

# RADIOTRON

## 6J8-G

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### TRIODE-HEPTODE CONVERTER

|  |                             |                         |
|--|-----------------------------|-------------------------|
| Heater   | Coated Unipotential Cathode |                         |
| Voltage  | 6.3                         | a-c or d-c volts        |
| Current  | 0.3                         | amp.                    |
| Direct Interelectrode Capacitances (With Standard Shield):           |                             |                         |
| Heptode Grid No.1 to Heptode Plate                                   | 0.01 max.                   | $\mu\text{f}$           |
| Heptode Grid No.1 to Triode Grid & Heptode Grid No.3                 | 0.13                        | $\mu\text{f}$           |
| Heptode Grid No.1 to Triode Plate                                    | 0.015                       | $\mu\text{f}$           |
| Triode Grid & Heptode Grid No.3 to Triode Plate                      | 2.2                         | $\mu\text{f}$           |
| R.F. Input (Heptode Grid No.1 to All Other Electrodes)               | 4.4                         | $\mu\text{f}$           |
| Osc. Output (Triode Plate to All Other Electrodes)                   | 5.5                         | $\mu\text{f}$           |
| Osc. Input (Triode Grid & Heptode Grid No.3 to All Other Electrodes) | 11.7                        | $\mu\text{f}$           |
| Mixer Output (Heptode Plate to All Other Electrodes)                 | 8.8                         | $\mu\text{f}$           |
| Maximum Overall Length   |                             | 4-17/32"                |
| Maximum Diameter   |                             | 1-9/16"                 |
| Bulb   |                             | ST-12                   |
| Cap  |                             | Skirted Miniature       |
| Base   |                             | Small Shell Octal 8-Pin |
| Pin 1-No Connection  |                             | Pin 6-Triode Plate      |
| Pin 2-Heater   |                             | Pin 7-Heater            |
| Pin 3-Heptode Plate  |                             | Pin 8-Cathode           |
| Pin 4-Heptode Grids #2 & #4  |                             | Cap -Heptode Grid #1    |
| Pin 5-Heptode Grid #3 & Triode Grid                                  |                             |                         |
|  |                             |                         |
| BOTTOM VIEW  |                             |                         |
| Mounting Position  |                             | Vertical, Base Down     |
| <u>CONVERTER SERVICE</u>   |                             |                         |
| Heptode Plate Voltage  | 300 max.                    | volts                   |
| Heptode Screen (Grids Nos.2 & 4) Voltage                             | 100 max.                    | volts                   |
| Heptode Screen Supply Voltage  | 300 max.                    | volts                   |
| Heptode Control-Grid (Grid No.1) Voltage                             | 0 min.                      | volts                   |
| Triode Plate Voltage   | 250 max.                    | volts                   |
| Heptode Plate Dissipation  | 0.9 max.                    | watt                    |
| Heptode Screen Dissipation   | 0.4 max.                    | watt                    |
| Triode Plate Dissipation   | 0.8 max.                    | watts                   |
| Typical Operation:   |                             |                         |
| Heater Voltage   | 6.3                         | 6.3 volts               |
| Heptode Plate Voltage  | 100                         | 250 volts               |
| Heptode Screen Voltage   | 100                         | 100 volts               |
| Heptode Control-Grid Voltage   | -3                          | -3 volts                |
| Triode Plate Voltage   | 100                         | 250 <sup>o</sup> volts  |
| Triode Grid Resistor   | 50000                       | 50000 ohms              |
| Heptode Plate Resistance   | 0.9                         | 4.0 megohms             |
| Conversion Transconductance  | 250                         | 290 $\mu\text{mhos}$    |
| Heptode Control Grid Bias for Conver. Transcond.=2 $\mu\text{mhos}$  | -20                         | -20 volts               |
| Heptode Plate Current  | 1.4                         | 1.3 ma.                 |
| Heptode Screen Current   | 3.0                         | 2.9 ma.                 |
| Triode Plate Current   | 3.0                         | 5.0 ma.                 |
| Triode Grid & Heptode Grid No.3 Current                              | 0.3                         | 0.4 ma.                 |
| <u>TRIODE SECTION</u>  |                             |                         |
| Plate Voltage  | 100                         | volts                   |
| Grid Voltage   | 0                           | volts                   |
| Amplification Factor   | 17                          |                         |
| Plate Resistance   | 10600                       | ohms                    |
| Transconductance   | 1600                        | $\mu\text{mhos}$        |
| Plate Current  | 7                           | ma.                     |
| <sup>o</sup> Applied through a 20000 ohm dropping resistor.          |                             |                         |

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### OPERATION CHARACTERISTICS

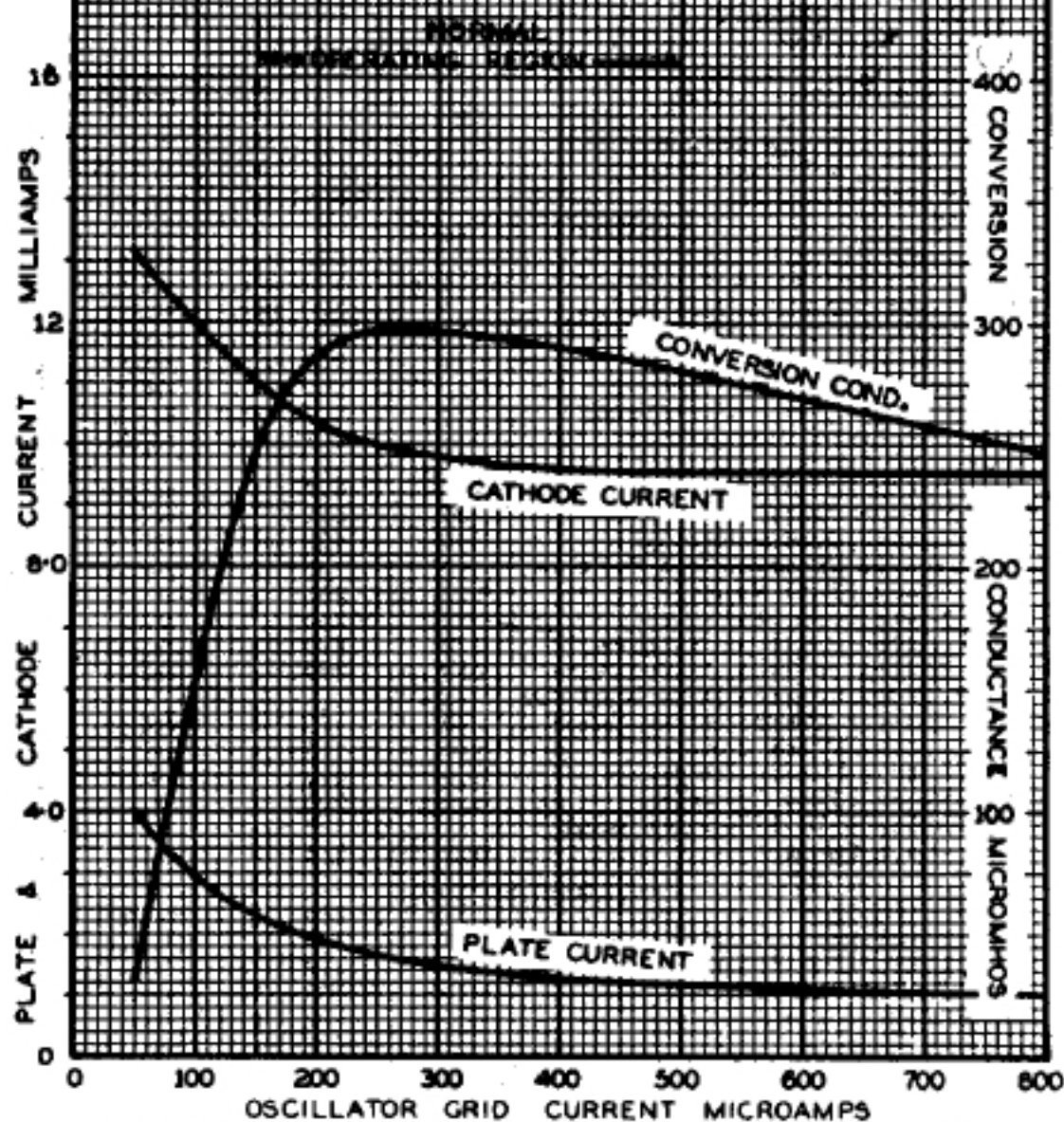
A.W.V. 130

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|            |   |        |
|------------|---|--------|
| $E_F$      | = | 6.3 V. |
| $E_p$      | = | 250 V. |
| $E_{G1}$   | = | -3 V.  |
| $E_{G2,4}$ | = | 100 V. |

OSC. PLATE FED FROM +250 V. THROUGH  
A 20,000  $\Omega$  RESISTOR.

OSCILLATOR GRID RESISTOR = 50,000  $\Omega$



AMALGAMATED WIRELESS VALVE CO. PTY. LTD.

SEPTEMBER, 1940

SYDNEY, AUSTRALIA