

**RADIOTRON****6V6-G****BEAM POWER AMPLIFIER**6V6-G  
SHEET  
★

Heater*	Coated Unipotential Cathode	
Voltage	6.3	a-c or d-c volts
Current	0.45	amp.
Maximum Overall Length		4-5/8"
Maximum Seated Height		4-1/16"
Maximum Diameter		1-13/16"
Bulb		ST-14
Mounting Position		Any
Base		Medium Shell Octal 7-Pin
Pin 1-No Connection		Pin 5-Grid
Pin 2-Heater		Pin 7-Heater
Pin 3-Plate		Pin 8-Cathode
Pin 4-Screen		



BOTTOM VIEW (G-7AC)

**SINGLE VALVE AMPLIFIER-Class A<sub>1</sub>**

Plate Voltage				315 max.	volts
Screen Voltage				285 max.	volts
Plate Dissipation				12 max.	watts
Screen Dissipation				2 max.	watts
Typical Operation:					
Plate Voltage	180	250	250	315	volts
Screen Voltage	180	100	250	225	volts
Grid Voltage <sup>AO</sup>	-8.5	-5	-12.5	-13	volts
Cath. Bias Res. <sup>O</sup>	250	250	232	317	ohms
Peak A-F Grid Volts	8.5	5	12.5	13	volts
Zero-Sig. Plate Cur.	29	17.5	45	34	mA.
Max.-Sig. Plate Cur.	30	18.4	47	35	mA.
Zero-Sig. Scrn. Cur.*	3	0.7	4.5	2.2	mA.
Max.-Sig. Scrn. Cur.*	4	1.3	7	6	mA.
Plate Resistance	.058	.094	.052	.077	meg.
Transconductance	3,700	3,440	4,100	3,750	μmhos
Load Resistance	5,500	14,000	5,000	8,500	ohms
Total Harm. Dist.	8	5	8	12	%
Max.-Sig. Pwr. Output	2	1.5	4.5	5.5	watts

**AMPLIFIER - Class A<sub>1</sub> (Triode Connection\*)**

Plate Voltage			300 max.	volts
Plate & Screen Dissipation (Total)			12.5 max.	watts
Typical Operation:				
Plate Voltage		250	300	volts
Grid Voltage <sup>AO</sup>		-15	-20	volts
Cathode Bias Res. <sup>O</sup>		400	513	ohms
Zero-Sig. Plate Cur.		37.5	39	mA.
Amplification Factor		9.6	9.6	
Plate Resistance		2,400	2,400	ohms
Transconductance		4,000	4,000	μmhos
Load Resistance		3,500	4,800	ohms
Second Harm. Dist.		5	5	%
Max.-Sig. Pwr. Output		1.0	1.65	watts

**PUSH-PULL AMPLIFIER - Class AB<sub>1</sub>**

Plate Voltage			315 max.	volts
Screen Voltage			285 max.	volts
Plate Dissipation			12 max.	watts
Screen Dissipation			2 max.	watts
Typical Operation:				
	Values are for two valves			
Plate Voltage	250	285	315	volts
Screen Voltage	250	285	250 <sup>••</sup>	volts
Grid Voltage <sup>A</sup>	-15	-19	-15.8 <sup>••</sup>	volts
Peak A-F Volts (G-G)	30	38	30	volts
Zero-Sig. Plate Cur:	70	70	76.5	mA.
Max.-Sig. Plate Cur.	79	92	70	mA.

AMALGAMATED WIRELESS VALVE CO. PTY. LTD.

AUGUST 1941

SYDNEY, AUSTRALIA

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## BEAM POWER AMPLIFIER

Zero-Sig. Screen Cur.*	5	4	4.9	mA.
Max.-Sig. Screen Cur.*	13	13.5	10.5	mA.
Eff. Load Res. (P-P)	10,000	8,000	12,000	ohms
Total Harm. Distortion	5	3.5	-	%
Max.-Sig. Pwr. Output	10	14	13	watts

PUSH-PULL AMPLIFIER (Triode Connection<sup>o</sup>)

Plate Voltage	300 max.	volts
Plate & Screen Dissipation (Total)	12.5 max.	watts
Typical Operation:		

	<u>Class A<sub>1</sub></u>	<u>Class AB<sub>1</sub></u>	
Plate Voltage	300	300	volts
Grid Voltage <sup>a</sup>	-20	-25	volts
Cathode Bias Resistor	256	-	ohms
Peak A-F Volts (G-G)	40	50	volts
Zero-Sig. Plate Cur.	78	42	mA.
Eff. Load Res. (P-P)	9,800	6,000	ohms
Max.-Sig. Power Output	3.3	4.75	watts

\* The heater should be operated at 6.3 volts. Under maximum dissipation conditions, the heater voltage should never fluctuate so that it exceeds 7.0 volts. The potential difference between heater and cathode should be kept as low as possible.

<sup>a</sup> The type of input coupling used should not introduce too much resistance in the grid circuit. Transformer or impedance coupling devices are recommended. When the grid circuit has a resistance not higher than .05 megohm, fixed bias may be used; for higher values, cathode bias is required. With cathode bias, the grid circuit may have a resistance not to exceed 0.5 megohm, provided the heater voltage is not allowed to rise more than 10% above the rated value under any condition of operation.

<sup>o</sup> The requisite negative bias may be obtained from an external source or, alternatively, may be derived from a cathode bias resistor of the stated value. For this particular service the type of bias has negligible effect on the operation.

• Screen connected to plate at the socket.

•• Conditions as used in Radiotron circuit A504. The two screens are fed through a common 3,000 ohm resistor from the plate supply voltage; a bleed resistor of 15,000 ohms is connected between the screens and the cathodes, the common cathode bias resistor being 150 ohms. Both screens and cathodes must be suitably bypassed.

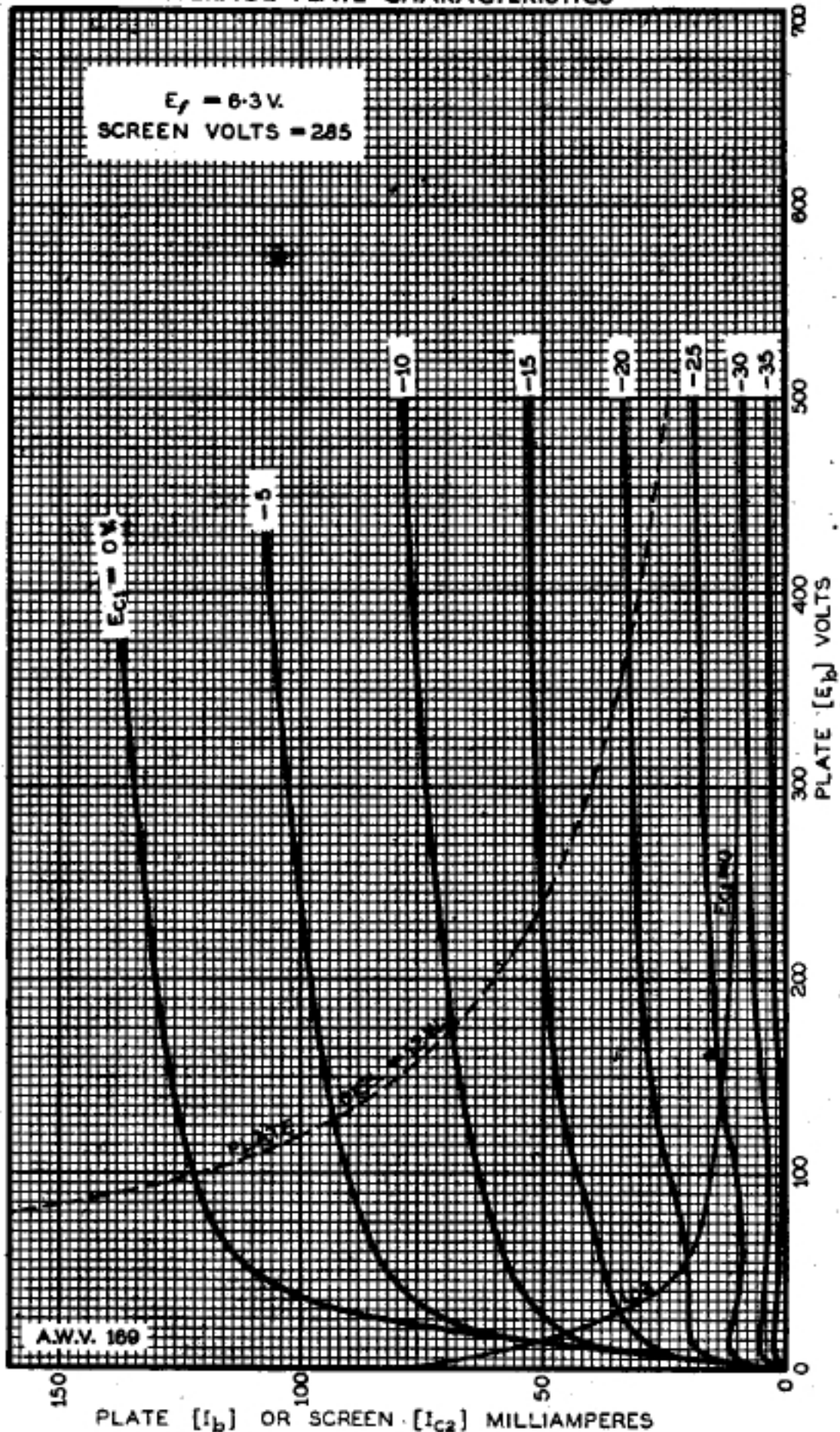
\* Nominal value; subject to variation from valve to valve.

←Indicates a change.

# RADIOTRON

## 6V6-G

### AVERAGE PLATE CHARACTERISTICS

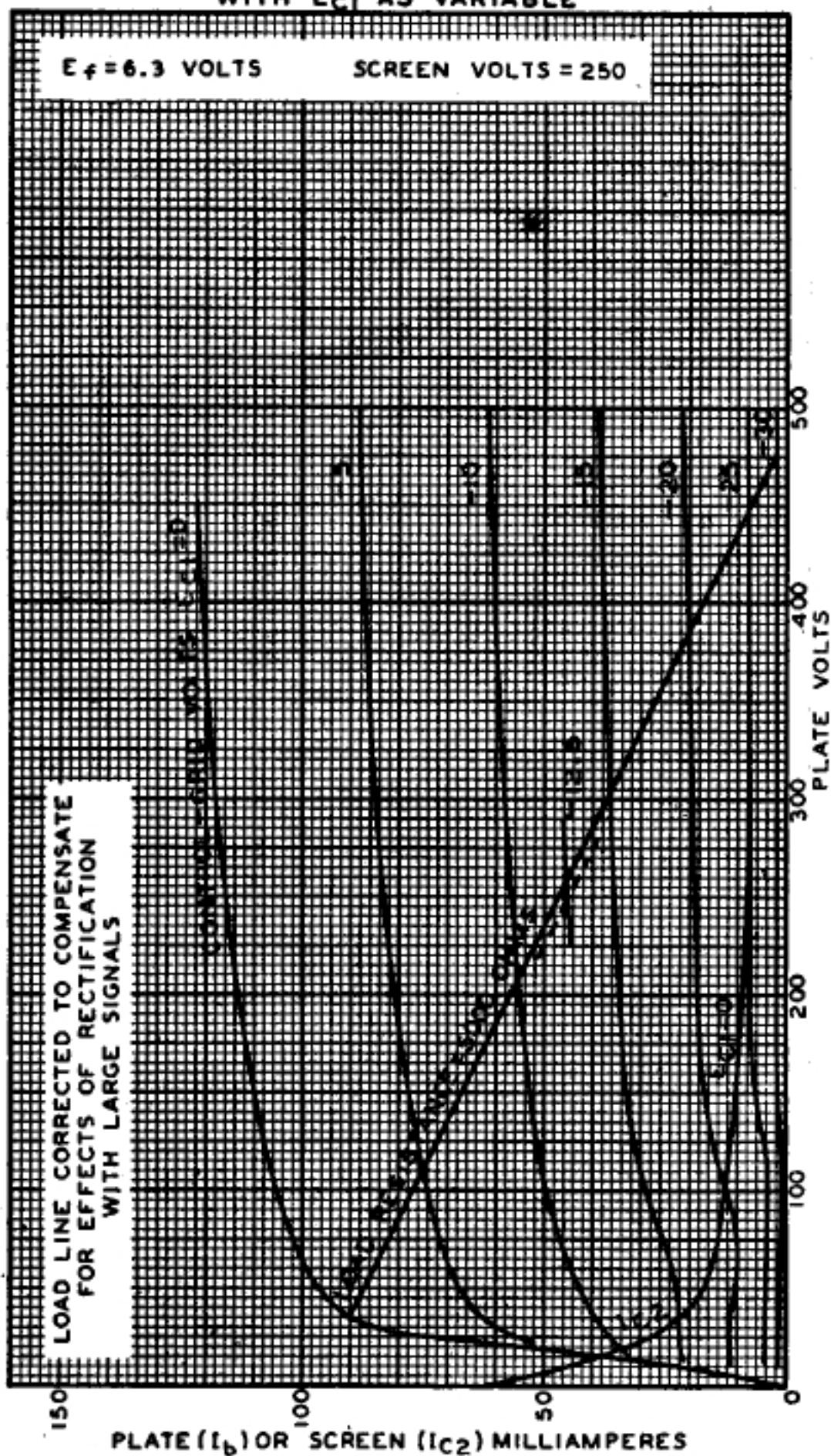


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AVERAGE PLATE CHARACTERISTICS  
WITH  $E_{c1}$  AS VARIABLE



92C-4807

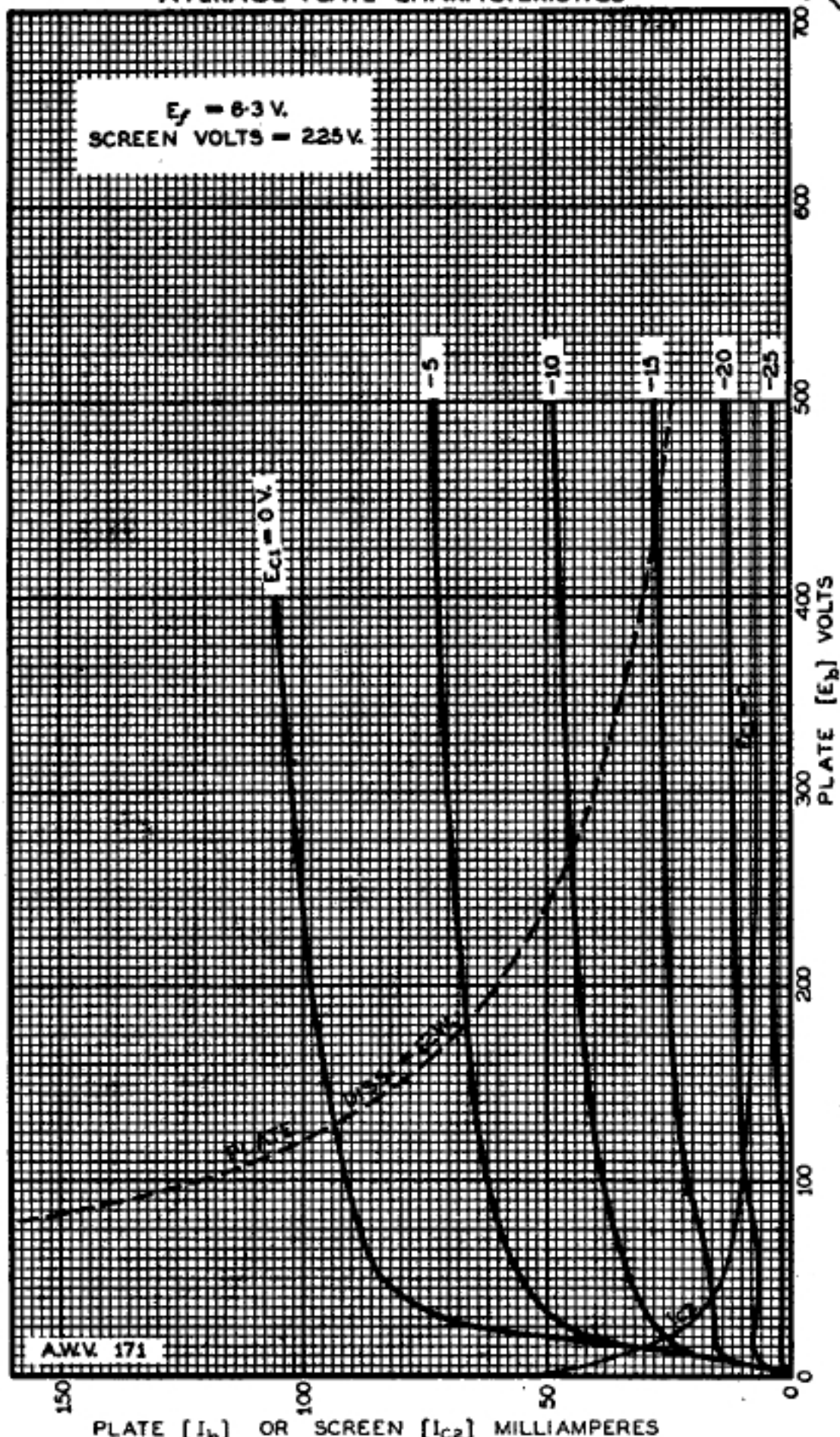


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## AVERAGE PLATE CHARACTERISTICS

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SHEET 3



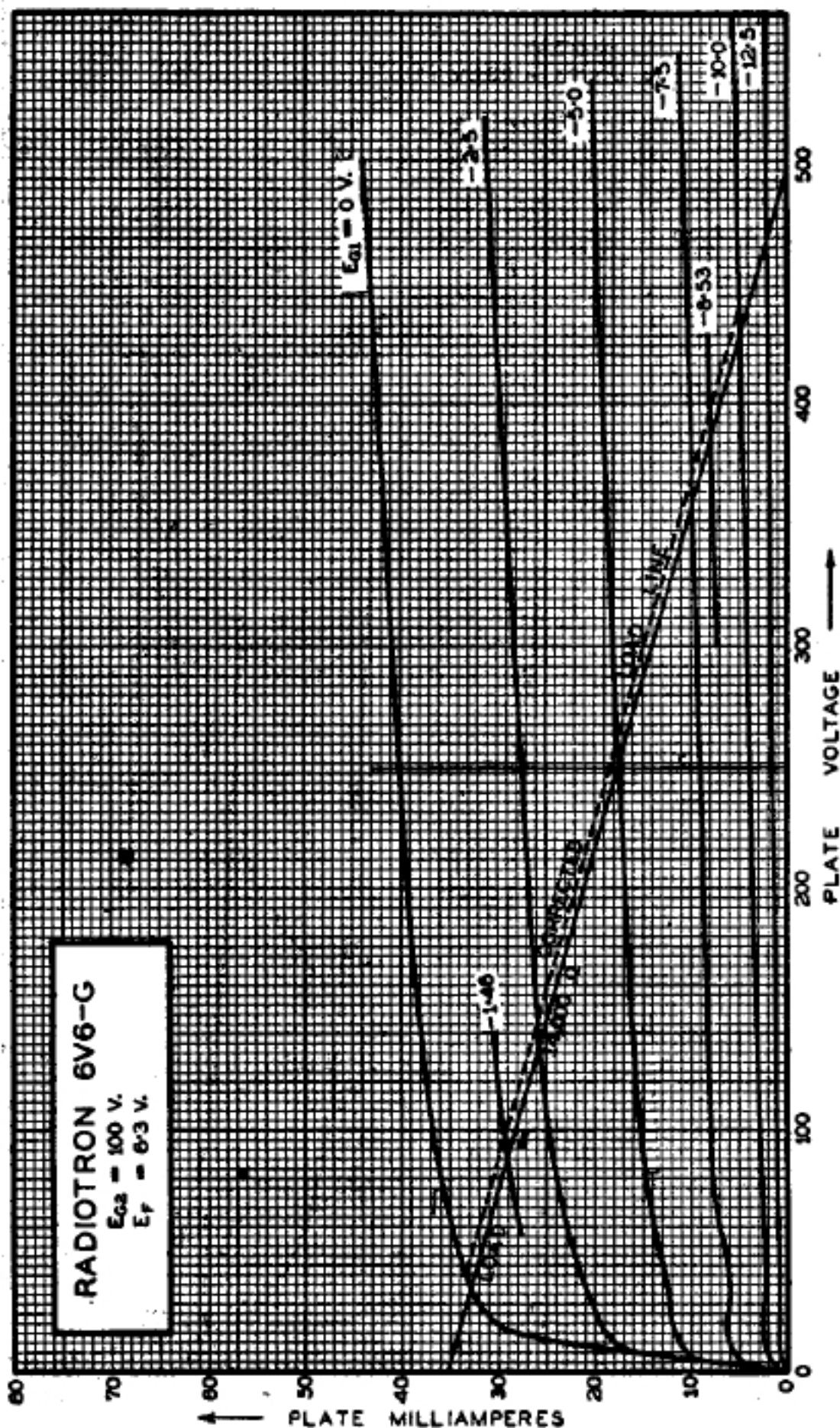
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AVERAGE PLATE CHARACTERISTICS

with  $E_{c1}$  as variable

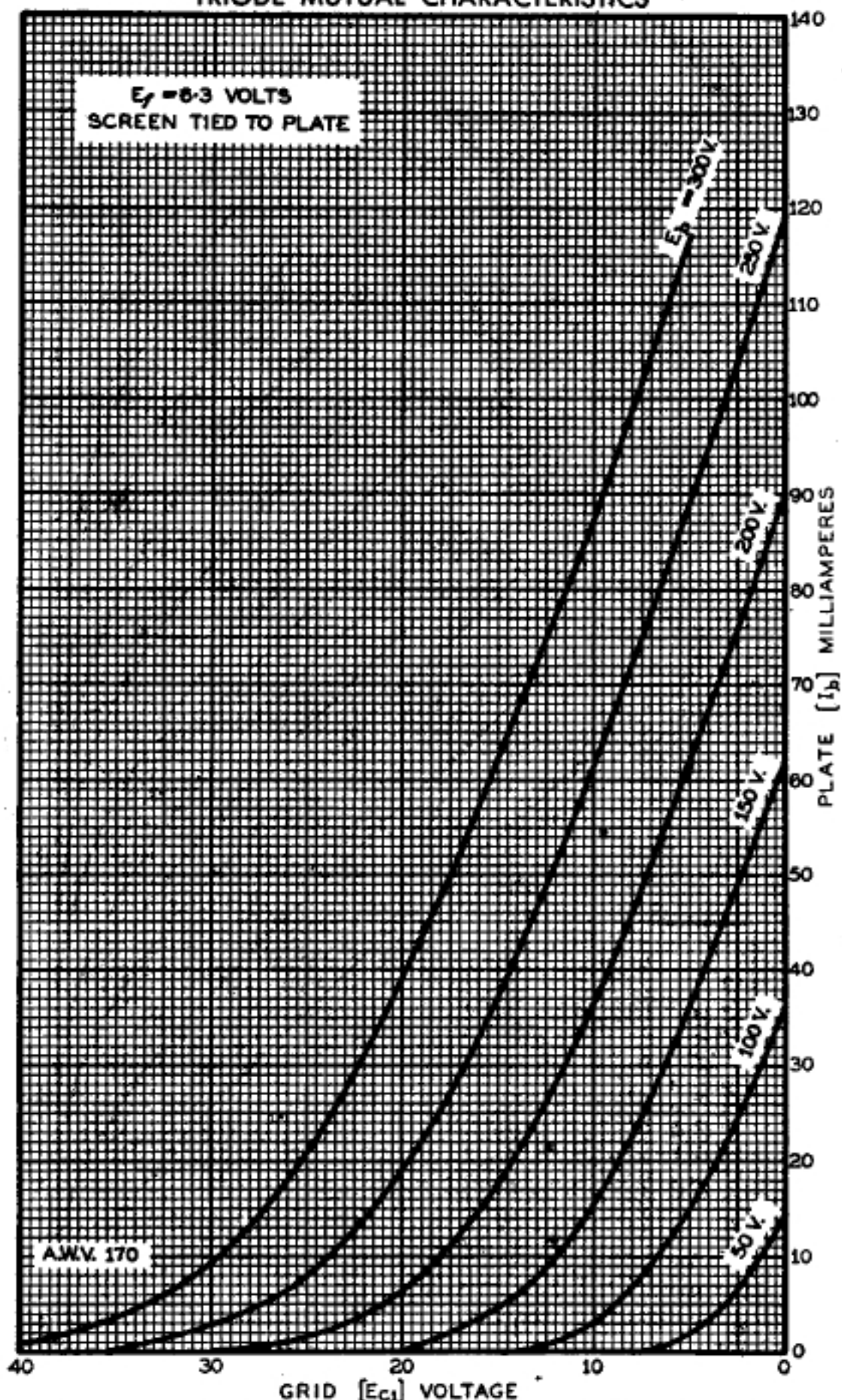


# RADIOTRON

## 6V6-G

### TRIODE MUTUAL CHARACTERISTICS

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SHEET 4





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AVERAGE PLATE CHARACTERISTICS  
TRIODE CONNECTION

