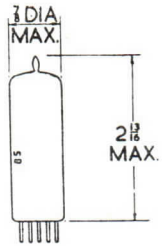
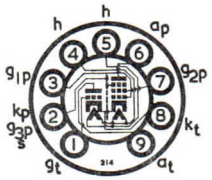


B9A Base

Current Equipment Type

TYPE UCL82 MINIATURE TRIODE PENTODE



The BRIMAR UCL82 is a noval triode pentode for use as a sound amplifier and output valve.

Heater Current	0.1 amp.
Heater Voltage	50 volts

RATINGS

	Triode	Pentode	
Anode Voltage ($I_a = 0$)	550	550	volts max.
Anode Voltage	250	250	volts max.
Anode Dissipation	1	7	watts max.
Screen Voltage ($Ig_2 = 0$)	—	550	volts max.
Screen Voltage	—	250	volts max.
Screen Dissipation	—	1.8	watts max.
Screen Dissipation (at full drive, speech and music.)	—	3.2	watts max.
Cathode Current	15	50	mA max.
Control Grid Resistance. Fixed Bias	1	1	M Ω max.
Cathode Bias	3	2	M Ω max.
Heater-Cathode Voltage	200	200	volts max.

CHARACTERISTICS

	Triode		Pentode		
Anode Voltage	100	100	170	200	volts
Screen Voltage	—	100	170	200	volts
Control Grid Voltage	0	—6	—11.5	—16	volts
Anode Current	3.5	26	41	35	mA
Screen Current	—	5	8	7	mA
Mutual Conductance	2.5	6.8	7.5	6.4	mA/V
Amplification Factor	70	—	—	—	
Inner Amplification Factor ($\mu g_1 - g_2$)	—	10	9.5	9.5	
Anode Impedance	—	15	16	20	k Ω

OPERATING CHARACTERISTICS

Pentode Section as an audio output stage.

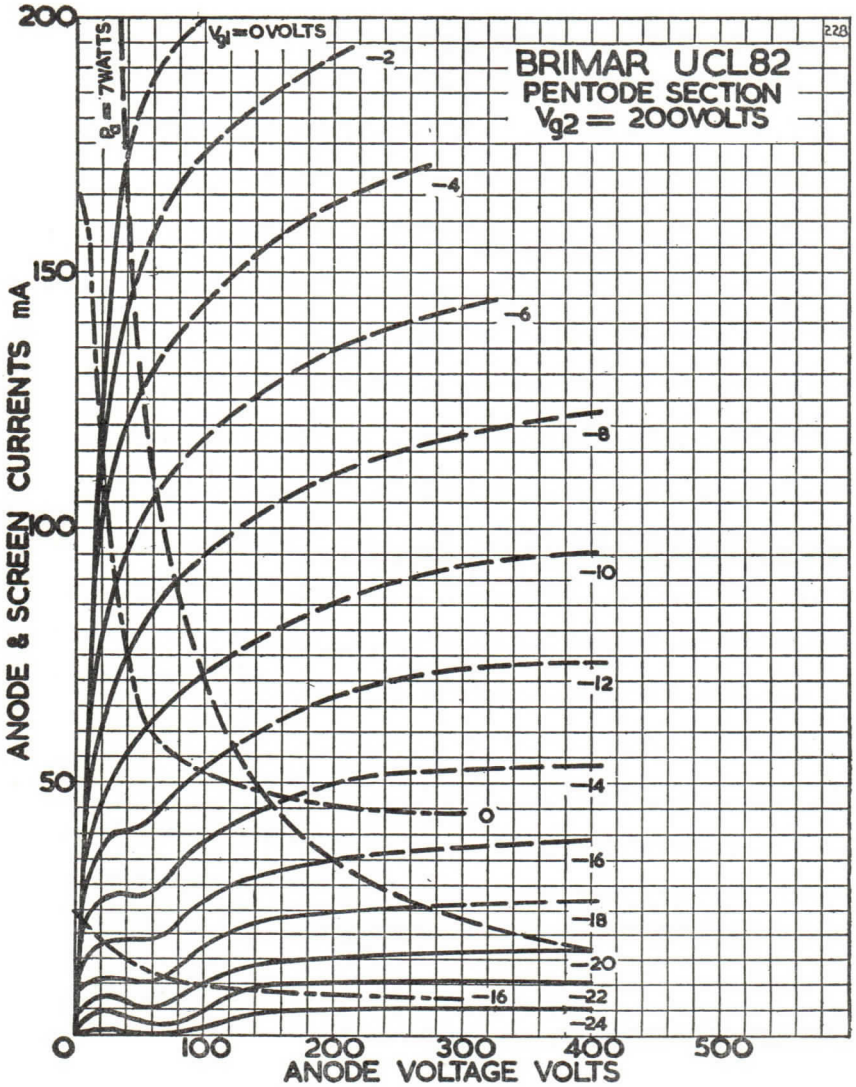
Anode and Screen Voltage	170	200	volts
Grid Voltage	—11.5	—16	volts
Anode Current	41	35	mA
Screen Current	8	7	mA
Optimum Load	3.9	5.6	k Ω
Power Output	3.3	3.5	watts
Distortion	10	10	per cent

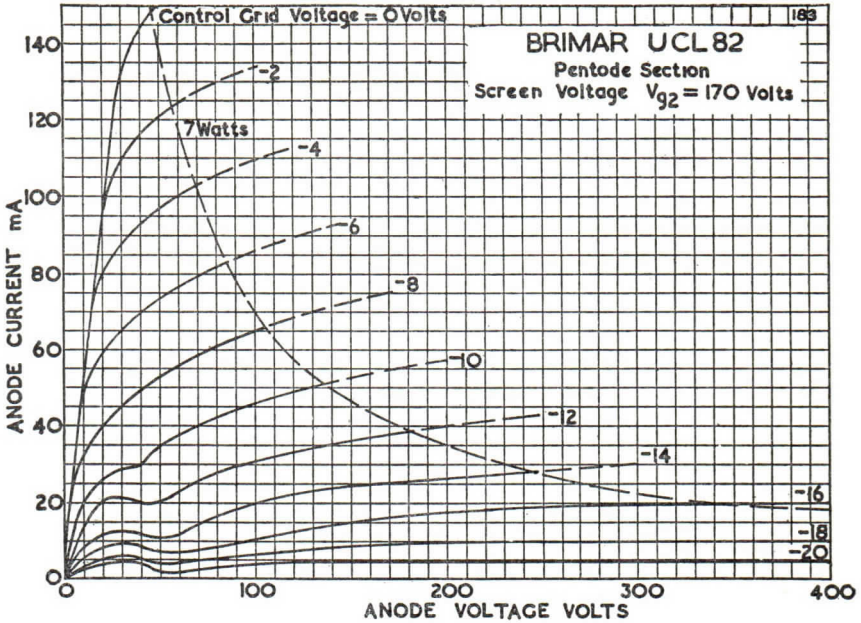
Triode Section as an A.F. amplifier.

Anode Supply Voltage	170	200	volts
Cathode Bias Resistor	2.7	2.2	k Ω
Anode Resistor	220	220	k Ω
Maximum Output	25	26	V r.m.s.
Distortion	2.3	1.6	per cent
Gain	51	52	
Following Grid Resistor	680	680	k Ω

INTER-ELECTRODE CAPACITANCES

Triode Input	2.7	pF	Pentode Anode to Pentode Grid	0.3	pF
Triode Output	4.3	pF	Pentode Grid to Heater	0.3	pF
Triode Anode to Triode Grid	4.2	pF	Triode Anode to Pentode Grid	0.02	pF
Triode Grid to Heater	0.02	pF	Triode Grid to Pentode Anode	0.02	pF
Pentode Input	9.3	pF	Triode Grid to Pentode Grid	0.025	pF
Pentode Output	8	pF	Triode Anode to Pentode Anode	0.25	pF max.


BRIMAR UCL82
PENTODE SECTION
Vg2 = 200VOLTS
228
Vg1=0VOLTS
Pg = 7WATTS
-2
-4
-6
-8
-10
-12
-14
0
-16
-18
-20
-16
-22
-24
200
150
100
50
0
100
200
300
400
500
ANODE & SCREEN CURRENTS mA
ANODE VOLTAGE VOLTS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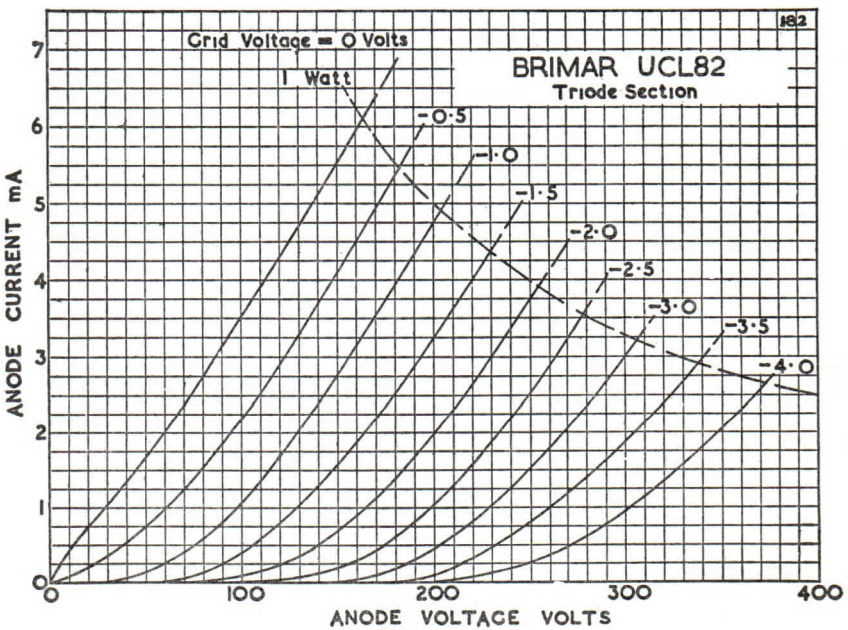
BRIMAR UCL82
Pentode Section
Screen Voltage V_{g2} = 170 Volts
Control Grid Voltage = 0 Volts
7 Watts
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
ANODE CURRENT mA
ANODE VOLTAGE VOLTS
0
20
40
60
80
100
120
140
100
200
300
400


182
BRIMAR UCL82
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