HIGH-MU TRIODE—SHARP-CUTOFF PENTODE
9-PIN MINIATURE TYPE
Intended for use in equipment having series heater-string arrangement

GENERAL DATA

Electrical:
Heater, for Unipotential Cathodes:
Voltage. ........ 6.3 ...... ac or dc volts
Current. ......... 0.6 ...... amp
Warm-up time (Average). 11 ........ sec

For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.

Direct Interelectrode Capacitances:

<table>
<thead>
<tr>
<th></th>
<th>Without External Shield</th>
<th>With External Shield</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Triode Unit:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grid to plate.</td>
<td>2.2</td>
<td>2.2</td>
</tr>
<tr>
<td>Grid to cathode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and heater</td>
<td>3.2</td>
<td>3.4</td>
</tr>
<tr>
<td>Plate to cathode</td>
<td>0.32</td>
<td>1.7</td>
</tr>
<tr>
<td>and heater</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pentode Unit:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grid No.1 to plate</td>
<td>0.036 max.</td>
<td>0.03 max.</td>
</tr>
<tr>
<td>Grid No.1 to cathode &amp; grid No.3 &amp; internal shield, grid No.2, and heater</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Plate to cathode &amp; grid No.3 &amp; internal shield, grid No.2, and heater</td>
<td>2.8</td>
<td>3.6</td>
</tr>
<tr>
<td>Triode grid to pentode plate</td>
<td>0.03 max.</td>
<td>0.008 max.</td>
</tr>
<tr>
<td>Pentode grid No.1 to triode plate</td>
<td>0.008 max.</td>
<td>0.005 max.</td>
</tr>
<tr>
<td>Pentode plate to triode plate</td>
<td>0.2 max.</td>
<td>0.05 max.</td>
</tr>
</tbody>
</table>

Mechanical:

| Mounting Position. | Any                        |
| Maximum Overall Length | 2-5/8"                    |
| Maximum Seated Length | 2-3/8"                    |
| Length, Base Seat to Bulb Top (Excluding tip) | 2" ± 3/32" |
| Maximum Diameter | 7/8"                      |
| Bulb | T-6-1/2                   |

With external shield JETEC No.315 connected to cathode of unit under test.

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Pin 1 - Triode Cathode
Pin 2 - Triode Grid
Pin 3 - Triode Plate
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Pent. Cath., Grid No.3
Pin 7 - Pentode Grid No.1
Pin 8 - Pentode Grid No.2
Pin 9 - Pent. Plate

TRIODE UNIT - Class A1 Amplifier

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE ............... 300 max. volts
PLATE DISSIPATION ............ 1 max. watt

PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode 200 max. volts
Heater positive with respect to cathode 200 max. volts

Typical Operation and Characteristics:

Plate Voltage ................. 200 volts
Grid Voltage .................. -2 volts
Amplification Factor .......... 70
Plate Resistance (Approx.) .... 17500 ohms
Transconductance .......... 4000 µmhos
Grid Voltage (Approx.) for plate current of 10 µamp .... -5 volts
Plate Current .................. 4 ma

Maximum Circuit Values:

Grid-Circuit Resistance:
For fixed-bias operation ........ 0.5 max. megohm
For cathode-bias operation .... 1.0 max. megohm

PENTODE UNIT - Class A1 Amplifier

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

△: See next page.

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RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
**HIGH-MU TRIODE—SHARP-CUTOFF PENTODE**

<table>
<thead>
<tr>
<th>GRID-No.2 INPUT:</th>
<th>1 max. watt</th>
</tr>
</thead>
<tbody>
<tr>
<td>For grid-No.2 voltages up to 150 volts</td>
<td></td>
</tr>
<tr>
<td>For grid-No.2 voltages between 150 and 300 volts</td>
<td>See Grid-No.2 Input Rating Chart at front of Receiving Tube Section</td>
</tr>
</tbody>
</table>

**PEAK HEATER-CATHODE VOLTAGE:**
- Heater negative with respect to cathode: 200 max. volts
- Heater positive with respect to cathode: 200 max. volts

**Typical Operation and Characteristics:**
- Plate Voltage: 200 volts
- Grid-No.2 Voltage: 150 volts
- Grid-No.1 Voltage: 0 volts
- Cathode-Bias Resistor: 180 ohms
- Plate Resistance (Approx.): 0.4 megohm
- Transconductance: 9000 μmhos
- Grid-No.1 Voltage (Approx.) for plate current of 10 μamp: -10 volts
- Plate Current: 13 ma
- Grid-No.2 Current: 3.5 ma

**Maximum Circuit Values:**
- Grid-No.1-Circuit Resistance:
  - For fixed-bias operation: 0.25 max. megohm
  - For cathode-bias operation: 1.0 max. megohm

▲ The dc component must not exceed 100 volts.
6AW8

AVERAGE PLATE CHARACTERISTICS
TRIODE UNIT

\[ E_F = 6.3 \text{ VOLTS} \]
6AW8

AVERAGE CHARACTERISTICS
PENTODE UNIT

\[ E_C = 6.3 \text{ VOLTS} \]
\[ \text{GRID-N\# 2 VOLTS} = 150 \]

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

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