CATHODE.
Tungsten filament
Nominal voltage (Actual voltage marked on bulb) 22 V
Nominal current 70 A
Peak emission 12 A

RATING.
Amplification factor \(\{\text{Measured at } V_a\}\) 26
Impedance \(\{12kV \ 1a \ 1.5A\}\) 2,900 Ω

DIRECT INTER-ELECTRODE CAPACITIES.
Grid to anode 17 pF
Grid to filament 29 pF
Anode to filament 1 pF

WATER FLOW
Water Jacket type 3005A
Normal water flow 11 gal. per min.
Pressure drop for normal flow 14 lb. per sq. in.
Maximum water pressure 50 lb. per sq. in.

DIMENSIONS.
Maximum overall length 520 mm.
Net weight 3.6 kg.

MAXIMUM RATINGS.
Maximum direct anode voltage 17,500 V
Maximum direct anode current 2.5 A
Maximum anode dissipation 20 kW
Maximum grid dissipation 1.2 kW

May 1947
Single-ended Water-cooled
R.F. Power Amplifier Triode

TYPICAL OPERATING CONDITIONS

RADIO FREQUENCY

Class B Telephony. Modulated. Carrier applied to grid.

(Carrier conditions per valve for use with 100% modulation).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct anode voltage</td>
<td>15 kV</td>
</tr>
<tr>
<td>Grid bias</td>
<td>—600 V</td>
</tr>
<tr>
<td>Direct anode current</td>
<td>2.0 A</td>
</tr>
<tr>
<td>Power output</td>
<td>10 kW approx.</td>
</tr>
</tbody>
</table>

Class C Power Amplifier. Anode subject to modulation.

(Carrier conditions per valve for use with 100% modulation).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct anode voltage</td>
<td>15 kV</td>
</tr>
<tr>
<td>Grid bias</td>
<td>—2,000 V approx.</td>
</tr>
<tr>
<td>Direct anode current</td>
<td>2 A</td>
</tr>
<tr>
<td>Power output</td>
<td>20 kW approx.</td>
</tr>
</tbody>
</table>

Class C Power Amplifier or Oscillator, unmodulated.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct anode voltage</td>
<td>17 kV</td>
</tr>
<tr>
<td>Grid bias</td>
<td>—1,600 V approx.</td>
</tr>
<tr>
<td>Direct anode current</td>
<td>2.5 A</td>
</tr>
<tr>
<td>Power output</td>
<td>30 kW approx.</td>
</tr>
</tbody>
</table>

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3Q/221E

FILAMENT

GRID

GRID SCREEN

520 mm.
MAX:

115 mm. ± 3 mm.