The 6AC10 is a compactron containing three high-mu triodes. It is designed for use primarily as a color-difference amplifier in color television receivers.

**GENERAL**

**ELECTRICAL**

- Cathode - Coated Unipotential
- Heater Characteristics and Ratings
  - Series Circuit: 6.3 Volts
  - Parallel Circuit: 6.3 ± 0.6 Volts
  - Heater Voltage, AC or DC...
  - Heater Current...
  - Heater Warm-up Time, Average...
  - Direct Interelectrode Capacitances**

<table>
<thead>
<tr>
<th>Section</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid to Plate: (g to p)</td>
<td>1.3</td>
<td>1.2</td>
<td>1.2 pf</td>
</tr>
<tr>
<td>Input: g to (h + k)</td>
<td>2.4</td>
<td>2.6</td>
<td>2.6 pf</td>
</tr>
<tr>
<td>Output: p to (h + k)</td>
<td>0.22</td>
<td>0.30</td>
<td>0.44 pf</td>
</tr>
</tbody>
</table>

**MECHANICAL**

- Operating Position - Any
- Envelope - T-9, Glass
- Base - E12-70, Button 12-Pin
- Outline Drawing - EIA 9-59
  - Maximum Diameter...
  - Minimum Diameter...
  - Maximum Over-all Length...
  - Maximum Seated Height...
  - Minimum Seated Height...

**MAXIMUM RATINGS**

**DESIGN-MAXIMUM VALUES, EACH SECTION**

- Plate Voltage...
- Plate Dissipation...
- Heater-Cathode Voltage
  - Heater Positive with Respect to Cathode
    - DC Component...
    - Total DC and Peak...
  - Heater Negative with Respect to Cathode
    - Total DC and Peak...
- Grid Circuit Resistance...

**PHYSICAL DIMENSIONS**

**TERMINAL CONNECTIONS**

- Pin 1 - Heater
- Pin 2 - Plate (Section 3)
- Pin 3 - Cathode (Section 3)
- Pin 4 - Cathode (Section 1)
- Pin 5 - Plate (Section 2)
- Pin 6 - Cathode (Section 2)
- Pin 7 - Grid (Section 2)
- Pin 8 - No Connection
- Pin 9 - Grid (Section 1)
- Pin 10 - Plate (Section 1)
- Pin 11 - Grid (Section 3)
- Pin 12 - Heater

**BASING DIAGRAM**

EIA 12FE
MAXIMUM RATINGS (Cont’d)

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS, EACH SECTION

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>200 Volts</td>
</tr>
<tr>
<td>Cathode-Bias Resistor</td>
<td>150 Ohms</td>
</tr>
<tr>
<td>Amplification Factor</td>
<td>62 Ohms</td>
</tr>
<tr>
<td>Plate Resistance, approximate</td>
<td>10700 Ohms</td>
</tr>
<tr>
<td>Transconductance</td>
<td>5800 Micromhos</td>
</tr>
<tr>
<td>Plate Current</td>
<td>9.0 Milliamperes</td>
</tr>
<tr>
<td>Grid Voltage, approximate</td>
<td>5 Volts</td>
</tr>
<tr>
<td>Ib = 100 Microamperes</td>
<td></td>
</tr>
</tbody>
</table>

NOTES

* Operated with the heater in series with the heaters of other tubes having the same bogey heater current.
† Operated with the heater in parallel with the heaters of other tubes having the same bogey heater voltage.
§ For parallel heater operation, the equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.
¶ For series heater operation, the equipment designer should design the equipment so that heater current is centered at the specified bogey value, with heater supply variations restricted to maintain heater current within the specified tolerance.
△ Heater current of a bogey tube at Ef = 6.3 volts.
♯ The time required for the voltage across the heater to reach 80 percent of the bogey value after applying 4 times the bogey heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times the bogey heater voltage divided by the bogey heater current.
** Without external shield.