HIGH-MU TWIN TRIODE
9-PIN MINIATURE TYPE
For high-fidelity audio-amplifier applications critical as to noise and hum. In other respects, the 7025 is similar to the 12AX7.

GENERAL DATA

Electrical:
Heater, for Unipotential Cathodes:

<table>
<thead>
<tr>
<th>Series</th>
<th>Parallel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>12.6</td>
</tr>
<tr>
<td>Current</td>
<td>0.15</td>
</tr>
</tbody>
</table>

Direct Interelectrode Capacitances (Approx.):

<table>
<thead>
<tr>
<th>Unit No. 1</th>
<th>Unit No. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid to plate...</td>
<td>1.7</td>
</tr>
<tr>
<td>Grid to cathode and heater...</td>
<td>1.6</td>
</tr>
<tr>
<td>Plate to cathode and heater...</td>
<td>0.46</td>
</tr>
</tbody>
</table>

Equivalent Noise and Hum Voltage (Referenced to Grid):

Values are for Each Unit

Average Value (RMS)...
Measured in "true rms" units under the following conditions: heater volts = 6.3 ac (parallel connection), center-tap of heater transformer connected to ground, dc plate-supply volts = 250, plate load resistor (megohms) = 0.1, cathode resistor (ohms) = 2700, cathode-bypass capacitor (μF) = 100, grid resistor (ohms) = 0, and amplifier covering frequency range between 25 and 10,000 cps.

Maximum Value (RMS)...
Measured in "true rms" units under the same conditions as for "Average Value" except that the cathode resistor is un bypassed, and grid resistor (megohms) = 0.05.

Characteristics, Class A1 Amplifier (Each Unit):

| Plate Voltage | -1 | -2 | volts |
| Grid Voltage | 100 | 250 | |
| Amplification Factor | 100 | 100 | |
| Plate Resistance (Approx.) | 80000 | 62500 | ohms |
| Transconductance | 1250 | 1600 | μmhos |
| Plate Current | 0.5 | 1.2 | ma |

Mechanical:

Operating Position...
Maximum Overall Length...
Maximum Seated Length...
Length, Base Seat to Bulb Top (Excluding tip)...
Diameter...
Dimensional Outline...
Bulb...

O: See next page.

TENTATIVE DATA
HIGH-MU TWIN TRIODE

Base ........ Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW ............... 9A

Pin 1 - Plate of Unit No.2
Pin 2 - Grid of Unit No.2
Pin 3 - Cathode of Unit No.2
Pins 4 & 9 - Heater of Unit No.2
Pins 5 & 9 - Heater of Unit No.1
Pin 6 - Plate of Unit No.1
Pin 7 - Grid of Unit No.1
Pin 8 - Cathode of Unit No.1
Pin 9 - Heater Mid-Tap

AMPLIFIER — Class A,
Values are for Each Unit

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE .............. 330 max. volts
GRID VOLTAGE:
  Negative-bias value .......... 55 max. volts
  Positive-bias value .......... 0 max. volts
PLATE DISSIPATION .......... 1.2 max. watts
PEAK HEATER-CATHODE VOLTAGE:
  Heater negative with respect to cathode. 200 max. volts
  Heater positive with respect to cathode. 200A max. volts

Typical Operation as Resistance-Coupled Amplifier (Each Unit):

See RESISTANCE-COUPLED AMPLIFIER CHART No.25
at front of Receiving Tube Section

O without external shield.
A The dc component must not exceed 100 volts.

OPERATING CONSIDERATIONS

Parallel heater arrangement is recommended for use in high-gain, resistance-coupled-amplifier applications such as in the preamplifier stages of phonographs, microphones, and tape recorders. With closely paired, electrostatically shielded heater leads, a hum-balance control is unnecessary when the center-tap of the heater transformer is connected to ground. In applications where the heater-transformer winding does not have a center-tap, a 100-ohm hum-balancing potentiometer should be connected across the heater leads with the slider connected to ground.
7025
AVERAGE CHARACTERISTICS
EACH UNIT

E_f = 6.3 VOLTS
PARALLEL HEATER ARRANGEMENT.