

RADIOTRON**6V6-GT****BEAM POWER AMPLIFIER****6V6-GT
SHEET 1**

Heater ■ Coated Unipotential Cathode
 Voltage 6.3 a-c or d-c volts
 Current 0.45 amp.

Direct Interelectrode Capacitances (Approx.):

Grid to Plate 0.7 μF .
 Input 9.5 μF .
 Output 7.5 μF .

Maximum Overall Length 3-5/16"

Maximum Seated Height 2-3/4"

Maximum Diameter 1-5/16"

Bulb T-9

Base Intermediate Shell

Pin 1-No Connection

Pin 2-Heater

Pin 3-Plate

Pin 4-Screen

Mounting Position



Octal 7-Pin.

Pin 5-Grid

Pin 7-Heater

Pin 8-Cathode

Any

BOTTOM VIEW (G-7AC)

Maximum Ratings are Design-Centre Values.

SINGLE VALVE AMPLIFIER-Class A₁

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	-8.5	-5	-12.5	-13	volts
Cath. Bias Res.	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 A₁ (Triode Connection.®)

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

Typical Operation:

Plate Voltage	250	300	volts
Grid Voltage ▲	-15	-20	volts
Cathode Bias Res?	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 AB₁

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

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BEAM POWER AMPLIFIER

Screen Voltage	250	285	250**	volts
Grid Voltage ▲	-15	-19	-15.6**	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.
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. *)

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

Typical Operation:

	Class A ₁	Class AB ₁	
Plate Voltage	300	300	volts
Grid Voltage ▲	-20	-25	volts
Cathode Bias Resistor	256	-	ohms
Peak A-F Volts (G-G)	40	50	volts
Zero-Sig. Plate Cur.	76	42	mA.
Eff. Load Res. (P-P)	9,600	6,000	ohms
Max.-Sig. Power Output	3.3	4.75	watts

- The heater should be operated at 6.5 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.
- ▲ 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 0.1 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.
- 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 only a small effect on the operation.
- Screen connected to plate at the socket.
- Conditions as used in Radiotron circuit 1504. 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 variations from valve to valve.

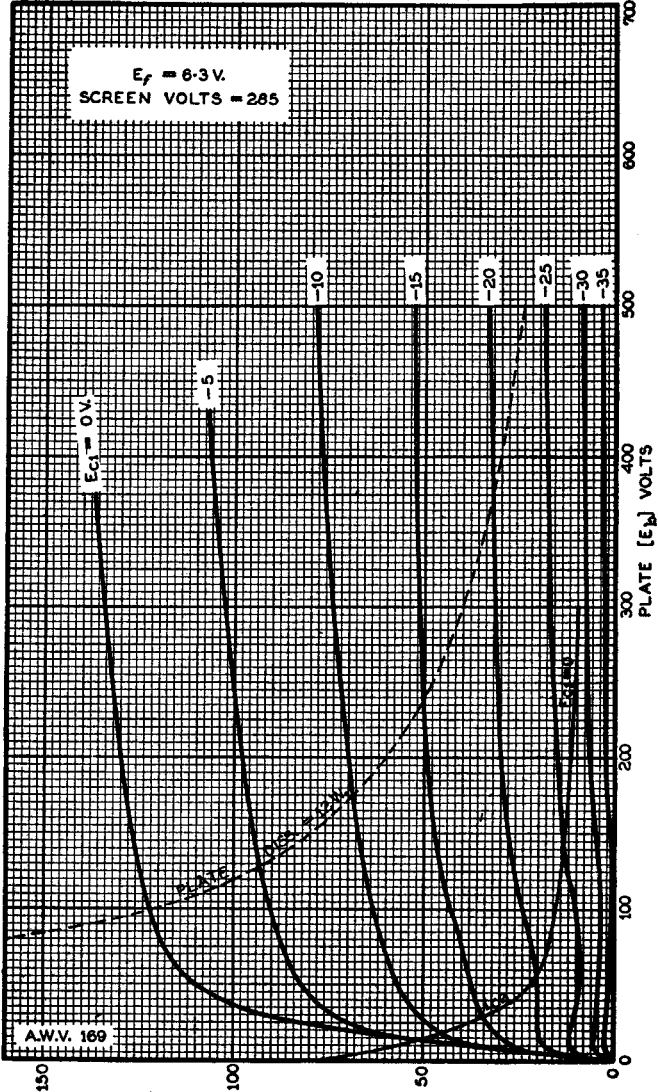
← Indicates a change.

RADIOTRON

6V6-G (T)

AVERAGE PLATE CHARACTERISTICS

6V6-G (T)
SHEET 2



A.W.V. 169

6V6-G (T)

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6V6-G (T)

AVERAGE PLATE CHARACTERISTICS
WITH E_{c1} AS VARIABLE

$E_f = 6.3$ VOLTS

SCREEN VOLTS = 250

LOAD LINE CORRECTED TO COMPENSATE
FOR EFFECTS OF RECTIFICATION
WITH LARGE SIGNALS

CONTROL GRID VOLTS (E_{c1})

150
100
50
0

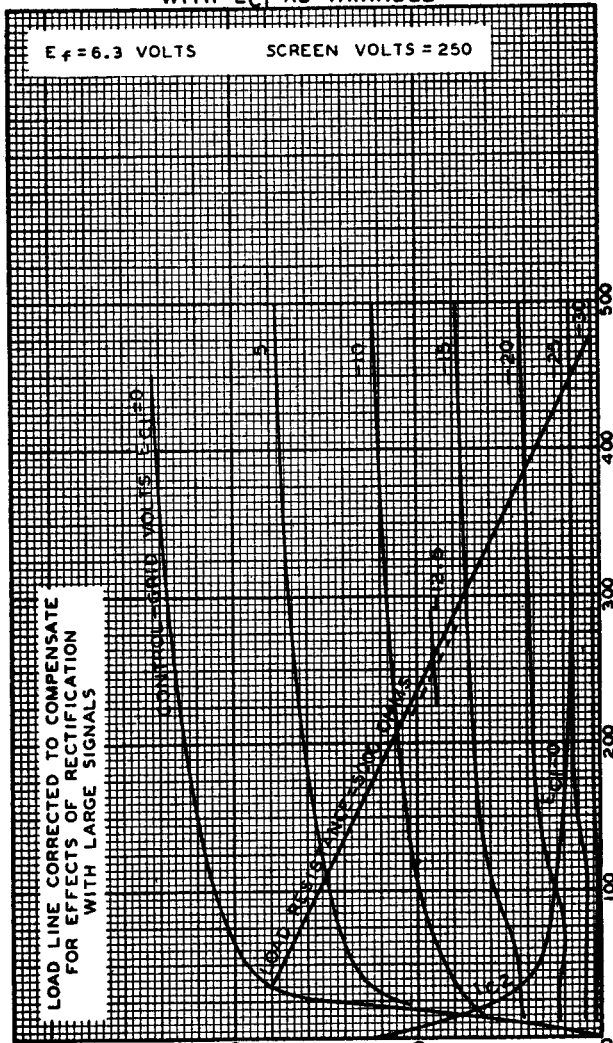
500
400
300
200
100
0

PLATE VOLTS

150
100
50
0

PLATE (i_b) OR SCREEN (i_{c2}) MILLIAMPERES

92C-4807



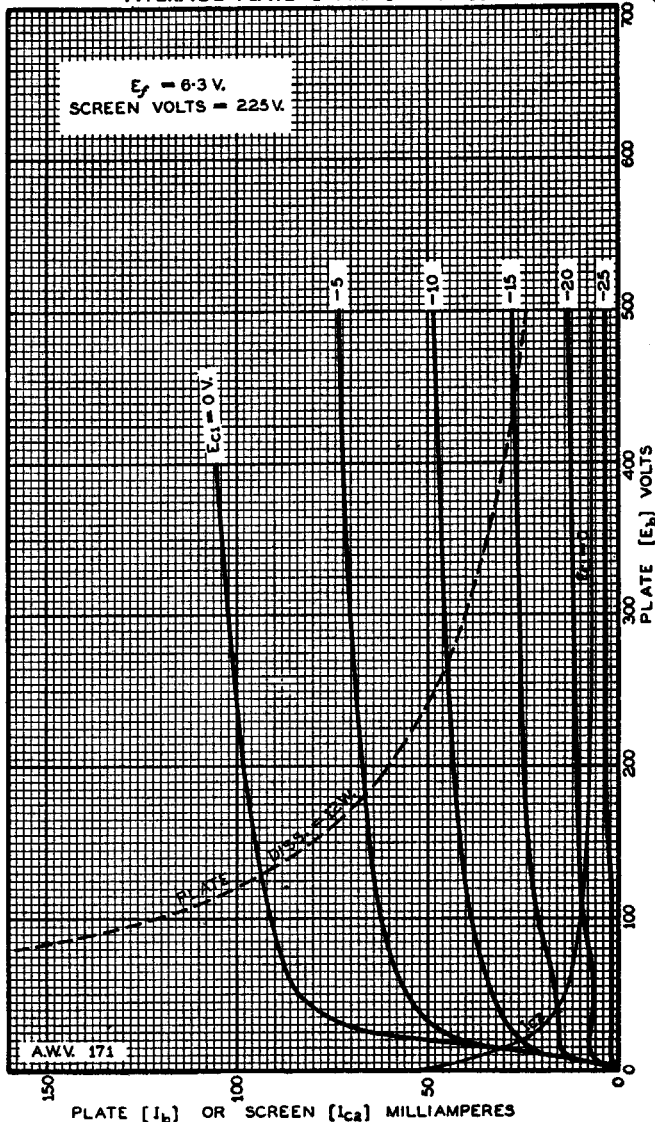
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6V6-G(T)

AVERAGE PLATE CHARACTERISTICS

6V6-G(T)
SHEET 3

$E_f = 6.3 \text{ V.}$
SCREEN VOLTS = 225 V.



A.W.V. 171

PLATE [I_b] OR SCREEN [I_{ca}] MILLIAMPERES

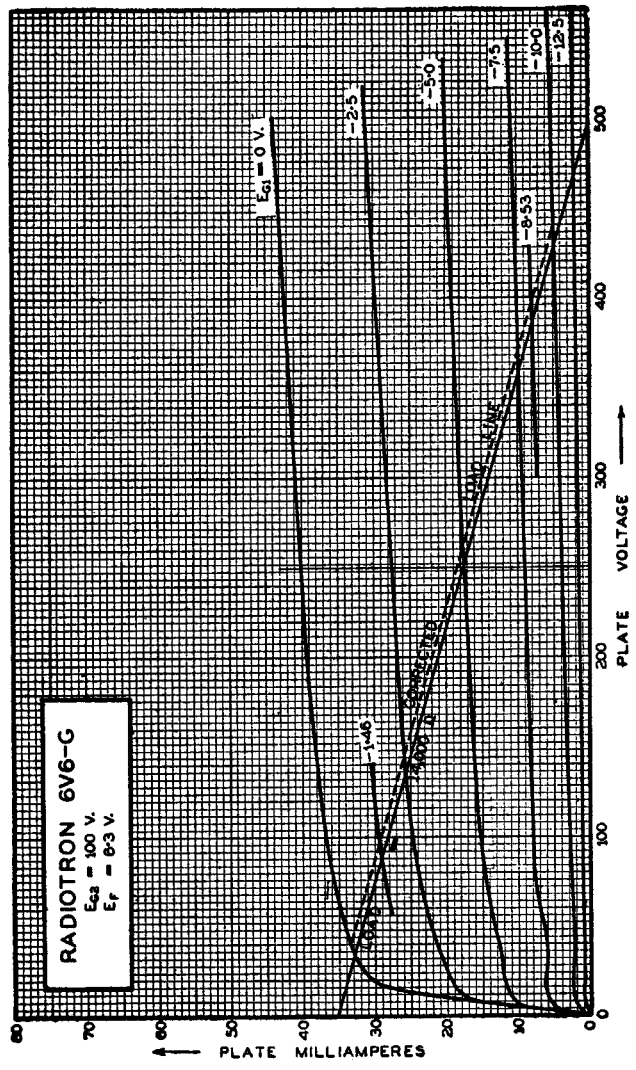
AMALGAMATED WIRELESS VALVE CO. PTY. LTD.
AUGUST 1941 SYDNEY, AUSTRALIA

6V6-G(T)

RADIOTRON

6V6-G(T)

AVERAGE PLATE CHARACTERISTICS
with E_{c1} as variable

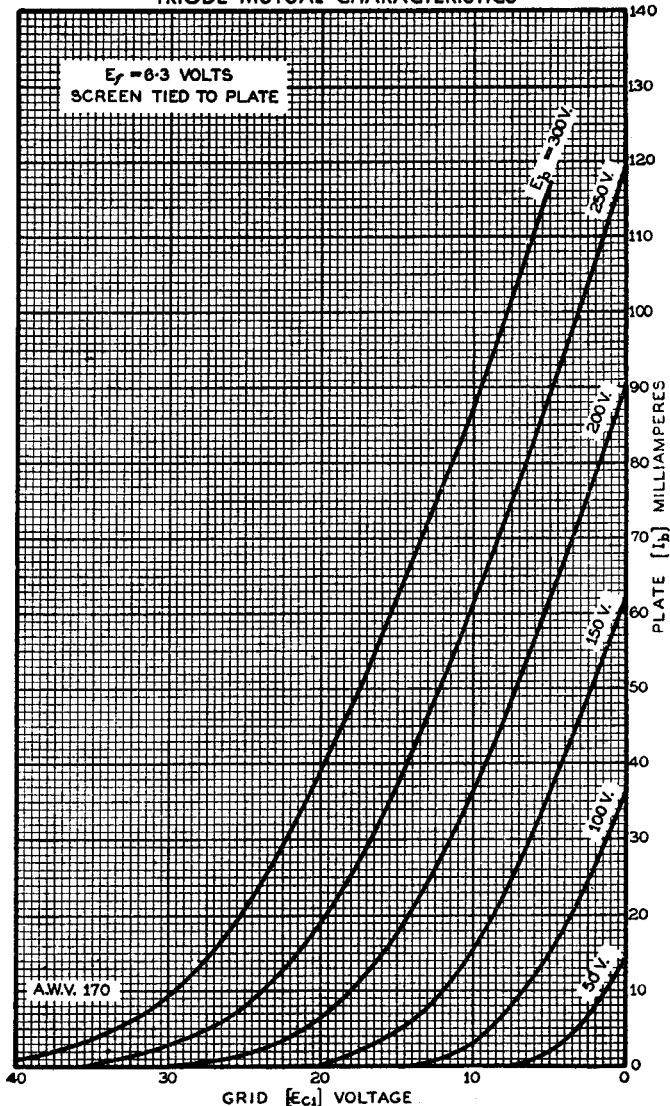


RADIOTRON

6V6-G

TRIODE MUTUAL CHARACTERISTICS

6V6-G
SHEET 4



6V6-G

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6V6-G

AVERAGE PLATE CHARACTERISTICS
TRIODE CONNECTION

