**6BH6**

**SHARP-CUTOFF PENTODE**

**7-PIN MINIATURE TYPE**

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**GENERAL DATA**

**Electrical:**

Heater, for Unipotential Cathode:
- Voltage: 6.3 ac or dc volts
- Current: 0.15 amp

Direct Interelectrode Capacitances:

<table>
<thead>
<tr>
<th>Without External Shield</th>
<th>With External Shield (\text{o} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid No.1 to plate</td>
<td>0.0035 max.</td>
</tr>
<tr>
<td>Grid No.1 to cathode, grid No.3 &amp; internal shield, grid No.2, and heater</td>
<td>5.4 (\mu f)</td>
</tr>
<tr>
<td>Plate to cathode, grid No.3 &amp; internal shield, grid No.2, and heater</td>
<td>4.4 (\mu f)</td>
</tr>
</tbody>
</table>

**Characteristics, Class \(A_1\) Amplifier:**

- Plate Voltage: 100 volts, 250 volts
- Grid-No.3 (Suppressor) Connected to cathode at socket
- Grid-No.2 Voltage: 100 volts
- Grid-No.1 Voltage: -1 volt
- Plate Resistance (Approx.): 0.7 ohms, 1.4 ohms
- Transconductance: 3400 & 4600 \(\mu\)hos
- Plate Current: 3.6 ma, 7.4 ma
- Grid-No.2 Current: 1.4 ma, 2.9 ma
- Grid-No.1 Voltage (Approx.) for plate current of 10 \(\mu\)amp: -5, -7.7 volts

**Mechanical:**

- Mounting Position: Any
- Maximum Overall Length: 2-1/8" (51.7 mm)
- Maximum Seated Length: 1-7/8" (48.3 mm)
- Length, Base Seat to Bulb Top (Excluding tip) 1-1/2" ± 3/32" (38.1 mm ± 0.96 mm)
- Maximum Diameter: 3/4" (19.1 mm)
- Dimensional Outline: See General Section
- Bulb: T-5-1/2 Small-Button Miniature 7-Pin (JETEC No.E7-1)
- Basing Designation for BOTTOM VIEW: 7CM

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Pin 1 - Grid No.1
Pin 2 - Cathode
Pin 3 - Heater
Pin 4 - Heater
Pin 5 - Plate
Pin 6 - Grid No.2
Pin 7 - Grid No.3, Internal Shield

\(\text{o} \) with external shield JETEC No.316 connected to cathode.

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SEPT. 1, 1955

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA
AMPLIFIER - Class A

Maximum Ratings, Design-Center Values:

- **PLATE VOLTAGE**: 300 max. volts
- **GRID-No.2 (SCREEN) SUPPLY VOLTAGE**: 300 max. volts
- **GRID-No.2 VOLTAGE**: See Grid-No.2 Input Rating Chart at front of Receiving Tube Section
- **GRID-No.1 (CONTROL-GRID) VOLTAGE**:
  - Negative bias value: 50 max. volts
  - Positive bias value: 0 max. volts
- **PLATE DISSIPATION**: 3 max. watts
- **GRID-No.2 INPUT**:
  - For grid-No.2 voltages up to 150 volts: 0.5 max. watt
  - For grid-No.2 voltages between 150 and 300 volts: See Grid-No.2 Input Rating Chart at front of Receiving Tube Section

**PEAK HEATER-CATHODE VOLTAGE**:
- Heater negative with respect to cathode: 90 max. volts
- Heater positive with respect to cathode: 90 max. volts

SEPT. 1, 1955
AVERAGE PLATE CHARACTERISTICS

$E_f = 6.3$ VOLTS
GRID-No. 2 VOLTS = 150
GRID-No. 3 VOLTS = 0

PLATE ($I_b$) OR GRID-No. 2 ($I_{c2}$) MILLIAMPERES

AUG. 23, 1947
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92CM-6892
AVERAGE CHARACTERISTICS

$E_f = 6.3$ VOLTS  PLATE VOLTS $\# 250$  GRID $-N \# 3$ VOLTS $= 0$

<table>
<thead>
<tr>
<th>CURVES</th>
<th>GRID $- N # 2$ VOLTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>$I_b$</td>
<td>$I_{C2}$</td>
</tr>
<tr>
<td>1</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>B</td>
</tr>
<tr>
<td>3</td>
<td>C</td>
</tr>
</tbody>
</table>

PLATE $(I_b)$ OR GRID $- N \# 2 (I_{C2})$ MILLIAMPERES

GRID $- N \# 1$ VOLTS

AUG. 22 1947  TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-6893
**AVERAGE CHARACTERISTICS**

\[ E_f = 6.3 \text{ VOLTS} \quad \text{PLATE VOLTS} = 250 \quad \text{GRID-\#3 VOLTS} = 0 \]

<table>
<thead>
<tr>
<th>CURVES</th>
<th>GRID-#2 VOLTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I_b A</td>
<td>50</td>
</tr>
<tr>
<td>I_b B</td>
<td>100</td>
</tr>
<tr>
<td>I_b C</td>
<td>150</td>
</tr>
</tbody>
</table>

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**Diagram Details:**

- **Axes:**
  - X-axis: GRID-\#1 VOLTS
  - Y-axis: PLATE\( (I_b) \) OR GRID-\#2\( (I_c) \) MILLIAMPERES

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**Other Details:**

- **Page Number:** 6BH6
- **Date:** AUG. 22 1947
- **Department:** TUBE
- **Company:** RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
- **Document Code:** 92CM-6893
AVERAGE PLATE CHARACTERISTICS
TRIODE CONNECTION

$E_i = 6.3 \text{ VOLTS}$
GRIDS - NR 2 & 3 CONNECTED TO PLATE

DEC. 10, 1947
TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
92CM-6896