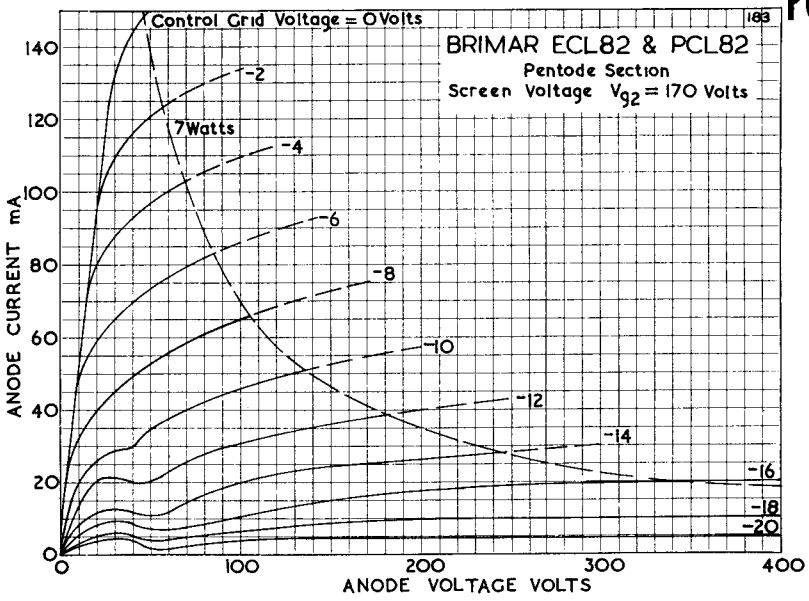
Triode section as an A.F. amplifier

Anode Supply Voltage	170	200	volts
Anode Resistor ...	220	220	kilohms
Cathode Bias Resistor	2.7	2.2	kilohms
Optimum Load ...	4	5.6	kilohms
Power Output	3.3	3.5	watts
Distortion ...	10	10	per cent.
Maximum Output	25	26	V.r.m.s.
Gain	51	52	
Following Grid Resistor ...		700	kilohms

INTER-ELECTRODE CAPACITANCES

	ECL82	PCL82	
Triode Input ...	2.7	2.7	pF
Triode Output ...	4	4	pF
Triode Anode to Triode Grid... ...	4	4	pF
Triode Grid to Heater	0.1	0.025	pF
Pentode Input ...	9.3	9.0	pF
Pentode Output ...	8	8	pF

	ECL82	PCL82	
Pentode Anode to Pentode Grid ...	0.3	0.3	pF
Pentode Grid to Heater	0.3	0.3	pF
Triode Anode to Pentode Grid ...	0.02	0.02	pF
Triode Grid to Pentode Anode	0.02	0.02	pF
Triode Grid to Pentode Grid ...	0.025	0.025	pF
Triode Anode to Pentode Anode ...	0.25	0.25	pF max.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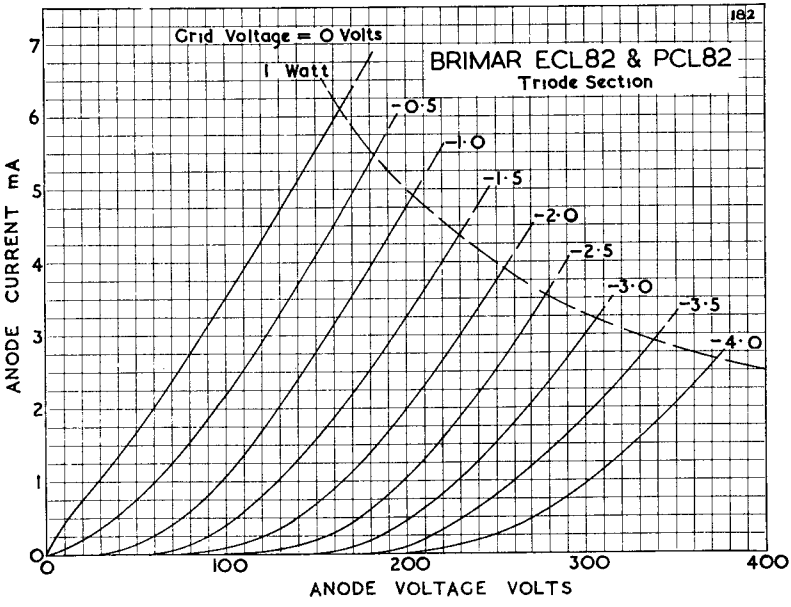
BRIMAR ECL82 & PCL82
Pentode Section
Screen Voltage V_{g2} = 170 Volts
Control Grid Voltage = 0 Volts
7 Watts
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
ANODE CURRENT mA
ANODE VOLTAGE VOLTS
0
20
40
60
80
100
120
140
100
200
300
400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BRIMAR ECL82 & PCL82
Triode Section
Grid Voltage = 0 Volts
1 Watt
-0·5
-1·0
-1·5
-2·0
-2·5
-3·0
-3·5
-4·0
ANODE CURRENT mA
ANODE VOLTAGE VOLTS
0
1
2
3
4
5
6
7
100
200
300
400