ILA4

POWER AMPLIFIER PENTODE

Filament Coated d-c volts
Voltage 1.4
Current 0.05 amperes
Maximum Overall Length 2-25/32"
Maximum Seated Height 2-1/4"
Maximum Diameter 1-3/16"
Bulb T-9

Base Lock-in 8-Pin
Pin 1—Filament + Pin 5—No Connection
Pin 2—Plate Pin 6—Grid
Pin 3—Screen Pin 7—No Connection
Pin 4—No Connection Pin 8—Filament +
Mounting Position Any

For curve and additional data, refer to Type IA59F/IA5G. The ILA4 and
the IA59F/IA5G are identical electrically.

ILA6

PENTAGRID CONVERTER

Filament Coated d-c volts
Voltage 1.4
Current 0.05 amperes
Direct Interelectrode Capacitances o:
Grid #4 to Plate 0.4 μf
Grid #4 to Grid #2 0.3 μf
Grid #4 to Grid #1 0.15 μf
Grid #1 to Grid #2 0.6 μf
Grid #4 to All Other Electrodes (R-F Input) 7.7 μf
Grid #2 to All Other Electrodes
Except Grid #1 (Osc. Output) 3.3 μf
Grid #1 to All Other Electrodes
Except Grid #2 (Osc. Input) 2.9 μf
Plate to All Other Electrodes (Mixer Output) 8.0 μf

Maximum Overall Length 2-25/32"
Maximum Seated Height 2-1/4"
Maximum Diameter 1-3/16"
Bulb T-9

Base Lock-in 8-Pin
Pin 1—Filament + Pin 5—Grids #3 & #5
Pin 2—Plate Pin 6—Grid #4
Pin 3—Grid #2 Pin 7—No Connection
Pin 4—Grid #1 Pin 8—Filament +
Mounting Position Any

o With close-fitting shield connected to negative filament terminal.

(continued on next page)

May 1, 1941

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

TENTATIVE DATA
PENTAGRID CONVERTER

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>90 max.</td>
</tr>
<tr>
<td>Screen (Grids #3 &amp; #5) Voltage</td>
<td>55 max.</td>
</tr>
<tr>
<td>Screen Supply Voltage</td>
<td>90 max.</td>
</tr>
<tr>
<td>Anode–Grid (Grid #2) Voltage</td>
<td>90 max.</td>
</tr>
<tr>
<td>Total Zero-Sig. Cathode Current</td>
<td>3 max.</td>
</tr>
<tr>
<td><strong>Plate Voltage</strong></td>
<td><strong>90</strong></td>
</tr>
<tr>
<td><strong>Screen Voltage</strong></td>
<td><strong>45</strong></td>
</tr>
<tr>
<td><strong>Anode-Grid Voltage</strong></td>
<td><strong>90</strong></td>
</tr>
<tr>
<td><strong>Oscillator-Grid Voltage</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>Oscillator-Grid (Grid #1) Resistor</strong></td>
<td>200000</td>
</tr>
<tr>
<td><strong>Plate Resistor</strong></td>
<td>0.75</td>
</tr>
<tr>
<td><strong>Conversion Transcond.</strong></td>
<td>250</td>
</tr>
<tr>
<td><strong>Conversion Transcond. with Grid #4</strong></td>
<td>10</td>
</tr>
<tr>
<td><strong>Bias of -3 volts</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Plate Cur.</strong></td>
<td>0.55</td>
</tr>
<tr>
<td><strong>Screen Cur.</strong></td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Anode-Ground Cur.</strong></td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Oscillator-Ground Cur.</strong></td>
<td>0.035</td>
</tr>
<tr>
<td><strong>Total Cathode Cur.</strong></td>
<td>2.4</td>
</tr>
</tbody>
</table>

**NOTE:** The transconductance of the oscillator portion (not oscillating) is approximately 550 µmhos, and the anode grid current 2.2 ma. under the following conditions: plate volts, 90; screen volts, #5; control-grid volts, 0; anode-grid volts, 90; and oscillator-grid volts, 0.

**▲** Obtained preferably by using a properly by-passed 5000 to 75000-ohm voltage-dropping resistor in series with a 90-volt supply.

**▲▲** A resistance of at least 1.0 megohm should be in the grid return to negative filament pin.

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A Typical Pentagrid Circuit is shown under Type 1A6.

May 1, 1941

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